

LAS NEWS

COLLEGE OF LIBERAL ARTS & SCIENCES | SPRING 2018

Life +
Career
Design
Lab

> **INQUIRE:**
Ask questions

> **ENGAGE:**
Give it a go

> **CREATE:**
Make something

DESIGN THINKING

LAS EXPLORES NEW WAYS TO HELP
STUDENTS ENGAGE THEIR FUTURE

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Where are our alumni?



GREETINGS FROM THE College of Liberal Arts & Sciences

Dear alumni and friends,

The College of LAS is changing the world, thanks to the efforts of our students and faculty whose work in the classroom, laboratory, and in the field has a profound and often immeasurable impact. Our alumni also do amazing things across the globe.

LAS has 168,318 living alumni. That's 36 percent of the campus total of 469,473. They are educators, researchers, entrepreneurs, writers, public servants, and business people. Not only do they work in all sectors of the economy, but they are spread across the world (see the infographic on page 24).

We honored some of our most distinguished alumni with college awards in the fall. This stellar group includes people such as Michael Sofia, a chemistry alumnus whose work created a drug for Hepatitis C that has cured more than a million people. Read more on page 8.

Our faculty teach not just some 12,000 undergraduates in LAS, but 99.6 percent of all undergraduates on campus at some point during their time at Illinois. In Spring 2017, 390 faculty members in LAS were ranked as excellent by their students.

Faculty research and scholarship create new knowledge, new techniques, and new perspectives. Read more in this magazine:

- **Melissa Littlefield's** work melds the humanities and kinesiology as she examines wearable technology.
- **Martha Gillette**, director of our Neuroscience Program, recently received an NSF grant to provide interdisciplinary training for graduate students from across campus. This innovative project blends neuroscience and engineering to gain new insights on the brain.
- **Dolores Albarracin** from psychology is studying how much health information is the right amount. Her research team wants to help health care professionals communicate better with their patients.

As dean, I especially take pride in the accomplishments of our students and eagerly anticipate the ways in which they will change the world. It is clear that Thomas Dowling, a senior majoring in history and political science, has a bright future; Thomas was recently named the university's first Rhodes Scholar in 19 years. He represents the many exemplary students in LAS. I look forward to the future success of all of our students.

With my best wishes,

Feng Sheng Hu,
Harry E. Preble Dean



On the cover: Wayfinding guides in the Life + Career Design Lab. Photo by Heather Gillett.

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Finding a link between honey bees and autism

Honey bees that consistently fail to respond to obvious social cues share something fundamental with autistic humans, researchers report in a new study. **Gene Robinson**, professor of entomology and director of the Carl R. Woese Institute for Genomic Biology, reported that genes most closely associated with autism spectrum disorders in humans are regulated differently in unresponsive honey bees than in their more responsive nest mates. ■



Faculty and departments honored

A partial list of many faculty, student, and department honors this past summer and fall include:

- **Public Scholar award from National Endowment for the Humanities:** **John Lynn**, professor emeritus of history.
- **American Mathematical Society Award for an Exemplary Program or Achievement in a Mathematics Department:** The Department of Mathematics.
- **Henry G. Houghton Award/American Meteorological Society:** **Francina Dominguez**, professor of atmospheric sciences.
- **Unit for Criticism and Interpretive Theory Senior Research Fellowship:** **L. Elena Delgado**, professor of Spanish and Portuguese.
- **Burt L. and N Kuggie Vallee Foundation Vallee Scholar:** **Thomas Kehl-Fie**, professor of microbiology.
- **Health Policy Research Scholar/Robert Wood Johnson Foundation:** **Arrianna Planey**, doctoral student in geography and geographic information science.

See a complete list of faculty honors at las.illinois.edu/news/honors. ■



From left, Noman Baig (chemistry), Lauren Gabra (molecular and cellular biology), Allana Griffith (political science), and Jada Hampton (psychology) were among 12 students in the **Lincoln Scholars Initiative** to graduate in May. The program, launched in 2012, supports promising students with financial need. ■

Faculty invested



Three professors last fall received named professorships or an endowed chair, which are among the highest honors a faculty member can receive. **Satish Nair**, professor of biochemistry in the School of Molecular and Cellular Biology, was named the I.C. Gunsalus Professor in the College of Liberal Arts & Sciences. In the School of Chemical Sciences, **Andrew A. Gewirth** was named the Peter C. and Gretchen Miller Markunas Professor of Chemistry, and **Catherine Murphy** (pictured) was named the Larry R. Faulkner Endowed Chair in Chemistry. ■

College of LAS names Conrad Scholars



Three professors have been named a Conrad Humanities Scholar beginning with the 2017-18 academic year. **John Tofik Karam** (Spanish and Portuguese), who is also associate director of the Lemann Institute for Brazilian Studies, **Soo Ah Kwon** (Asian American studies, pictured); and **Marc Hertzman** (history), will receive \$5,000 per year until the 2021-22 academic year. ■

Bioenergy research center to launch at Illinois

The U.S. Department of Energy is funding a \$115 million Bioenergy Research Center at Illinois to provide scientific breakthroughs for a new generation of sustainable, cost-effective biofuels and bioproducts. The Center for Advanced Bioenergy and Bioproducts Innovation is a collaboration between Illinois' Institute for Sustainability, Energy, and Environment (iSEE), the Carl R. Woese Institute for Genomic Biology, and 16 partner institutions. **Evan H. DeLucia**, the G. William Arends Professor of Plant Biology and Baum Family Director of iSEE, will serve as director. ■

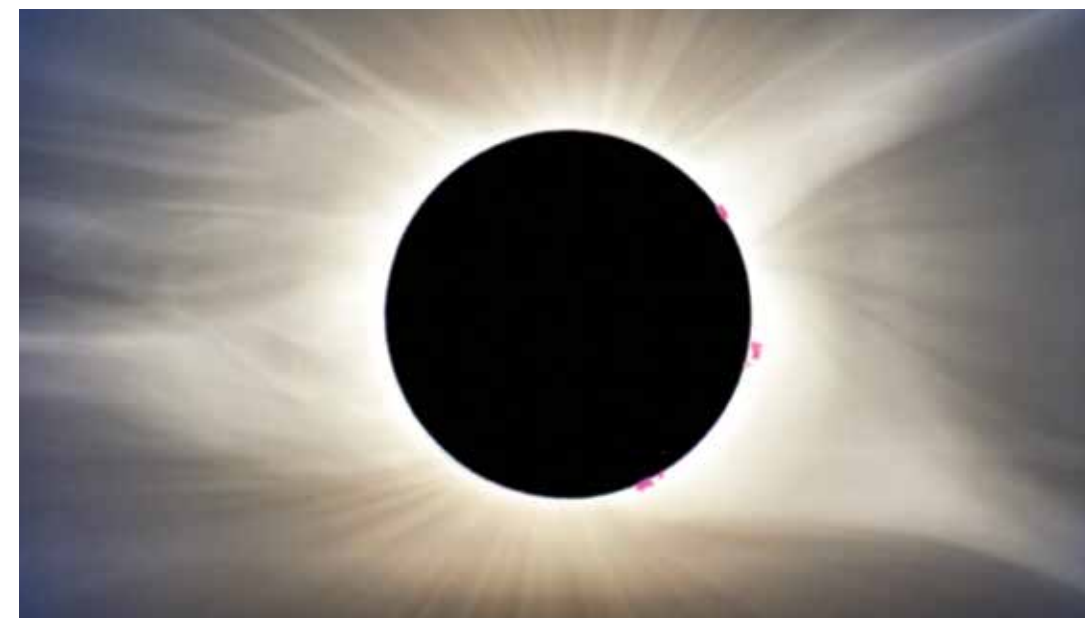


After several months of no music, work is wrapping up on renovations in the **Altgeld chimes tower** that university officials said could allow chimes players back into the space very soon. Read more about the building renovation at altgeldillini.illinois.edu. ■

The bad rap for rap



A study co-authored by communication professor **Travis Dixon** suggests that negative stereotypes directed toward rap music is largely the result of how major record labels market the music genre. Dixon reports that rap songs shared on Facebook contained more "pro-social" lyrics that espoused positive themes such as gratitude, expressions of faith and spirituality, messages of community building, the power of education, and support for political engagement. ■



Illinois astronomers led a trip to Goreville, Illinois, in August to witness the first total solar eclipse in the state in 148 years. The magenta bubbles showing along the silhouette of the moon are clouds of gas in the sun's atmosphere. (Photo by Paul Ricker.) ■



Bruce Murray, professor of Germanic languages and literatures and resident director of the successful Austria-Illinois Exchange Program, retired after running the program for 25 years. (Photo by Melissa Michael.) ■

LAS faculty selected to highlight interdisciplinary research



Three research teams from the College of LAS have been awarded David Dodds Henry Lectureship Funds in support of the culminating research event of the University of Illinois' Sesquicentennial Celebration. Three professors—**Aron Barbey** (psychology), **Jonathan Inda** (Latina/Latino Studies), and **Susan Koshy** (English, pictured)—are serving as principal investigators on research on topics ranging from land-grant institutions to brain plasticity and police behavior. ■

Center for Advanced Study appoints six new LAS faculty members



The Center for Advanced Study (CAS) has appointed six new LAS faculty as members - one of the highest forms of academic recognition for outstanding scholarship at the University of Illinois. The new members are **Antoinette Burton** (history), **Gary Dell** (psychology), **Martin Gruebele** (chemistry), **Sharon Hammes-Schiffer** (chemistry), **Harry Liebersohn** (history), and **Catherine Murphy** (chemistry). They join 21 other CAS professors with permanent appointments. ■

Student awarded Boren Scholarship



Derek Hoot, a political science major at Illinois with a minor in Arabic studies, received an \$18,500 David L. Boren Scholarship to fully cover the cost of his academic year 2017-18 study abroad experience at the Qasid Institute for Classical and Modern Standard Arabic in Jordan. Hoot set up an internship to work with refugee populations during the second semester. He is a member of the James Scholar Honors Program. ■

Researchers from entomology and engineering are looking to cicadas for insight into the design of artificial surfaces with de-icing, self-cleaning, and anti-fogging abilities. ■



Microbiology professor receives \$1.5 million for pioneering research



Rachel Whitaker, professor of microbiology and leader of the Infection Genomics for One Health research theme at the Carl R. Woese Institute for Genomic Biology, is one of five new Allen Distinguished Investigators recognized by the Paul G. Allen Frontiers Group for pioneering research in epigenetics, aging, and evolution. She will receive \$1.5 million over the next three years to research microbial evolution. ■



The **Girls Explore Biology Camp**, founded in 2012 in the **School of Integrative Biology**, is exposing more girls than ever to science. ■

Seminar puts participants in police shoes

About two dozen faculty, students, activists, authors, police chiefs, university officials, and journalists explored the issue of police shootings during the Boeschstein Seminar on Public Policy, hosted by the **Cline Center for Democracy** at Illinois. In hopes of exploring the topic of police shootings, participants engaged in simulations normally faced by third-month police officers in training. ■



The Department of Atmospheric Sciences is leading the **RELAMPAGO-CACTI project**, a multi-agency, \$30 million study in western Argentina to learn from the world's most intense thunderstorms. (Herb Stein/CSWR.) ■

\$45 million grant boosts project to increase food supplies



A \$45 million reinvestment in U of I's Realizing Increased Photosynthetic Efficiency (RIPE) research project, which has already demonstrated dramatic yield increases in food crops, will help researchers advance their work to address the global food challenge. The five-year reinvestment from the Bill & Melinda Gates Foundation, the Foundation for Food and Agriculture Research, and the U.K. Department for International Development builds upon the Gates Foundation's initial \$25 million grant in 2012. RIPE Director **Stephen Long**, (above left), Stanley O. Ikenberry Endowed Chair and Gutsell Endowed Professor of Plant Biology and Crop Sciences at the Carl R. Woese Institute for Genomic Biology, and Deputy Director **Donald Ort**, the Robert Emerson Professor in Plant Biology and Crop Sciences, hope the project will eventually lead to yield increases of up to 50 percent within decades. ■

Eleven LAS students and alumni offered Fulbright grants

Eleven LAS students and young alumni have been offered student Fulbright grants to pursue international educational, research, and teaching experiences this coming year throughout Eastern and Western Europe, Latin America, Asia, and the Middle East. In 2017, a total of 14 U of I students were offered the grants, which are sponsored by the Fulbright U.S. Student Program. See the full list of students and their work at go.las.illinois.edu/fulbright17.



Online courses helped Emma Woods graduate on time with a degree in Earth, society, and environmental sustainability even though the birth of her daughter, Addison, occurred the fall semester of her senior year. (Photo courtesy of Emma Woods.)



The Chem Annex was formally rededicated in October following a \$21.4 million upgrade that included renovated research and classroom space and a 9,600-square-foot addition.

Celebrating 20 years of Asian American studies



The Department of Asian American Studies, considered a leader in the study of Asian Americans, is celebrating 20 years on campus. The formation of Asian American studies at Illinois came in response to student activism and support from faculty, staff, and the community. It helped pave way for more ethnic studies on campus.

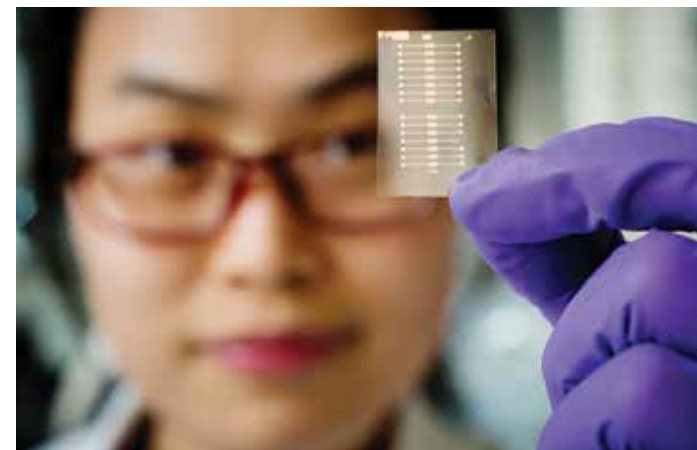


Roshen Samuel, a student in economics and statistics, was named Most Outstanding Undergraduate Intern in 2017 at U of I's Research Park. He's pictured here with his manager, Masha Trenhaile. (Image courtesy of U of I Research Park.)

Research reveals widespread bias in astronomy and planetary science



Anthropology professor Kathryn Clancy and her colleagues surveyed more than 400 women and men in astronomy and planetary science about their workplace experiences. A large proportion reported overhearing racist and sexist remarks, experiencing or witnessing harassment, and other negative workplace or classroom experiences in their field. The experiences are taking a toll on scientists' work, Clancy reported.



In a new study, chemical and biomolecular engineering professor Ying Diao's research group demonstrated a device that monitors ammonia in breath, a sign of kidney failure.



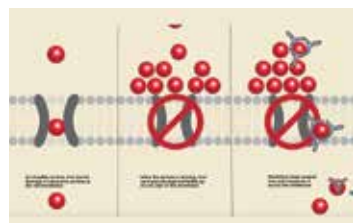
Satish Nair, the I.C. Gunsalus Professor in the College of Liberal Arts & Sciences, postdoctoral researcher Shi-Hui Dong, and their colleagues discovered a mechanism by which bacteria signal one another to become more virulent. The researchers hope to manipulate this pathway to treat disease. (Illustration by Jennifer Oosthuizen, CDC.)

De-sensationalizing the news



Scott Althaus, director of the Cline Center for Democracy and professor of political science and communication, has received a grant to research how media can avoid sensationalist coverage of terrorism. Althaus and colleagues in Europe, who won the funding through the Digging into Data Challenge, want to help journalists avoid serving strategic goals of terrorist organizations.

Molecular prosthetics can treat disease

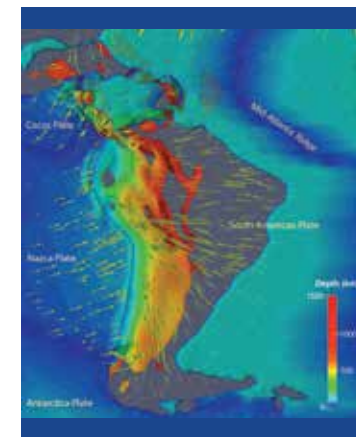


Researchers at Illinois, led by Martin D. Burke, professor of chemistry, have demonstrated that a small molecule can transport iron in human cells and live animals when proteins that normally do the same job are missing, a condition that often causes severe anemia in patients. Such "molecular prosthetics" might treat a host of incurable diseases caused by protein deficiencies, such as anemias, cystic fibrosis, or certain types of heart disease.

States find rewards from high-tech investments



States have spent millions to develop high-tech industry, with its promise of good jobs and economic growth. But does the public investment pay off? A study by Kevin Leicht, head of the Department of Sociology, suggests it does—including in places where prospects for high-tech seems less than ideal. The key for these state programs is often patience and modest expectations, he said.



With help from the National Center for Supercomputing Applications, Lijun Liu, professor of geology, and doctoral student Jiashun Hu created sophisticated four-dimensional data-oriented geodynamic models of Earth's interior that are among the first of their kind. (Image provided by Lijun Liu.)

MAKING A WORLD OF DIFFERENCE

LAS ALUMNI AWARD
WINNERS MAKE CHANGE
AT HOME AND
ABROAD

By Doug Peterson

This year's LAS awards have a geographical twist. One winner was born in Africa and moved to Chicago, while another winner discovered a 3.2-million-year-old skeleton in Ethiopia. Many were world travelers, whether it was making high-end real estate deals in London, or working as a professor in Australia.

But they are all world-changers. One brought healing to over 1.2 million people around the world. And this year's humanitarian award winner showed that you can change people's worlds, even if you work close to home.



WAYNE KOONCE
BA, '71, GEOGRAPHY
DEAN'S QUADRANGLE AWARD

Wayne Koonce never stepped on an airplane until his junior year at Illinois. That's when the College of LAS set him up with a year of study in Vienna, Austria—a trip that changed his life.

Since then, Koonce, an investment banker, has flown overseas countless times. One of his first major deals was in 1988 for the wealthiest family in Japan, which bought InterContinental Hotels worldwide for \$2.3 billion—then the largest hotel deal ever.

Koonce has remained close to Illinois by hosting a Campaign Illinois event, joining the President's Council, and helping set up a graduate fellowship fund in honor of a former professor. He and his wife, Harriet Hentges, established a bequest gift, the Wayne Koonce Endowment for Liberal Arts and Sciences.

"Illinois changed my life," he said. "It absolutely changed my life."



DAVID BOGER
MS, '64; PHD, '66; CHEMICAL ENGINEERING
LAS ALUMNI ACHIEVEMENT AWARD

When a mine tailings dam burst in Brazil in 2015, it unleashed a wave of toxic "red mud" that wiped out villages and killed at least 17 people.

There are at least two major failures of these tailings dams every year, said David Boger, who studies the flow of liquids. He did the basic science behind ways to store toxic tailings dam waste safely, helping to prevent similar disasters.

Boger, a professor of chemical engineering at Monash University and the University of Melbourne, also developed

what became known as Boger Fluids, which flow like liquids but behave like an elastic solid.

Boger has won many awards for his work. Most recently, in 2017, he was inducted into the National Academy of Engineering in the United States.



DONALD JOHANSON
BA, '66, ANTHROPOLOGY
LAS ALUMNI ACHIEVEMENT AWARD

Donald Johanson was walking at his archaeological dig in Ethiopia in 1974 when he happened to glance over his shoulder. That glance would change his life.

Johanson spotted the fragment of a human elbow sticking from the ground. Johanson and his team uncovered 40 percent of a skeleton that was approximately 3.2 million years old—the oldest and most complete skeleton ever discovered at the time.

The skeleton became known as "Lucy," in honor of the Beatles song, "Lucy in the Sky With Diamonds." The find created a worldwide sensation.

Because Lucy contained human and ape features, such as a small brain and ape-like teeth, Johanson saw her as a common ancestor to two branches, one that went extinct and the other evolving into modern humans.



MICHAEL J. SOFIA
PHD, '84, CHEMISTRY
LAS ALUMNI ACHIEVEMENT AWARD

When Michael Sofia delivered the convocation speech for the Department of Chemistry in 2017, a woman came up afterward to thank him for developing the drug that cured her—and millions like her.

Sofia led the team that created the Hepatitis C drug, sofosbuvir. The result was the then-most successful drug launch in history, with sofosbuvir doing more than \$11 billion in sales during the first year after being approved in 2013.

The drug has cured more than 1.2 million individuals—although the actual number is probably much higher because it's hard to obtain accurate statistics in underdeveloped countries. Sofosbuvir is now the backbone of a cocktail of drugs that patients take.

"This is more than just a job for me," Sofia says. "It's a mission."



IFEOLUWA "LUVVIE" AJAYI
BS, '06, PSYCHOLOGY
LAS OUTSTANDING
YOUNG ALUMNI AWARD

Luvvie Ajayi knew she had finally made it when Oprah Winfrey rubbed her head.

Ajayi had been selected for Oprah's "Supersoul 100 list," and she was invited in June 2016 to interview Oprah and the rest of the cast of "Greenleaf," a TV show premiering on the Oprah Winfrey Network. Ajayi told Oprah she loved her character's hair. All of a sudden, Oprah grabbed her head.

Ajayi says it was like her anointing, and her fans have also anointed her as one of the most popular bloggers in the country. What's more, her New York Times best-selling book, "I'm Judging You," is in development to be turned into a TV series.

Ajayi's blog, "Awesomely Luvvie," covers everything from pop culture and what's happening in her life to travel and politics. Its success, she added, is "all a beautiful surprise."



**MORGAN MCCLAIN-
MCKINNEY LIMO**
BA, '09; MA, '11; POLITICAL SCIENCE
LAS OUTSTANDING
YOUNG ALUMNI AWARD

Morgan Limo recently left with her family on a two-year adventure in Guinea as a foreign service officer for the U.S. Agency for International Development. It's the latest move in a young but illustrious career on the front lines of international development.

Limo became fascinated with Africa after taking a Pan-Africa course with Merle Bowen, professor of African American studies.

She has done numerous short-term assignments in Africa, including Ghana, Kenya, Ethiopia, South Africa, and Kenya.

She worked as a program advisor for the President's Power and Trade Africa Initiative and also supported the President's Young African Leaders Initiative.

Guinea was struck by Ebola in 2013. Although Guinea was declared Ebola-free in December of 2015, its health system is still trying to recover with the help of people like Limo.



NANCY GREENWALT
BA, '89, SPEECH COMMUNICATION
LAS ALUMNI HUMANITARIAN AWARD

The turning point in Nancy Greenwalt's life came when she took a class at Illinois on corporate advocacy, in which she studied how corporations handled public relations for the Exxon Valdez oil spill and the Tylenol capsule-tampering case.

Greenwalt realized that public relations, marketing, and communication are so powerful that they shouldn't just be for industries. They should also be for the common good.

Today, she is executive director of Promise Healthcare, a nonprofit that includes two programs in Champaign County—the Frances Nelson Health Center and SmileHealthy, which provides dental care to those in need. Together these programs treat 150 to 200 patients each day, many who otherwise would have no access to health care. ■

Visit go.las.illinois.edu/alumniawards17 to learn more about these recipients.



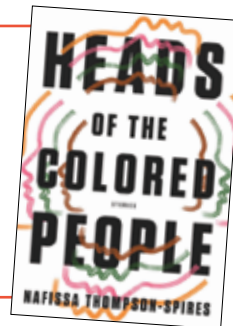
Books from LAS

Here are some of the latest good reads written or edited by faculty in the College of LAS

“Tropical Freedom: Climate, Settler Colonialism, and Black Exclusion in the Age of Emancipation,” by **Ikuko Asaka**, professor of history, shows how emancipation efforts in the United States and Canada were accompanied by attempts to relocate freed black slaves to tropical regions. (Image courtesy of Duke University Press.)



“Heads of the Colored People,” by **Nafissa Thompson-Spires**, visiting professor of English and African American studies, presents a collection of “moving, timely, and darkly funny stories” examining the concept of black identity in the so-called post-racial era. (Image courtesy of Simon & Schuster.)

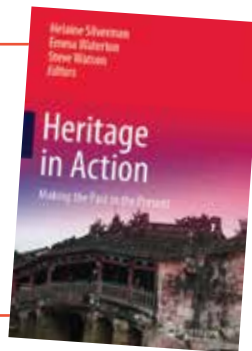


“Revolution without Revolutionaries: Making Sense of the Arab Spring,” by **Asef Bayat**, professor of sociology, takes a look at the extraordinary Arab Spring, its aftermath, how it compares to revolutions of the past, and the nature of revolution itself. (Image courtesy of Stanford University Press.)

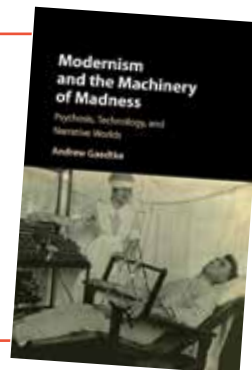


“Religious Perspectives on Religious Diversity,” edited by **Robert McKim**, professor of religion, examines how followers of a religious faith view those outside of their religion. (Image courtesy of Brill.)

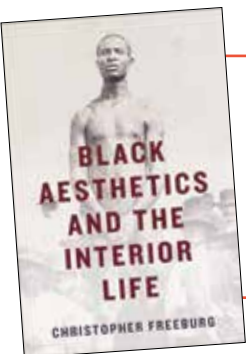
“Heritage in Action: Making the Past in the Present,” edited by **Helaine Silverman**, professor of anthropology, is a textbook that highlights the dynamic processes of heritage, emphasizing that heritage is always in action. (Image courtesy of Springer International Publishing.)



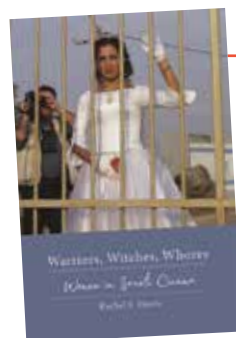
“Modernism and the Machinery of Madness,” by **Andrew Gaedtko**, professor of English, demonstrates the emergence of a technological form of paranoia within modernist culture which transformed much of the period’s experimental fiction. (Image courtesy of Cambridge University Press.)



“Black Aesthetics and the Interior Life,” by **Christopher Freeburg**, professor of English, rethinks what it means to be a person in the works of black artists. (Image courtesy of The University of Virginia Press.)



“Victorian Soul-Talk: Poetry, Democracy, and the Body Politic,” by **Julia Saville**, professor of English, explores the decades between the Reform Acts of 1832 and 1884 when British poets defended the civil rights of disenfranchised souls as Western nations slowly evolved toward modern democracies. (Image courtesy of Palgrave Macmillan.)



“Warriors, Witches, Whores: Women in Israeli Cinema,” by **Rachel Harris**, professor of comparative and world literature, is a feminist study of Israel’s film industry and the changes that have occurred since the 1990s. (Image courtesy of Wayne State University Press.)

FINDING A HIGHER CAUSE IN THE LAW

Just a year out of law school, **Daissy Dominguez** opened her own successful firm

LAS @Work



Daissy Dominguez opened her own law firm just a year after graduating from law school. (Images courtesy of Daissy Dominguez.)



Daissy Dominguez, left, with Estefania Perez, who was awarded a scholarship from Dominguez’s law firm to attend Benedictine University.



Daissy Dominguez opened the Dominguez Legal Justice Center in Chicago a year after graduating from law school. Now, Dominguez is highly active in her community, landing her the 2017 Ms. JD’s Woman of Inspiration Award.

Job Title: Principal attorney at Dominguez Legal Justice Center, LLC

Degree: BA, '10, political science

What’s a typical workday?

As an immigration attorney, my days are constantly changing and that is one of the things I love the most about my job. When I’m not in court or client meetings, I visit community organizations to discuss ways of collaborating; facilitate training workshops at high schools and universities about immigration laws and supporting undocumented students; train therapists at counseling centers; host legal workshops to educate undocumented individuals about their constitutional rights and immigration relief; and participate as a panelist or keynote speaker. I’ve also been an adjunct professor at The John Marshall Law School.

What about college prepared you for your life and career?

Working at La Casa Cultural Latina and being involved in student organizations developed my leadership skills and passion for social activism. The assistant director, Ronnie Kann, taught me to be a leader and to fight for social justice, and she also taught me to support other students and be a mentor. Through my major, I gained an understanding of our government. The study abroad program in Vienna, Austria, provided me with the wonderful opportunity to learn about UN-affiliated organizations.

What’s your proudest achievement?

While studying at John Marshall Law School I designed an academic retention program for first-year law students. The Academic Enhancement Program has proven to be very successful in promoting academic excellence among minority students and inspiring second and third year students to consider a career in teaching.

What do you do when you’re not practicing law?

I go to the boxing gym, which forces me to stop working by 6 or 7 p.m. and allows me to relieve stress.

Read more LAS@Work features at go.las.illinois.edu/LASatWork. ■



NEW FACULTY launch promising careers at the College of LAS

By Samantha Jones Toal

2017-18 school year starts with 23 new professors across the college



DOLEZAL



HAN



NANCE



PROROK

New faculty who arrived during the 2017-18 academic year serve in a variety of departments, from animal biology and statistics to philosophy and East Asian languages and cultures. Find a full list at go.las.illinois.edu/newfaculty17.

ADAM DOLEZAL

Adam Dolezal, professor of entomology, was one of the first to receive a degree from the integrative biology program at Illinois. Now, after receiving his doctoral degree at Arizona State University, Dolezal is back, but this time to teach and conduct research.

"Illinois is such a great university for entomology," Dolezal said. "It has such a long tradition of entomological research. There are really great people here already."

HEE-SUN HAN

As a student and post-doctoral researcher at MIT, Hee-Sun Han invented technologies to examine live cells in animals. As a post-doctoral researcher at Harvard, Han pioneered technologies to learn more about individual cells or viruses. Now, as a professor of chemistry at Illinois, Han hopes to get a more complete picture of cellular networks and human and animal organs.

"I highly look forward to being a part of this energetic, enthusiastic community and working with the students at U of I," she said.

C. KEMAL NANCE

C. Kemal Nance can't recall a time when he didn't dance.

"Once you start, you don't stop," Nance said. Now, he is a professor of African American studies in the College of LAS and a professor of dance for the College of Fine and Applied Arts.

"I'm very much a proponent of auto ethnography," Nance said. "As an African American person I've always been interested in historical and sociological occurrences that affect people like me."

ALYSSA PROROK

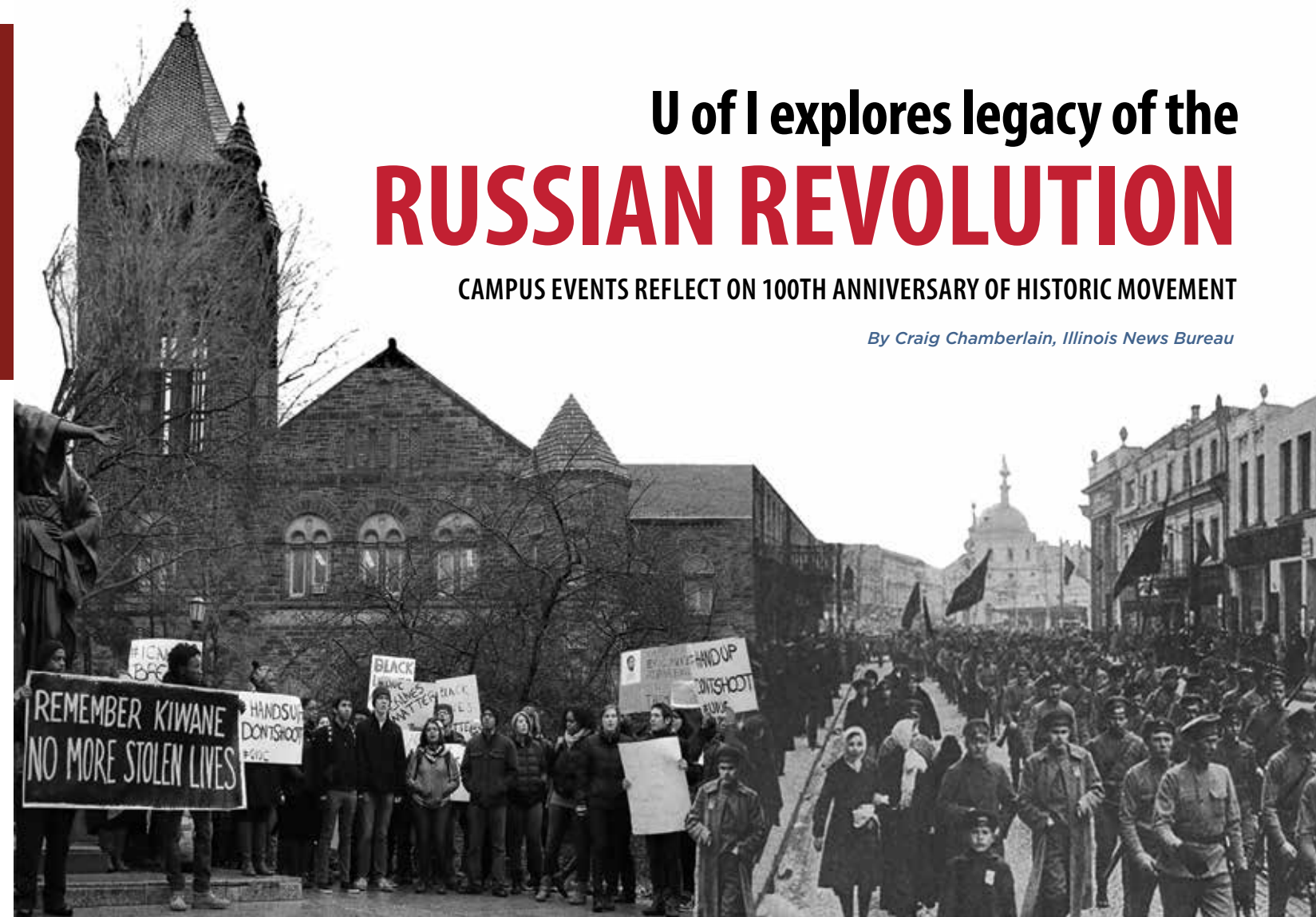
Alyssa Prorok always wanted to be a professor. Now, she is on faculty at Illinois as a professor of political science. She's excited by the extensive resources at Illinois for faculty research, and plans to continue to extend her research on civil wars.

"What I study is primarily civil war — why rebel groups fight against states. Most of my research has focused on how civil wars end and why they do, with a focus on leadership of rebel organizations and states," Prorok said. ■

U of I explores legacy of the RUSSIAN REVOLUTION

CAMPUS EVENTS REFLECT ON 100TH ANNIVERSARY OF HISTORIC MOVEMENT

By Craig Chamberlain, Illinois News Bureau



One hundred years ago, the Russian Revolution "shook the world," in the words of a famous book.

Last fall at the University of Illinois, organizers hoped to "shake the campus," at least a little, with a series of events reflecting on that anniversary and its legacy.

The U of I is an obvious site as "one of the strongest centers" of Russian and Slavic studies in the country and the world, said **Harriet Murav**, a professor of Slavic languages and literatures, and the coordinator of the fall series, titled "1917: Ten days that shook the world / 2017: Ten days that shake the campus."

"When people think of Slavic studies, they often think of Illinois," Murav said. It starts with the University Library's Slavic, East European and Eurasian Collections, which are some of the most extensive in the world, and extends to professorships and other programs.

The "Ten Days" series explored the revolution and its aftermath



through lectures, film, art, theater, poetry, music, an archival exhibit and even an innovative new undergraduate history course, which traces a century of revolutionary

movements starting with Black Lives Matter and working backward to 1917.

In all, the schedule included about two dozen public activities. A wide range of campus units signed up early to participate in the centennial series, said **David Cooper**, a professor of Slavic languages and literatures.

Part of the series' titles referred to a book by American journalist John Reed that chronicled the opening days of the Bolshevik Revolution. The second half of the series' title referred to the program of campus events.

The U of I series explored the ramifications of the revolution not only over the century since it occurred, but in connection with wide-ranging subjects and regions of the world, said Murav. "That global and present-day interest is what distinguishes our program," she said. ■

Above image: This photo compilation shows, on the left, a protest by Altgeld Hall at U of I (photo by Ray Cunningham), and, on the right, the march to Smolney during the Russian Revolution. (Image courtesy of Ten Days organizers).

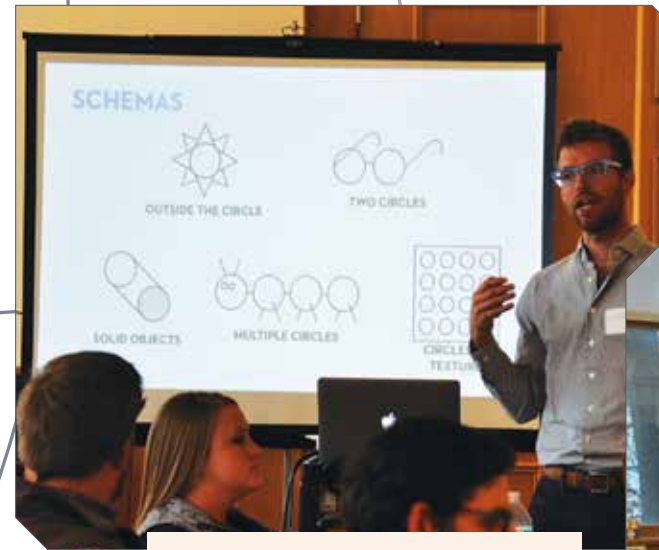
Left image: Professors Harriet Murav and David Cooper have played significant roles in organizing a fall semester series of campus events on the Russian Revolution, marking its 100th anniversary this year. Illinois is an obvious site for such a series, they note, given its leading role in Russian and Slavic studies.



THE NEW POTENTIAL FOR

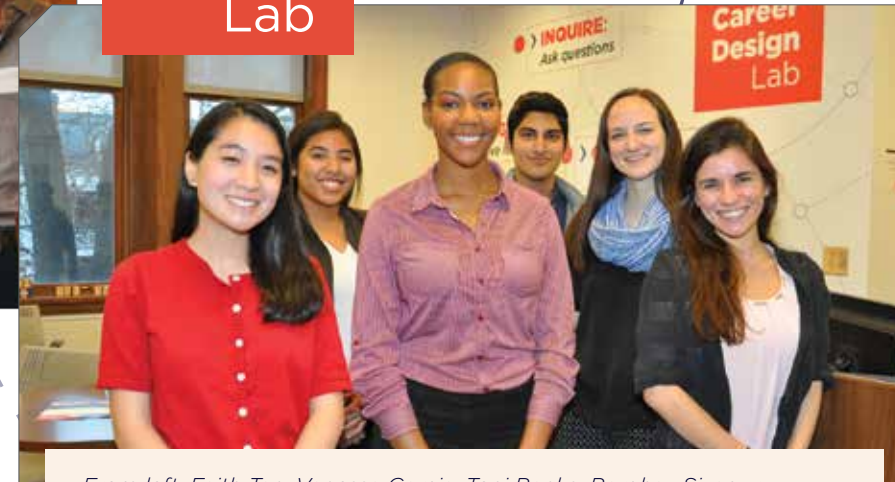
DESIGN THINKING

AN INNOVATIVE CONCEPT IS HELPING LAS STUDENTS PLAN THEIR FUTURE



Kyle Williams visits campus to explain design thinking principles to LAS faculty and staff.

Life + Career Design Lab



From left: Faith Tan, Vanessa Garcia, Toni Banks, Barghav Sivaguru, Cassandra Masters, and Julia Carter serve as Wayfinding Interns, a key component of the new Life + Career Design Initiative.

› **Beautiful art. Monolithic buildings. Microscopic machines. Since humankind first picked up tools, design has been used to create the physical objects that shape our world. But what if the same approaches that enable us to design the physical world could be used to engineer a better life?**

This past October, the College of LAS took the wraps off of a brand-new program to do just that. Called the Life + Career Design Initiative, it's a new program designed to help students not just choose a career but to move through their time at Illinois with purpose and intent, acquiring the experiences they need to find their passion—and the tools they need to pursue it.



"We want 100 percent of our sophomores to have a career development plan," said **Barbara Hancin-Bhatt**, associate dean of student affairs at LAS. "The question was, 'How do you get someone to make a goal of that nature?' You can expose them to internships. You can expose them to experiential learning or professional development opportunities, but how do you get them to imagine that and see how it all fits together with their academic program and

co-curricular activities into a coherent narrative about their Illinois experience and how it has impacted them?"

The initiative was preceded by three years of groundwork in LAS as advisors and college staff leading undergraduate academic affairs imagined how best to assist students with career development. As they

worked on bringing the concept of design thinking to life, university administrators working separately from LAS announced in fall 2016 that a new Siebel Center for Design Thinking would open on campus in 2020. The announcement affirmed for Hancin-Bhatt and her colleagues that they were on the right path in helping students build tools to inquire, engage, and create their future.

Born out of lean engineering and other corporate innovation methodologies, design thinking is a fluid way of problem solving that uses tools such as empathy, "radical collaboration," and prototyping to rapidly bring new ideas to fruition. And for years, companies like Apple and Coca-Cola have been using it to create products that give them the edge.

In 2007, Bill Burnett, executive director of Stanford University's design program, and Dave Evans, co-founder of gaming juggernaut Electronic Arts, were among the first to apply these principles to life planning. Together, they created "Designing Your Life," which eventually became a top elective at Stanford and the subject of a No. 1 New York Times best-seller, "Designing Your Life: How to Build a Well-Lived, Joyful Life."

Kyle Williams was a student in Designing Your Life at Stanford as he wrapped up his master's degree, and he was invited to be the first fellow in Stanford's newly established Life Design Lab where he was a teacher for the course and a key participant in shaping the curriculum for the follow up class, Designing Your Stanford. So when his resume crossed Hancin-Bhatt's desk in late 2016, she realized she had the perfect consultant to help transform the educational experience of students at LAS.

What she and her new team envisioned wasn't merely a class; it was a way of engaging students at multiple points throughout their journey to create a different mindset.

"Many students don't start to think about life out of college until their last semester in school," said **Brian Neighbors**, director of career development for the college. "We've got to change the culture to where students actually understand the significant value of the LAS degree."

That means starting in the beginning. This past fall, the school unveiled a new pilot program for LAS 101 incorporating many design principles. Taught by **Murillo Soranso**, director of first year experience in LAS, and two College of LAS advisors, **Melissa Newell**, director of undergraduate studies from the Department of Economics, and **Tonya Pulley** from the School of Integrative Biology, the class helped students learn how to reframe problems, unleash the power of collaboration, and create multiple way-finding maps that enabled them to pursue their goals while embracing opportunities as they arose.

The ability to adapt is important for emerging graduates who, studies indicate, may experience as many as 13 different careers after graduation.

"That's why I think the framework is so useful," said Neighbors. "We're guiding these students to go out into the world with a wayfinding map to start exploring connections, engaging in experiences, and reflecting on what they learn from the experiences."

This spring, the college launched LAS 201: Design Your Illinois, where students will map out their broader university experience. That will eventually be followed by a third course—Designing Your Life + Career—created specifically for upperclassmen. The college is also hosting numerous workshops led by people such as Soranso that help expose students, faculty, and advisors to design thinking. Not to be left out, the LAS 291/292: Global Perspectives courses help about 1,400 students who travel abroad annually apply design thinking to build empathy and thrive in new environments, which is a skill Hancin-Bhatt believes all students need to acquire.

"The nature of work in the 21st century is changing, and the problems our students will face in their various vocations will call on both the depth of their disciplinary knowledge and their ability to move across multiple domains of knowledge and practice," said **Kevin Hamilton**, senior associate dean of the College of Fine and Applied Arts, who served on the university's Design Initiative executive committee and provided critical support for the program at the College of LAS. "In a large research university like this one it can be hard to help students through the discovery of something as personal and even principled as a 'vocation' and not just the narrower term of a 'career.' The LAS effort seems to be thinking big to this end."

Andy Singer, interim director of the new Siebel Center for Design, agrees. "It's very exciting that LAS has taken the initiative and really gotten in front of this. Who better than our humanists to understand the human-centered element in innovation? It's fantastic that LAS is saying, 'Hey, we need to think about how one designs their life. We need to think about what are the human-centric and human-focused elements of your campus experience.'"

In the long run, Singer believes the entire university will benefit. "Any design thinking courses, programs, or projects on our campus need people from LAS," he said.

As for the consultant who helped to create one of the first fully-integrated career design thinking programs in the country? Williams believes the initiative will have a major impact, transforming the answer to the one question students hear the most: What are you going to do with that liberal arts and sciences major?

"The culture around that question and the answer to that question is going to change for these students because of this thing," Williams said, "and I think that's really exciting." ■



Life + Career Design Lab

LIFE + CAREER DESIGN LAB OPENS

STUDENTS CAN RECEIVE FACE-TO-FACE HELP FOR PLANNING

▶ **To change the way that students navigate** their educational experience, you have to change how they connect with resources. The question is, how do you encourage students to explore all the possibilities of one school that incorporates 70 different majors?

For the College of LAS, the answer is the brand-new Life + Career Design Lab, which officially opened its doors on the second floor of Lincoln Hall in October. It's not a large space. You won't see rows of computers or bulging racks overflowing with dusty brochures. But what students will find when they walk through the door is something far more valuable—help from someone who's been there.

"The lab is a place for students, faculty, and advisors to connect about life and career development," said **Erin Dittmer**, a master's student in curriculum and instruction who oversees six undergraduate interns chosen specifically for their experience in undergraduate research, internships, and studying abroad. "What makes it different from a typical career center is how we get students to integrate their academic program, co-curricular and other meaningful experiences into their career development, starting in LAS 101."

That means exploring the reasons students want to undertake an internship or research opportunity as much as the steps to achieve it. Interns also help students prototype their goals, perhaps encouraging someone who wants to study abroad for a semester to first try a shorter program during spring break.

"That's kind of encouraging the bias towards action," explained **Barghav Sivaguru**, a lab intern majoring in political science and communication who specializes in undergrad research opportunities. "We really encourage them to think deeply and really look at all the resources available ... If you have thought about it, and you think that taking that action is the best choice for you, don't be afraid. You should do it!"

"We always try to make sure that students are doing something to work towards that internship or make themselves a better candidate," added **Vanessa Garcia**, a major in Latina/o studies and political

science, whether that's getting a job on campus or joining a student organization. Even when they do, however, translating that experience to a resume can be a challenge for some. That's when reflection—another key design thinking principle—can help them find their narrative and move forward with more confidence.

Cassandra Masters, a major in political science and history, remembers helping one student in that exact situation. She was pursuing a career in human resources, and Masters was able to help her realize that the work she did with student clubs was just as meaningful as any internship.

"That is HR work!" Masters told the student. "That's communication skills. That's all of those different things." Masters said that validating those experiences and helping students make use of them is one of the things she finds most rewarding.

Even though the lab has been in operation for only a few months, Dittmer is excited about the interactions they've had and the way they're helping students navigate what can often be a bewildering range of choices. Located in 2040 Lincoln Hall, the lab is open weekdays from 1 to 5 p.m. with no appointment required. All LAS undergraduate students are welcome, said Dittmer. She added: "We'd love to see a line out the door." ■

Stories by John Turner

Support the Life + Career Design Initiative

Learn more about the initiative and how to support it at go.las.illinois.edu/lifecareerdesigninfo. Or contact Joan Volkmann, associate dean for advancement at the College of LAS, at lasgifts@illinois.edu or (217) 333-7108.

Renovated:

The Natural History Building reopens



Students and faculty benefit from upgraded space

The fall semester was significant for the renovated Natural History Building—it was the first time since 2014 that the 125-year-old campus landmark was open for classes. The building's new interior struck many as impressive.

Lydia Jaja, a senior in atmospheric sciences, said the renovated building offered a productive place to study outside of class time.

"This is really cool with all the whiteboards and the seating. It's really nice to be able to study in your own space even amongst all these people," she said.

It's the first time the entire School of Earth, Society, and Environment (SESE)—including the departments of Atmospheric Sciences, Geography and Geographic Information Science, and Geology—has been under the same roof. The 148,000 square-foot building also

houses teaching programs in the School of Integrative Biology (SIB), which includes the departments of Animal Biology, Entomology, Plant Biology, and the Integrative Biology Honors Program.

More than 4,600 students use the building per week. The building is one of the oldest on campus, and much of its interior, such as some of the original wooden floors and carved wooden staircases, was preserved.

The roughly \$70 million renovation also created state-of-the-art laboratories, flexible classrooms, and study spaces, such as the SESE Student Hub.

"I would say it's nice to have all of SESE together. That's going to be a big benefit," said **Ryan Sriver**, professor of atmospheric sciences. "Before, the departments were spread all around campus. I think it's going to enable a lot more collaboration

Renovated spaces inside the Natural History Building: Top image - The Core; Left and above - the student hubs; Center image - an SIB classroom

between departments."

An open house for Natural History Building was held during Homecoming, and a celebration to commemorate the renovated structure was conducted in November. The event featured self-guided tours, lunch, and a rededication and ribbon-cutting ceremony. More than 200 people attended. ■

By Samantha Jones Toal

Images of RESEARCH

Faculty in the College of LAS conduct research in all corners of the world. **Daniel Leon**, professor of classics, is shedding light on Alexander the Great through research in Greece, and **Lisa Lucero**, professor of anthropology, is learning the significance of ancient sacred Mayan pools in Belize.

By Dave Evensen

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1. Lucero is studying how the Maya viewed and used the ancient pools of Cara Blanca. (Photo copyright Tony Rath.)
2. A trek through the jungle in central Belize to study Mayan pools means navigating around obstacles like this spiky ceiba tree. (Photo by Aimee Carbaugh.)
3. Graduate students Jean Larmon, front, and Aimee Carbaugh launch a drone to collect aerial photos and video in Belize. (Photo copyright Tony Rath.)
4. Daniel Leon used a 3D scanner in Athens to learn more about a second century historian who studied Alexander the Great. (Photo courtesy of K.A. Rask.)
5. Professor K.A. Rask of Duquesne University worked with Leon to use Reflective Transformation Imaging to examine inscriptions from almost 2,000 years ago. (Photo courtesy of K.A. Rask.)
6. A 3D scanner performed precise measurements that allowed Leon to distinguish ancient inscriptions from naturally occurring cracks in the rock. (Photo courtesy of K.A. Rask.) ■

NSF awards Illinois \$3 million for interdisciplinary graduate student training

Program to form new insight on the brain, expand participation in field of brain science

The National Science Foundation (NSF) granted the University of Illinois \$3 million for an interdisciplinary graduate student training program to help form new insight on the brain—and to expand participation in the field of brain science itself.

Sixty graduate students from across campus will participate in the five-year NSF Research Traineeship, led by **Martha Gillette**, professor of cell and developmental biology and director of the Neuroscience Program. **HyunJoon Kong**, professor in chemical and biomolecular engineering, is the lead co-principal investigator.

The project's primary goal is to provide students with an immersive research experience that blends techniques from multiple disciplines to better understand the many aspects of the human body's most complex organ.

The program will teach students to use and understand miniature brain machinery critical to examining and regulating brain activities. It's also designed to increase the participation of women, underrepresented minorities, and students with disabilities in the field of brain science.

A third goal is to improve scientists' communication skills with the public. "This is a training initiative between neuroscience and engineering. It's building on some of the new technologies in engineering, but it's focused on better understanding the brain," Gillette said. "It's exciting because it's going to let us do new things and train graduate students in new ways."

Students will come from several departments across campus, including neuroscience, cell and developmental biology, molecular and integrative physiology, chemistry, psychology, chemical and biomolecular engineering, bioengineering, and electrical and computer engineering.

The U of I project was one of only three proposals aimed at understanding the brain selected for this particular NSF project, out of a large national competition. Co-directors on the project include **Neal Cohen**, professor of psychology; **Jonathan Sweedler**, professor of chemistry; and **Rashid Bashir**, professor of bioengineering and electrical and computer engineering and executive associate dean at Carle Illinois College of Medicine. ■

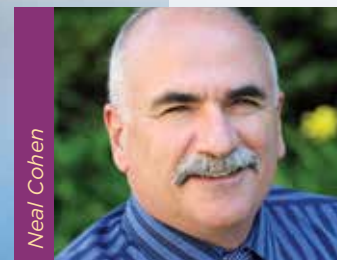
By Samantha Jones Toal



Martha Gillette



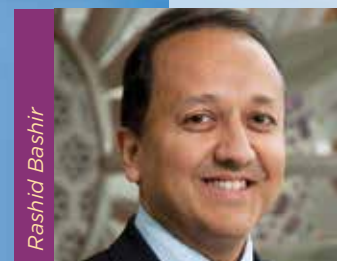
HyunJoon Kong



Neal Cohen



Jonathan Sweedler



Rashid Bashir



LAS Experts

By Dave Evensen

Where body meets machine

MELISSA LITTLEFIELD examines the growing promise (and potential peril) of wearable technology



The growth of wearable technology such as Fitbits and smartwatches has been a gee-whiz moment for many of us. **Melissa Littlefield**, a professor of English and kinesiology and community health at Illinois, understands how the spread of laboratory technology into everyday consumer goods deserves a deeper look.

What's the impact of your work?

My research has always sought to bring the hard sciences, social sciences, and humanities into conversation about neuroscientific advancements. My most recent book (re)introduces EEG into controversial conversations about brain imaging technologies. While the focus has often been on more flashy technologies, thinking through EEG's subtle, commercial developments helps us see and understand the public uptake of the neurosciences in new ways.

What is your most significant achievement?

In 2009, my team won the European Neuroscience and Society Network's novel experimental contest. As a result, we were able to carry out a project I had been contemplating for many years: an fMRI experiment concerning socially-stressful truth-telling. Our hypothesis was that such truth-telling could activate similar regions to those identified during fMRI lie detection experiments, thereby offering a challenge to neuroscientific research about lying and the brain. Our experiment bore out the hypothesis and offered me and my fellow researchers an amazing opportunity to be involved in and analyze neuroscientific research from the inside out. ■

What are you writing now?

I just finished a book about EEG wearables, "Instrumental Intimacy: EEG Wearables and Neuroscientific Control" (JHUP 2018). Like Fitbits, these wearables promise to measure, track, and help to optimize physiological function—their focus is your brain's electrical activity. Over the past decade, electroencephalography (EEG) has left the strict confines of the laboratory and become integrated into consumer goods such as baseball hats, headphones, eye masks, bike helmets, and even novelty cat ears. I discuss the development, contemporary promise, and potential peril associated with turning to machines for self-optimization.



Dolores Albarracín

TOO MUCH INFORMATION CAN BE A GOOD THING

Psychologists examine how to package health recommendations

In health care, the phrase "too much information"—or TMI—can be a serious problem. If you Google "How to prevent cancer," for example, you will find many lists of websites claiming to have the winning strategy, with some plans presenting 20-30 steps.

The same situation occurs if one searches for information on quitting smoking, exercising, sleep, and endless other issues. The question becomes this: When does a person receive too much health information? What's the best way for health providers to convey information without consumers skipping over or forgetting key information?

According to a study from the College of LAS, the answer lies in the goal of a specific health objective. **Dolores Albarracín**,

professor of psychology, graduate student Jack McDonald, and colleagues at other universities studied the behavior of some 459 people to shine light on this topic that challenges health providers.

One school of thought among health care providers is to give health information in small doses of two or three recommendations at once. Others argue that it's best to give patients the entirety of their options, so as to not skip out on something that may prove useful. The Illinois study, published in *Clinical Psychological Science*, asserts that it depends on the nature of the recommendations.

According to the researchers, presenting a large amount of information is appropriate if the goal is for people to remember a large amount of potentially interchangeable

behaviors, but if the goal is for people to remember a complete set of important recommendations, then the best strategy should be to present relatively few recommendations.

"The best number of health behaviors to recommend seems to depend on the goal of an intervention," Albarracín said. "If the goal is to communicate as many recommendations as possible, then go for a long list of behaviors. But if the goal is to implement behaviors, then the best strategy may be to convey a lower number of recommended behaviors." ■

By Logan Weeter and the Department of Psychology



Professor Joanne Chory examines *Arabidopsis* plants in a greenhouse with postdoctoral researcher Sigal Savaldi-Goldstein (approx. 2008).



Joanne Chory with *Arabidopsis* plants (approx. 2008).

FINDING ANSWERS IN THE DARK

JOANNE CHORY became a leader in her field by explaining inexplicable plant behavior

By Doug Peterson



Joanne Chory as an associate professor in a greenhouse at the Salk Institute (approx. 1999).



Joanne Chory poses with Sam Kaplan, former professor of microbiology at Illinois, with whom she studied while attending Illinois, during a celebration of 10,000 days of the Chory laboratory in 2016.



Joanne Chory with her extended family at the celebration of 10,000 days of the Chory laboratory at the Salk Institute in 2016. Front row from left: Nick Chory (nephew), Mary Ann Chory (sister), Stephen Worland (husband), Joanne, Joe Worland (son), Katie Worland (daughter), Kayla Chory (niece), and Kelley Slingerland (assistant). Back row from left: George, Paul, and Michael Chory (brothers), John Kelley (brother-in-law), and Kevin Kelley (nephew).

IN AN IRONIC TWIST OF SCIENCE, it took mutant plants, grown in total darkness, to shine a spotlight on how plants respond to sunlight.

Joanne Chory (MS, '80; PhD, '84; microbiology) used her findings from mutants to trace the complete pathway of what happens at the molecular level when plants sense light, beginning with cell receptors. This research put Chory on a path to becoming one of the leading plant geneticists in the country. She has garnered all kinds of accolades over her long career, including being a member of the U.S. National Academy of Sciences since 1999 and winning the 2012 Genetics Society of America Medal. Most recently, she was awarded a 2018 Breakthrough Prize for her pioneering research on plant growth, development, and cellular structure.

She has also been a Howard Hughes Medical Institute (HHMI) investigator since 1997, and she was the first HHMI investigator to use a plant as the primary organism of study. But her first big breakthrough goes back to a 1989 paper in *Cell* about mutant strains of *Arabidopsis thaliana*, which “think they see the light when they haven’t.” In other words, these plants responded to the dark in the same way that a typical plant would respond to light.

This mutation is not desirable because healthy plants should be seeking the light, Chory said. Plants need the light to produce food, but with this mutation, they will not move above the ground in search of light. They will remain in the dark.

Although this mutation is not good for plants, it was a key to Chory’s research at the Salk Institute for Biological Studies. Work on the mutants led her to find a whole class of genes behind the plant’s response to light. She also discovered that a single gene was responsible for preventing plants from reacting to the dark as if they’ve seen the light.

“This finding was met with some skepticism at first,” she said, “because people said this is a very complicated process. Why would plants rely on one gene to keep it from happening? But plants do.”

Working on mutants also enabled her to pinpoint the genes involved in making a steroid that all plants use as a growth hormone. As one colleague put it, Chory “lets the mutants lead.”

Chory grew up just north of Boston as the third oldest in a family of six children, with three younger brothers who tested her mettle. She said that living in a large clan prepared her for coping with the dynamics of working in a large lab, such as the one at Illinois.

After receiving her bachelor’s degree from Oberlin College in 1977, Chory came to Illinois to study microbiology. She says it was an exciting time for microbiology at U of I, with Illinois professors Carl Woese and Ralph Wolfe making breakthroughs that changed the world’s conception of the tree of life. She worked in the lab of Samuel Kaplan, professor of microbiology, an experience that taught her how to run a large lab.

“I really liked Sam’s style,” she said. “We knew he was always there for us, but he wasn’t completely hands-on. That’s the way I have run my own lab, so Sam had a big influence on me.”

After Chory received her doctoral degree from Illinois, she did her

postdoctoral work at Harvard University, where she moved into plant genetics. She said the timing of this choice was right because 1983 was a landmark year in plant genetics, as scientists began to apply the new tools of molecular biology on plant systems for the first time. She also became part of the first generation of scientists to use *Arabidopsis thaliana*, a small flowering mustard plant, as a model for plant growth.

In more recent research, she has been looking at the intense battle that occurs between adjacent plants fighting over light. Plants may look passive in a field, but a fierce competition for sunlight is taking place.

Plant photoreceptors can detect light of different wavelengths, and when they sense far-red light being reflected by adjacent plants, they know their neighbors are casting shade on them. This triggers the plant to start growing rapidly in a race to outgrow the nearby plants.

“The plant acts as if it doesn’t have enough light, elongating the stem and keeping the leaves small as it tries to outcompete the neighboring plant,” she said.

However, she also points out that these adaptations in the struggle for light can lead to less biomass and less seed. The bottom line: Yields are lost.

Her lab is also starting to turn some of its attention to climate change issues by looking at ways for plants to more effectively trap carbon dioxide in deep roots. Carbon dioxide emissions are the major culprit behind warming trends worldwide.

“This is a good time for biologists to step up,” she said.

Chory has operated her Salk Institute lab for almost 30 years in La Jolla, California—a city on the ocean just north of San Diego. Being by the water may explain why some of the “equipment” stored in her lab includes surfboards piled up against the wall.

In 2016, her lab registered its 10,000th day of operation, and Chory also celebrated her 60th birthday. To honor both milestones, colleagues at Salk held a symposium in her name—a testament to her impact on others.

“Amazing person. I’ll always be grateful,” said one colleague, who credits her for igniting his career.

Today, Chory said she still draws upon the inspiration she received at Illinois. She fondly recalls how Ralph Wolfe taught her to use a Winogradsky column, a long glass tube containing pond mud, water, and carbon. She stored the Winogradsky column in the window of her U of I lab for three years, and she could see how various kinds of bacteria in the mud partitioned themselves along the length of the tube.

“You could see how the organisms found a sweet spot to grow,” Chory said.

Likewise, she has found a sweet spot of her own to grow and thrive at the Salk Institute, and she says she is grateful for the role that Illinois played in setting the stage for this work.

“Looking back on my time at U of I, it had a huge impact,” she said. “That was where I learned to design a good experiment that told you something. I’m very grateful to the people there who gave me a hard time when I needed to be given a hard time.” ■

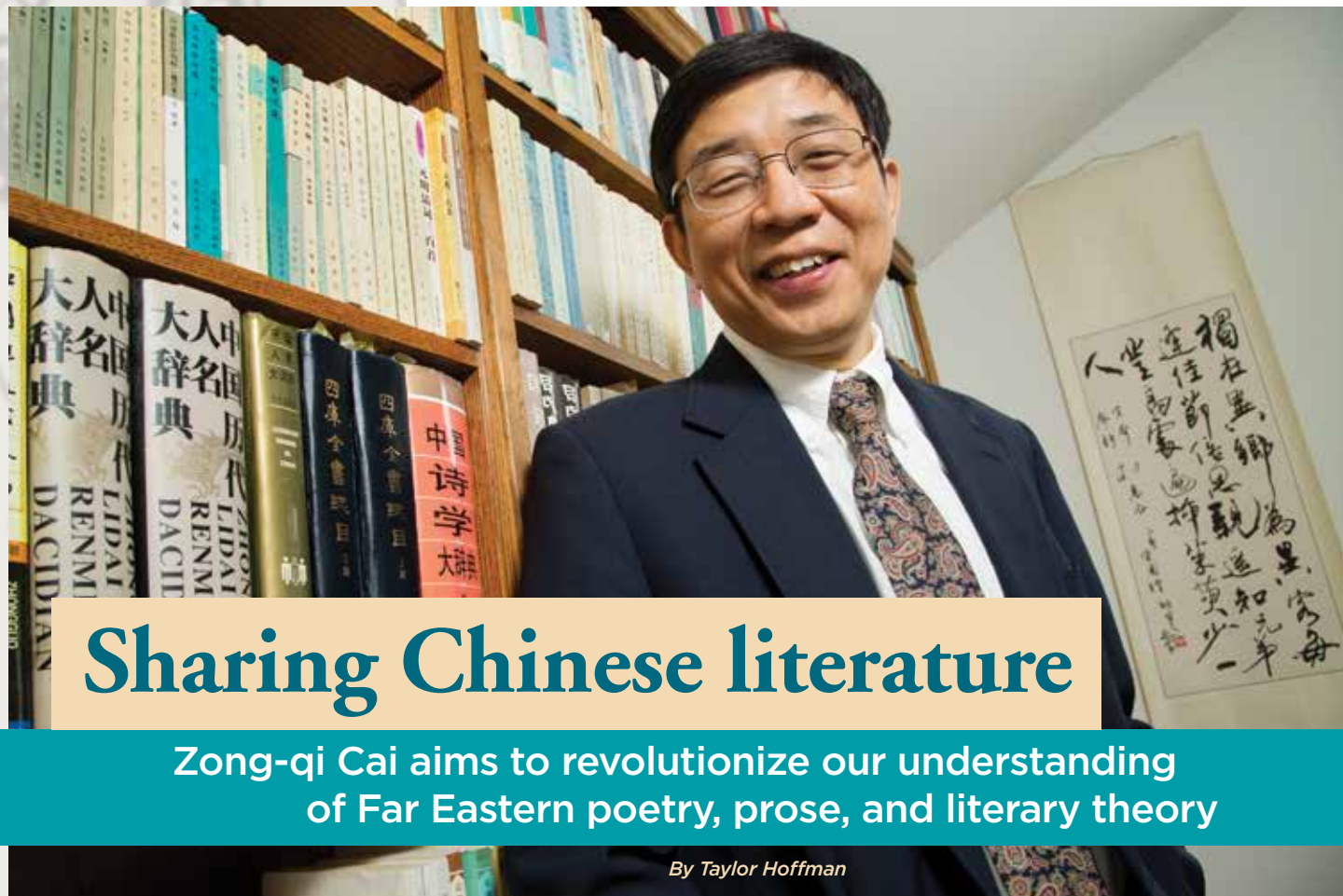


Joanne Chory as a young professor with a petri dish of *Arabidopsis* seedlings in 1989.

Zong-qi Cai, professor of East Asian languages and cultures at Illinois, is growing in prominence as an expert on understanding Chinese literature. He recently signed an agreement with Columbia University Press to be the general editor of a book series titled “How to Read Chinese Literature.”

Also, Cai’s journal, PRISM: Theory and Modern Chinese Literature, has been formally approved by Duke University Press. Co-sponsored by Lingnan University of Hong Kong and the University of Illinois, the journal is yet another fruit of his endeavors to pursue collaboration between Illinois and Chinese universities.

The “How to Read Chinese Literature” book series will consist of 10 books that cover fiction, drama, traditional Chinese poetry, prose and literary theory. The series, the most comprehensive project of its kind ever undertaken in the English-speaking world, aims to “revolutionize the teaching and learning of Chinese literature for the 21st century,” according to Cai.



Sharing Chinese literature

Zong-qi Cai aims to revolutionize our understanding of Far Eastern poetry, prose, and literary theory

By Taylor Hoffman

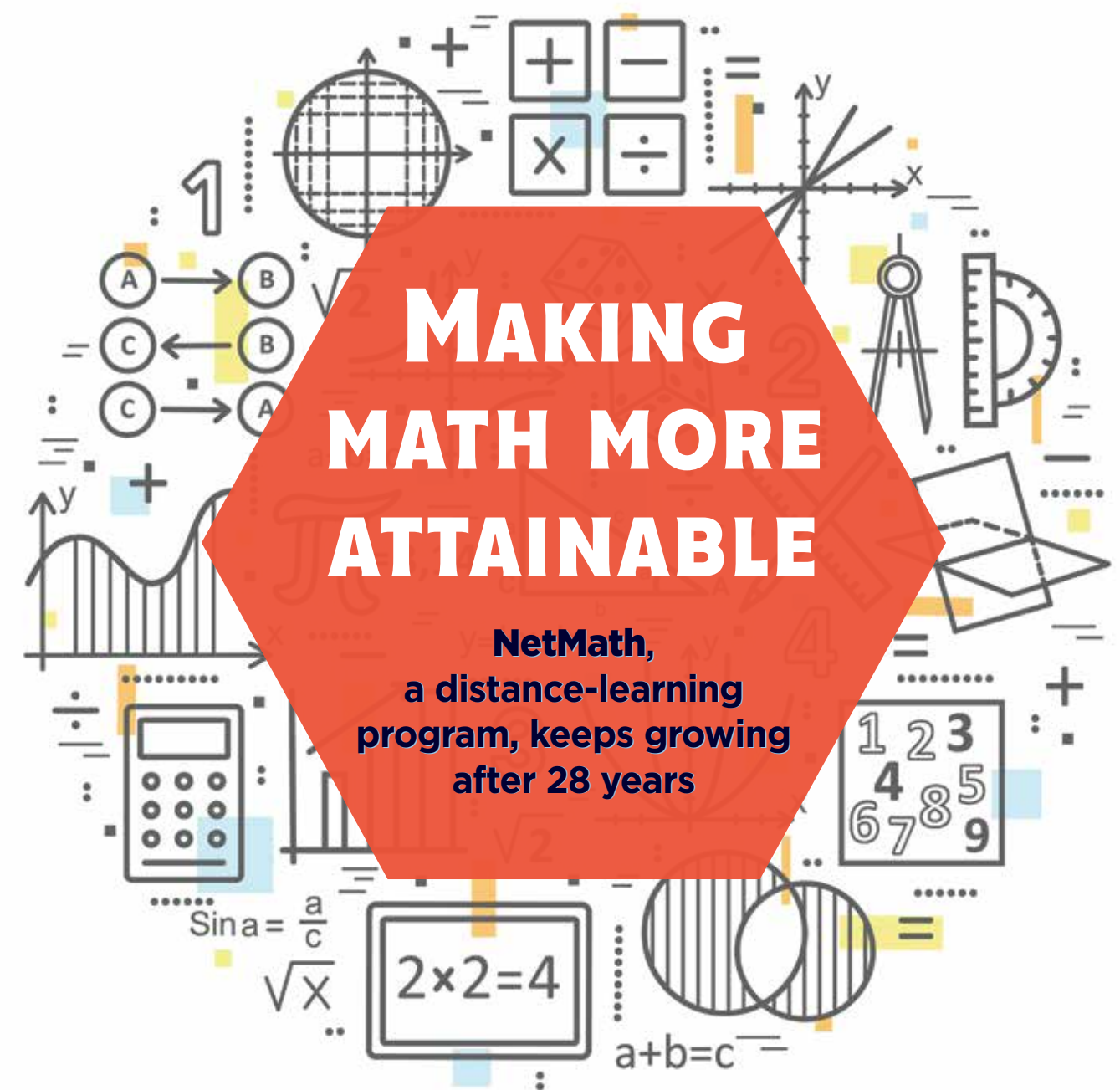
Zong-qi Cai is growing in prominence as an expert on Chinese literature.

A member of faculty at Illinois since 1993, Cai is currently the co-founding editor-in-chief of Journal of Chinese Literature and Culture published by Duke University Press, editor-in-chief of Lingnan Journal of Chinese Studies, and the host of the Forum on Chinese Poetic Culture.

He has also edited “How to read Chinese poetry,” a guided anthology and the companion language workbook text that goes along with it. Both texts are a part of the new book series and have received great response. This success led to Columbia University Press extending the invitation to Cai to make a book series.

Cai wishes to maintain the cross-cultural connections he has made on campus and promote the same connections for students and individuals interested in Chinese literature. He said that there are enormous benefits from international collaboration.

“My ideal scholarly pursuit is to try and bridge the gaps between Chinese language scholarship and English language scholarship. I want to establish a forum for scholar exchange,” Cai said. ■



ADVANCED MATH IS CRITICAL to people in countless careers, but living on a university campus and paying full tuition for only a few math courses isn’t always an option. With its Netmath program, the Department of Mathematics is making university-level math classes accessible to people who might not be Illinois students.

NetMath is a distance-learning program that’s been around since 1989 for people who can’t enroll on campus due to financial situations, distance, age, military service, or a plethora of other potential hindrances to learning.

The program ensures that people can get the education that they need, when they need it. Fees for NetMath classes are generally well under average tuition costs for a full-time student on campus.

Anuradha Murphy, associate director of NetMath, said stand-alone course materials for about two dozen courses are offered to a variety of learners, including high school students, high school graduates, undergraduate and graduate students at Illinois and other universities, active military personnel, career professionals, math hobbyists, and more. The courses range from college algebra

and trigonometry to calculus for business, differential equations, and introduction to probability theory.

The program has been growing in enrollment every year. In the 2016-17 school year, NetMath reached 1,500 people, and the program has no plans of slowing down. It’s currently working on a number of new, upper-level courses that will be ready for enrollment by this summer, as well as full undergraduate and graduate degree programs, where all the required courses can be taken entirely online.

Additionally, NetMath’s Partner High School program is being taken to schools across the country and the world; a large expansion in Hong Kong and China is in the planning phases.

“I hope NetMath will be the premier online program for math courses in this country and a source of pride for the University of Illinois,” Murphy said. ■

By Logan Weeter

At the separation of church and state

By Taylor Hoffman and Dave Evensen

LAS alumna kept her poise—and made her point—during an incendiary U.S. Supreme Court case

McCullum v. Board of Education, the landmark 1948 U.S. Supreme Court case which upheld the separation of church and state in public schools, didn't originate with a fiery sermon or philosophical debate. It began at a small, wooden desk in a school hallway in Champaign, Illinois.

That's where public school officials would put **James (Jim) McCollum** when he chose not to attend voluntary fifth-grade

Vashti McCollum, an alumna of the College of LAS, photographed here in 1948, fought for the separation of church and state in a landmark U.S. Supreme Court case. (Image courtesy of the Champaign News-Gazette.)



religious education classes. It was the seat for kids who misbehaved—and that didn't sit well with his mother, **Vashti McCollum** (AB, '44 general curriculum; MA, '57, social science).

She went to the school superintendent to complain. When told there was nothing that the schools could do, the issue grew in significance for Vashti, and she filed suit in the 6th Judicial Circuit court in Champaign County to bar religious education classes from public schools. The court ruled against McCollum, so she brought the case to the Illinois Supreme Court. In 1946, the Illinois Supreme Court upheld the circuit court ruling.

Vashti, a mother of three, didn't give up the fight, however, and in June 1947 the U.S. Supreme Court agreed to hear the case.

"Every once in a while, history messes with the wrong person," said Vashti's middle son, **Dannel** (BA, '58, science and letters; BS, '68, secondary education; MS, '94, geography), in a 2010 interview about his mother. Dannel once served as mayor of Champaign, and his book, "The Lord is Not on Trial Here," became the basis for a PBS documentary.

Small in stature but possessed with what her children describe as a strong personality, Vashti would need every bit of her strength to endure what happened as her case gained national attention. Champaign in the mid-1940s, said Jim (BS, '56, geology; JD, '62, law) in an interview with LAS News, was extremely pious, and reaction against the McCollums was strong as people perceived Vashti's case as being anti-religious.

Trick-or-treaters pelted the family with rotten food, the New York Times reported, and someone strangled the family's cat. Vashti was threatened and lost her job as a dance instructor at U of I. Daily life for Jim grew so tense that his parents (Jim's father, John, was a professor in the Department of Horticulture at Illinois) sent him to live with his grandparents in New York.

The family's support for Vashti never wavered, however. In fact, Jim, her oldest son, said that he looked to his mother for his own strength.

"I was calm, because she was calm," Jim said. "I was rarely scared. Even when my family received threats and I started to get into fights at school, I was calm."

Jim was careful to point out that although Vashti self-identified as an atheist, the home she built was not anti-religious. Religion, Jim recalled, simply was not a topic of discussion in their home, even though Vashti's name ironically appears in the Bible as queen of Ahasuerus, the Persian King. According to the Book of Esther, the queen refused to obey her husband's order and was divorced.

"I think (my mother) found pride in her name and her beliefs," Jim said.

Vashti's religious views were also influenced by her father, Arthur Cromwell, who was also an atheist and the president of

the Rochester, New York, Society of Free Thinkers. In the 2010 interview, Dannel recalled Cromwell refusing to swear on the Bible prior to giving court testimony during the case.

That's at least partly why, when Jim was in fourth grade—a year prior to his mother's clashes with school officials that eventually led to the U.S. Supreme Court case—and he actually wanted to attend religious education courses, Vashti balked at the idea. But Jim was curious, and he was also feeling pressure to join the classes.

"The pressure—to some extent from my peers but particularly from the fourth-grade teacher—made me want to be included in whatever was going on in there!" Jim said.

Vashti and John eventually relented and allowed Jim to attend the religious education classes. But after taking a few classes, Jim found the material uninteresting, so by the fifth grade he was opting out of the class. That's what landed him in the desk in the hall, and how he became singled out by his classmates and teachers.

"When I was punished for not being a member of the class, my mother got involved," Jim said.

Once the case reached the courts, Vashti contended that the religious education classes were a misuse of taxpayers' money, discriminated against non-Christian faiths, and were an unconstitutional merger of church and state. She was not without friends and sympathizers—a local Unitarian minister and a group of Jewish businessmen in Chicago supported her, according to news reports.

However, her arguments didn't find much traction in the courts until they reached the U.S. Supreme Court. There, on March 8, 1948, after testimony from both Vashti and Jim, the court ruled 8-1 in Vashti's favor.

Justice Hugo L. Black, who wrote the majority opinion, said the practice of religious education in Champaign schools was "beyond all question" using tax-established and tax-supported schools "to aid religious groups to spread their faith." He added, "It falls squarely under the ban of the First Amendment."

The ruling in the case is considered a precursor to decades of legal debate over school prayer, religious displays on public property, and other matters regarding the separation of church and state. As for Vashti, she earned her master's degree after the case was over, and spent much of the rest of her life traveling.

She wrote a book on the case, "One Woman's Fight," and served two terms as the president of the American Humanist Association. Vashti passed away in 2006 at age 93.

Jim, meanwhile, now lives in Arkansas and was a chapter founder for the Americans United for Separation of Church and State. He recalled his mother fondly—and what she stood for.

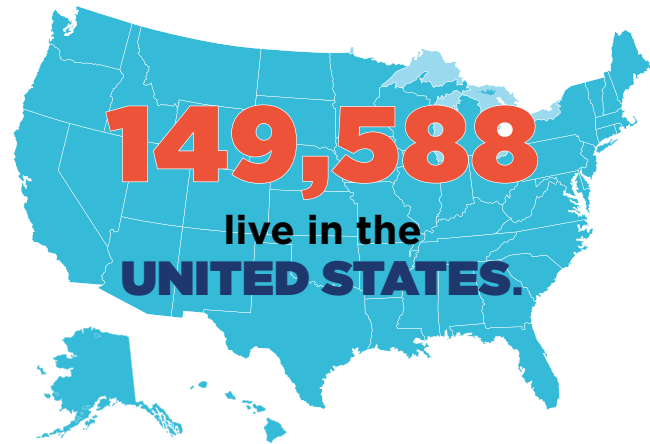
"As long as the public school is used to recruit the child," she once said, "or to segregate the children according to religion or to use the truancy power of the public schools to make them go to religious training or religious instruction classes, I'm against it." ■



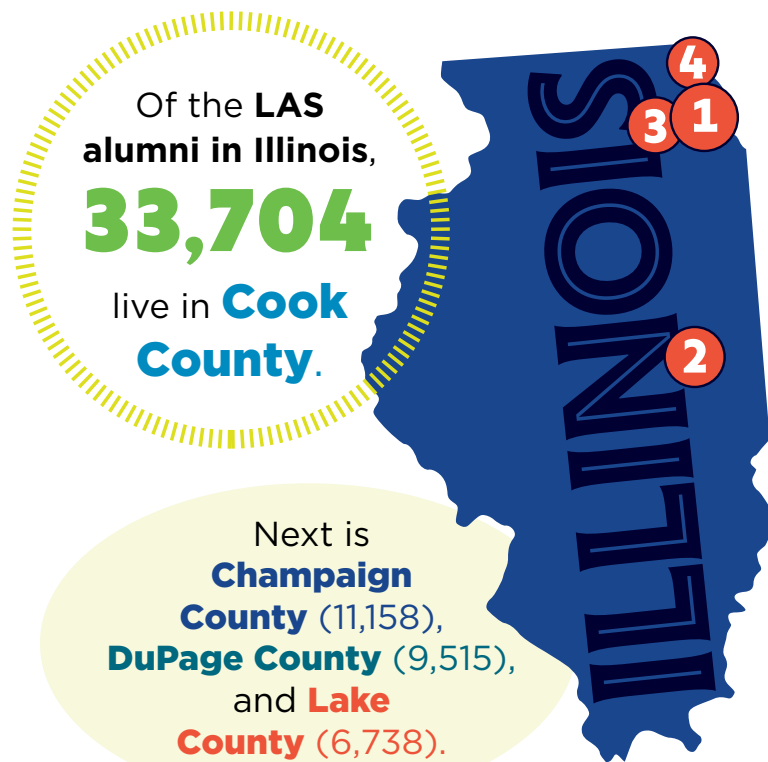
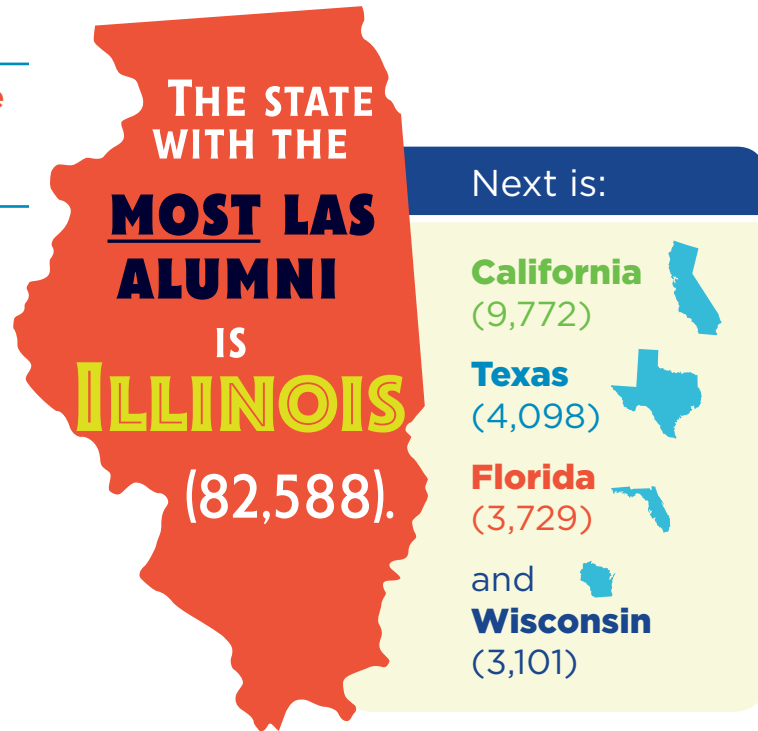
The classes taken—and not taken—by James McCollum, photographed here in 1948, in a Champaign school were the subject of McCollum v. Board of Education. James would later earn an LAS degree from Illinois. (Image courtesy of the Champaign News-Gazette.)

WHERE ARE LAS ALUMNI?

There are **168,216** living alumni of the College of LAS. They live in 132 countries, all 50 U.S. states, and all 102 counties in Illinois.



Next is **South Korea** (883), **China** (647), **Canada** (304), and **Taiwan** (291).



Source: University of Illinois Alumni Association

2018 Upcoming events

Learn new things, reunite with friends and classmates, and find out more about LAS initiatives and programs during this year's alumni events!

For more information and event registration, please visit las.illinois.edu/alumni/events, email us at las-alum@illinois.edu, or call (217) 333-7108.

Genomic Science Shaping Tomorrow's World

5 p.m. • **Thursday, April 5, 2018**
Carl R. Woese Institute of Genomic Biology

LAS at the Big Ten Experience

Noon to 3 p.m. • **Saturday in June or July (TBD)**

Big Ten Experience, Rosemont, Illinois

LAS Alumni Awards dinner and ceremony

6:30-9:30 p.m. • **Friday, Oct. 12, 2018**
I-Hotel and Conference Center, Illinois campus

Honoring Illinois' Presidents at the Abraham Lincoln Presidential Museum

6-10 p.m. • **Friday, Nov. 9, 2018**
Abraham Lincoln Presidential Museum, Springfield

2017's MOST POPULAR STORIES

Most-clicked COLLEGE OF LAS STORIES in the past year

1. Four College of LAS professors rank among most influential researchers worldwide (December)
2. Tasty invention from Illinois has its own day on the calendar (January)
3. Four professors in LAS elected to National Academy of Sciences (May)
4. New faculty join the College of LAS (October)
5. Researcher featured in Forbes 30 under 30 (January)
6. Chemistry Annex reopens after renovation (February)

For more top stories of 2017, visit go.las.illinois.edu/2017.

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