UCR’s research is improving the way the world eats — and it all starts with food on campus
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Feeding the World from Riverside

From rice to citrus to cowpeas, UCR’s research has changed the way people eat.
Flutist Meerenai Shim performs as part of the Culver Center of the Arts’ Outpost Concert Series. Founder of the flute and percussion group A/B Duo, Shim has performed all over the United States as a soloist and chamber musician.

This play by William Shakespeare defies the traditional rules of comedy with complex themes of justice versus mercy and sex versus love.

Free and open to the public, the colloquium will discuss the archaeology of Asian diasporic settlements in California.

The UCR Taiko Ensemble, directed by the Rev. Shuichi Thomas Kurai, puts on a spirited, 30-minute outdoor demonstration of Japanese drumming.

Brooklyn-based pianist Karl Larson performs as part of the Culver Center of the Arts’ Outpost Concert Series. A sought-after collaborator, Larson has worked with notable musicians around the country such as Tristan Perich, Mantra, Eve Beglarian and the Eco Ensemble.

This play follows Elizabeth Packard, who is committed by her husband to an asylum without proof of insanity. Based on historical events, Emily Mann’s play tells of one woman’s struggle to right a system gone wrong. “MRS. PACKARD” is the recipient of the Kennedy Center Fund for New American Plays Award.

This festival is full of original short films produced by UCR students, faculty and alumni. “Control Your State,” a new film by M.F.A. student Lisa Umhoefer, will also be screened.

Open to all staff, faculty and students, the sixth annual UC Walks event encourages the community to take a 20-minute walk around the UCR track as a way to promote physical fitness and better health.

The 34th annual UCR Pow Wow will celebrate Native American culture and traditions. This intertribal social gathering will include bird singers, handmade Native American jewelry, drum groups, arts and crafts and more.

Students in the UCR M.F.A. playwriting program offer this exciting selection of full-length plays. A different work will be presented at each performance.
Nourishing the Mind and Body at UCR

At UC Riverside, the citrus trees that beautify our campus and perfume the air each spring are tangible reminders of our roots as an agricultural research station. These trees link us to the Citrus Experiment Station, which was our campus’ direct forebear, and also serve as symbols of the innovative agricultural research that is part of the continuing mission of a public land-grant institution like ours.

UC Riverside and our sister University of California campuses have played a key role in helping California become the nation’s leading agricultural state. UC’s agricultural experts are at work in communities across California, using research-based knowledge to help farmers and ranchers cope with such challenges as invasive pests and the drought.

Now, UCR is joining other UC campuses in a system-wide Global Food Initiative, which aims to harness the university’s research prowess and other resources to tackle a critically important issue: how to feed a world population that is expected to reach 8 billion by 2025.

Of course, the question of food is not just about what we eat, as UC President Janet Napolitano noted last summer in announcing the initiative. It includes such complex, related topics as food availability, climate change, population growth and sustainability, making a comprehensive, interdisciplinary approach like UC’s essential.

As detailed in this issue’s cover story, UC Riverside faculty, staff and students are involved in an array of food-related research and activities. UCR scientists are studying ways to develop new and better crops, including rice plants that can survive catastrophic floods and wheat that can tolerate drought.

Other UCR experts are examining ways to help break the cycle of poverty that affects generations of rural farmers, while still others focus on innovative approaches to controlling the pests and pathogens that can devastate citrus and other crops.

These are just a few examples of UCR research making a difference in communities in California and around the world. But the campus itself is also redoubling its efforts related to food education and outreach.

As part of the new initiative, UCR faculty and staff are working to create a lecture series that will help inform us all about ways to eat more healthily and sustainably. UCR is also launching the California Agriculture and Food Enterprise (CAFÉ), a new institute that will serve as an umbrella for interdisciplinary research related to food and agriculture.

UCR students are also engaged in projects connected to the initiative, including investigating why nearly a quarter of our students report skipping meals often or very often.

At UCR, we’re working to nourish our community and the world, intellectually and physically, too.

Fiat lux,

Kim A. Wilcox
Chancellor
New Education School Dean

Thomas Smith started his tenure as dean of UCR’s Graduate School of Education in September 2014. Smith was previously a faculty member at Vanderbilt University’s Peabody College of Education and Human Development; he said he came to UCR because of top-level leadership, growing research capacity, and the opportunity to enhance the Graduate School of Education locally and nationally.

“It is an exciting challenge to go to a school that has strong roots and to take the good work that is already occurring and push it into something that is bigger and better recognized,” he said.

UCR Researchers Join Effort to Unlock Secrets of the Earth and the Solar System

UCR’s team of researchers will share a $50 million grant from the NASA Astrobio-ology Institute (NAI) to analyze Earth’s history. The purpose of the project is to answer the question of whether any other planets in the solar system can support life besides Earth.

UCR’s Alternative Earths team will spend five years trying to map the different states of life on Earth by studying ancient rocks to determine how oxygen developed in the atmosphere billions of years ago. The team consists of 19 scientists from 11 academic institutions and is led by UCR Distinguished Professor of Biogeochemistry Timothy Lyons.

Studying the Link Between Autism and Sound Hypersensitivity

Fragile X syndrome (FXS) is a genetic disorder in humans. It causes social impairments, repetitive behaviors and other behaviors on the autistic spectrum, as well as cognitive deficits. It is the most common inherited cause of intellectual disability and the most common cause of autism.

A team of UCR researchers received a grant from the National Institutes of Health (NIH) to study the mechanisms of auditory hypersensitivity in FXS from molecules to circuits to therapies. It is led by Khaleel Razak, an associate professor of psychology; the School of Medicine’s Iryna Ethell, a professor of biomedical sciences, and Devin Binder, an associate professor of biomedical sciences.
Plant Genome Scientist Awarded McClintock Prize

Susan R. Wessler, distinguished professor of genetics and world-renowned expert in transposable elements, was awarded the McClintock Prize for Plant Genetics and Genome Studies in recognition of her scientific achievements. Wessler is one of the nation’s leaders in the study of plant transposable elements — specifically regarding mutation, genome evolution and adaptation.

The awarding body called Wessler “one of the most creative minds and productive scientists in the study of plant genome structure, function and evolution.” It’s a significant award, Wessler says, because “it is named after a scientist whose discovery of transposable elements in maize started a revolution in biology and greatly influenced my career.”

Shaun Bowler Named Interim Dean

Shaun Bowler, distinguished professor of political science, began his position as interim dean of the College of Humanities, Arts and Social Sciences (CHASS) last November. Prior to that, he served as associate dean for Social Sciences in CHASS.

The goal, says Provost and Executive Vice Chancellor Paul D’Anieri, is to have a new permanent dean by summer 2015. “Professor Bowler has stated that he will not be a candidate,” D’Anieri said.

“Being interim dean is a temporary assignment for me but it promises to be an exciting one,” Bowler said. “I’ve always been very proud to be a part of UCR and CHASS and what we do here.”

Introducing the Diaper Detective

A team of UCR Bourns College of Engineering students created an inexpensive pad that can be inserted into diapers to detect dehydration and bacterial infections in infants.

The product, which won third place at the National Institute of Biomedical Imaging and Engineering Design by Biomedical Undergraduate Teams Challenge, operates much like a home pregnancy test or urine test strip. Chemical indicators change color when they come in contact with urine from an infant who is suffering from dehydration or a bacterial infection.

The pad, dubbed the Diaper Detective, costs only 34 cents to make. It doesn’t require electricity, cold storage or an advanced education to interpret. Plus it is customizable so other chemical indicators can be added to test for other medical conditions, and it could be adapted to be used in adult diapers. The Diaper Detective addresses the worldwide problem of infant mortality in developing nations.
Janet Lucas Appointed Interim Director of Athletics

Veteran athletics administrator Janet Lucas was appointed interim director of the UCR Division I Athletics program last October.

Lucas, who has been working as the executive associate athletics director at UCR since 2006, has more than 20 years of intercollegiate athletics experience, and takes over after the resignation of Jim Wooldridge.

Lucas said she is honored by the appointment: “I share UCR’s values concerning the relationship between academics and athletics. I look forward to leading the department in the development of an integrated and quality student-athlete experience that embraces and fosters academic, athletic and personal success.”

Suveen Mathaudhu, assistant professor of mechanical engineering, studies the underpinning mechanisms that make metallic materials and composites lighter and stronger.

Last year, he helped curate an exhibit that combines the real world of materials science and the fictional worlds of comic book heroes, such as Iron Man, Captain America, Spider-Man and Batman. The exhibit, entitled Comic-Tanium, was displayed at the ToonSeum, a museum dedicated to comic and cartoon arts.

“The goal is to get kids interested in materials science and engineering,” said Mathaudhu. “They typically don’t think of engineering as something cool or interesting. But when you make the connection that Spider-Man and Hulk are scientists, kids start connecting to what scientists and engineers do.”

On April 20, Mathaudhu will receive the Norm Augustine Award for Outstanding Achievement in Engineering Communications from the American Association of Engineering Societies. The award is given to individuals who speak with passion about engineering, allowing the public to better understand the field and better appreciate how engineers improve our quality of life.

“This may be the most significant award I will win in my career,” said Mathaudhu. “It focuses on the importance of connecting science to the general public at a level they can relate to.”

Superheroes + Engineering = National Award

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UCR by the Numbers

21,602
The number of UCR students enrolled in the 2014-15 academic year: 18,793 are undergraduate students; 4,280 are new freshmen; 2,809 are graduate students; and 1,293 are transfer students.

17
The number of UCR sports teams that compete in the NCAA Division 1 Big West Conference.

7,440
The number of students that will be admitted to the Master of Public Policy program for Fall 2015 enrollment. The School of Public Policy is UCR’s newest professional school.

20
The number of times that UCR has appeared on the Military Friendly Schools list published by Victory Media.

3,214,420
The total number of books in the four UCR Libraries.

8
UCR’s ranking among 539 schools on the Social Mobility Index (SMI) survey that is co-sponsored by CollegeNet and PayScale. The SMI ranking emphasizes economic mobility and the extent that a university helps its students with family incomes below the national median improve their social and economic standing.

7
UCR’s rank (tied) among all public universities in the United States by London-based Times Higher Education World University Rankings. The methodology behind this ranking is measuring how a university’s published work is cited by global scholars. UCR scored 91.5 in the research citations category.
“So we’ve got strawberries right here,” says Fortino Morales III, gripping a garden hoe. “The irises are down. Kale. That’s red cabbage. Here, we’ve got cauliflower or broccoli — we’ll know pretty soon.”

Stepping past rows of green sprouts budding from a vast expanse of soil, Morales stops at a box of leek seedlings, which he and a group of interns are planting today. He lifts one out of its square compartment, examines it in the sunlight and uncurls the white roots with his fingers, bits of excess dirt falling to the ground.

“One of the reasons why I’m really drawn to the garden is because it’s tangible,” says Morales, who comes from a family of growers. “And at the end of the season, you’re able to feed others.”

A 2011 graduate of UCR, Morales is the coordinator of R’Garden, the campus’ 3-acre community garden where students, faculty, staff and community members can harvest fresh produce while learning about sustainable food systems — and cultivate broader solutions.

Here in this space, and across the university, a movement grows.

UCR is part of the University of California Global Food Initiative, a UC systemwide quest to address the myriad of food issues confronting the world. This includes food availability, security, sustainability and nutrition. The initiative, launched earlier this year by UC President Janet Napolitano and UC’s 10 chancellors, comes at a critical time. By the year 2025, the world’s population is expected to reach 8 billion. Yet already, 1 billion people suffer from chronic hunger or serious nutritional deficiencies. Roughly the same number of people in the world are obese. UC, which has played a major role in helping California become the agricultural powerhouse of the nation, aims to be a leader in the global food arena.

Riverside is a key engine in the initiative. Its roots in food and agricultural research run deep. Ever wonder why you can bite into a juicy citrus fruit virtually all year long instead of only during its natural winter season? Thank UCR scientists, who discovered chemicals that slow the aging of the fruit. Need rice that can survive a monsoon flood? No problem. They’ve helped make that a reality, too. What about weapons to protect California against the...
Fortino Morales ’11, coordinator of UCR’s community garden, sits in front of a mural created by students who volunteer to grow produce on campus.
Asian citrus psyllid, a pest that could devastate the state’s citrus industry? Yep. UCR experts are fighting them. Could another potato famine be in our future? It’s possible, and UCR scientists are studying ways to address the threat.

On campus, students have participated in a wide array of courses, workshops and events focused on food education. These range from an Urban Garden seminar offered during the spring quarter to talks from local farmers to walking tours of the edible trees on campus, led by Tracy Kahn, curator of the UCR Citrus Variety Collection. As part of the initiative, UCR faculty and staff members are developing a UC systemwide lecture series called “Healthy Students, Healthy Campus, Healthy Communities.”

“UCR’s vision for the UC Global Food Initiative is to raise the profile of food issues as an integrated part of our daily lives starting locally, building globally,” says Peggy Mauk, director of Agricultural Operations and UCR’s initiative leader. “There is a renewed sense of energy on campus regarding food education and outreach. The initiative has been an excellent vehicle to bring together faculty, staff and students to address food issues.”

For the UCR community, it’s a movement they see, touch and even taste. This winter, fruits and vegetables from R’Garden will debut in the university’s residential restaurants and at the Barn. A hope is that when diners learn where their produce comes from, they’ll develop a greater appreciation for the harvesting process and the nutritional benefits of plant-based foods.

“We’re grooming the people who can really make a difference,” says Cheryl Garner, executive director of dining services. “These are first-time shoppers, first-time cooks and future parents and leaders. With the rising cost of health care, clearly, we can’t just continue to think about health in the way we have in the past. We have to ask, how do we educate around it? How do we actually change people’s eating habits?”

Garner adds that many farmers are now retiring, so there’s an urgency to inspire and groom the next generation. “Campuses need to develop programs to get young people
We’re grooming the people who can really make a difference.

excited about farming, to teach them how to do it in a proper manner — or else we’re going to run out of food,” she says.

To help engage students in the Global Food Initiative efforts, the UC Office of the President created a fellowship program funding three students on each campus to work on projects or internships related to the mission. At UCR, Daniel Lopez, Dietlinde Heilmayr and Darrin Lin received the award, which comes with an honorarium of up to $2,500. Lopez, a third-year undergraduate with a double-major in linguistics and anthropology, is investigating why 22 percent of UCR students self-reported that they skip meals often or very often, according to the 2012 University Experience Survey (UCUES). He hopes to curb the statistic and eventually open an on-campus pantry, a place where students can pick up food for the day, week and even the quarter. Heilmayr, a second-year graduate student in the School of Psychology, is studying the potential of gardening as a “multifaceted intervention,” a way to slowly shift people onto a healthy trajectory. And Lin, a senior undergraduate majoring in computer engineering, aims to showcase UC Global Food Initiative efforts by developing a new website.

UCR is also launching CAFÉ — the California Agriculture and Food Enterprise. Led by professor of genetics Norm Ellstrand, it is an institute that will act as an umbrella for UCR interdisciplinary research and other activities associated with food and agriculture in the broadest sense. “The membership is so diverse,” Ellstrand says. “We have researchers studying everything from the psychology of gardening to the interaction of diet and health to crop improvement during environmental challenges.”

Through the efforts at UCR and across the university system, the UC Global Food Initiative hopes to put the world on the path to feed itself sustainably and nutritiously. It all starts by planting the seeds.
Breaking the poverty cycle among rural farmers

STEVEN M. HELFAND
PROFESSOR OF ECONOMICS

In recent decades, Brazil has become one of the largest agricultural powerhouses in the world. And yet in the semiarid northeastern region, farmers are still under the weight of extreme poverty, passed on from generation to generation. Steven M. Helfand is evaluating a project that aims to break the cycle. In 2013, the economist was awarded a $70,000 grant by the International Fund for Agricultural Development (IFAD) of the United Nations to analyze how well cash-transfer programs work with rural development programs, such as one created by the IFAD.

Cash-transfer programs emerged in Latin America in the 1990s, providing small stipends to families. Conditions typically stipulate that children must attend school and receive vaccinations. IFAD’s Community Development Project for the Gavião River Region (PROGAVIÃO) was launched to increase incomes and improve living conditions of residents of the Gavião River basin through environmentally sustainable development. For example, a 16,000-liter cistern can provide a family with enough water to survive a drought for one year.

Helfand is leading a team that will investigate whether poverty can be increasingly diminished when such programs work together.

Giving plants strength to carry on

JULIA BAILEY-SERRES
PROFESSOR OF GENETICS
SEAN CUTLER
ASSOCIATE PROFESSOR OF PLANT CELL BIOLOGY AND CHEMISTRY

Natural disasters can wipe out crops that humans have been growing for millennia. What plants need are better coping skills.

Julia Bailey-Serres’ specialty is rice. She and her team of geneticists were involved in the identification of SUB1A, a gene that enables rice plants to survive complete submergence, which can happen during catastrophic flooding. The breakthrough resulted in Swarna-Sub1, a flood-tolerant rice variety developed by the International Rice Research Institute. Today more than 10 million farmers grow this variety. (In the fields of Bangladesh and India, one farmer’s wife told the researchers that the rice was growing even though it had been underwater for 15 days.)

Sean Cutler and his team of plant cell biologists discovered a way to supercharge the reaction of abscisic acid (ABA), plants’ naturally occurring stress hormone that helps them survive extreme conditions, particularly drought. After searching through many thousands of molecules to identify inexpensive synthetic chemicals that could mimic ABA, they came across one they named quinabactin, a molecule that’s nearly indistinguishable from ABA in its effects, but much simpler chemically and therefore easier to make.

“Discovering the full complement of plant hormones and understanding how they work is a very big goal that will have a tremendous impact on agriculture,” Cutler says.

Saving California’s citrus

ELIZABETH GRAFTON-CARDWELL
RESEARCH ENTOMOLOGIST

Every year California’s diverse ecosystem is invaded by new, often-destructive species of exotic pests, resulting in annual economic losses of more than $3 billion. The central San Joaquin Valley is home to 75 percent of California’s commercial citrus; that’s where Professor Elizabeth Grafton-Cardwell is working to develop effective methods of keeping pest populations under control. "I study the life cycles of pests and how to sample for them, I figure out how to preserve and boost their natural enemies and I learn how to utilize pesticides in ways that minimize their use," Grafton-Cardwell says. By minimizing fruit damage, growers can provide affordable, healthy fruit to consumers.

Grafton-Cardwell's goal is to keep the citrus pests under control with as few pesticides as possible, and to rapidly develop methods of identifying, monitoring and controlling new pests as they are introduced into California. Grafton-Cardwell is stationed at the Kearney Agricultural Center; she is the director of the Lindcove Research and Extension Center where she is in the heart of the citrus-producing area of California. She says, “These center locations help my research program to rapidly respond to grower needs and allow me to extend the information to the citrus growers in their own orchards.”
Developing affordable crop biosensors

HIDEAKI TSUTSUI
ASSISTANT PROFESSOR OF MECHANICAL ENGINEERING

In developing areas such as sub-Saharan Africa, farmers can’t afford to buy costly fertilizers, pesticides or herbicides to protect their source of food and income. They need a way to quickly identify and segregate infected plants in order to minimize a loss of harvest.

Hideaki Tsutsui’s lab develops low-cost tools and technology to fabricate biosensors on plant leaves. Through funding from the Bill & Melinda Gates Foundation’s Grand Challenges Explorations (GCE), they’re developing and testing an easy-to-read sensor — one that works similarly to a pregnancy test — to use on the leaves of crops such as corn, rice and cassava. When plants are in danger, the sensor changes color.

Researchers hope to use the sensor to monitor plant disease, health and nutrition contents.

The team has been developing the sensor technology using a model plant and a mock biomarker in the laboratory. The next step is to test it using a food crop and a plant pathogen in collaboration with plant pathologists.

Tackling late blight

HOWARD JUDELSON
PROFESSOR OF PLANT PATHOLOGY

The Irish potato famine of the mid-19th century led to the death of 1 million people on land and hundreds of thousands more who tried to escape on boats to find food elsewhere. A major culprit of epic agricultural disaster? Late blight, a plant disease that still exists — and still wreaks havoc on the world’s crops — even today.

Howard Judelson and his team are researching the biology and genetics of the fungus-like pathogens known as oomycetes, such as Phytophthora infestans, the species that causes late blight of tomatoes and potatoes. His lab uses gene transfer tools it pioneered and other approaches to study the pathogen’s life cycle, seeking better strategies for battling such diseases. Recently, the team has been helping a group in the United Kingdom develop potato cultivars resistant to late blight. Judelson also directs USAblight.org, a website that allows researchers nationwide to report late blight outbreaks and track them on maps.

Judelson believes most people don’t realize how much of a threat pathogens pose to food production, and it’s important to bring together the whole community to help defeat them. “We are lucky to have an inexpensive and ample food supply, but a devastating disease can always be just around the corner,” he says.

Helping wheat develop drought tolerance

J. GILES WAINES
PROFESSOR OF GENETICS

J. Giles Waines’ lab helps to solve food production issues in drought-stressed areas, including California, Mexico and many areas in Africa, Asia and Australia. To do so, the team gets down to the roots.

“During the last 150 years of scientific research, most plant science had concentrated on the above-ground parts of the crop plant, including stems, leaves, flowers and fruits,” Waines says. “There was relatively little research on below-ground root characters.”

But that’s changing. His research group found evidence that increasing the size of the wheat root system helped to increase grain yield in fields at the UCR Moreno Valley Station and at other locations in California by 5 to 10 percent. The discovery may allow more crops to be grown on the same amount — or even less — of water. A bonus: Wheat with a larger root system leaves less nitrogen in the drain-water that flows from the field, reducing nitrate pollution, a problem in California agriculture.

The group now aims to determine the optimum size for the wheat root system to maximize grain yield.
Sure, your refrigerator may be stocked with oranges, lemons, grapefruit and limes from Albertsons. But have you ever bitten into the beautiful pink flesh of a Cara Cara or tasted the rich sweetness of a Gold Nugget mandarin, or marveled at the gnarly, squid-like “fingers” of a Buddha’s Hand?

Tracy Kahn has, and can talk about the origins, qualities and harvesting seasons of each one. She’s the principal museum scientist and curator of UCR’s Citrus Variety Collection, which spans 22 acres. Consisting of two trees each of more than 1,000 citrus types, the collection is one of the most famous citrus germplasm collections in the world.

“Citrus diversity is amazing,” Kahn says. “We have fruits as small as a pea and as large as a person’s head. Fruits that are red, purple, yellow, blue, green. There are all types imaginable.”

UCR has a special connection with citrus, as its history begins with the fruit. In 1873, when Eliza Tibbets planted two Bahia navel orange seedlings in her Riverside garden, she inadvertently set off California’s citrus gold rush. The boom helped prompt the University of California Regents in 1907 to establish the Riverside Citrus Experiment Station, the forebear of UCR. In 1910, the Citrus Variety Collection was established to support the needs of the developing citrus industry in Southern California.

Today, scientists use the collection to conduct research projects, map citrus genomes and search for ways to battle crop-destroying pests and diseases. They also breed citrus to develop new varieties. In 2006, UCR introduced the Tango, a mandarin orange that can be grown anywhere with one to very few seeds.

Along with working with scientists, Kahn leads walking tours of the collection and collaborates with companies such as Givaudan, a Swiss manufacturer of flavorings and fragrances that finds inspiration in the groves. She’s also co-principal investigator with Mikeal Roose on a project to evaluate the commercial potential of new citrus cultivars. This is part of an integrated program to develop and evaluate new commercial citrus scion and rootstock cultivars suitable for California conditions.

“I probably have one of the coolest jobs on campus,” Kahn says. “In the springtime, the whole campus smells like citrus flowers.”

His official title is the director of the Center for Invasive Species Research, but Hoddle is also known as the “Indiana Jones of Insects.” Every year, California’s diverse ecosystem is invaded by new, often-destructive species of exotic pests, resulting in annual economic losses of more than $3 billion. Hoddle travels around the world on a quest for natural enemies that can combat these species before they cause extensive damage to agriculture, residential areas and native plants and animals.

The Asian citrus psyllid, for example, can spread the lethal citrus disease known as huanglongbing (HLB), previously called citrus greening. It’s already done crippling damage in Florida: So far, the insect-disease combination has cost the state’s citrus industry more than $4.5 billion in output and 8,000 jobs. And it has come to California. The psyllid arrived in San Diego County in 2008, and the first case of HLB was detected in Los Angeles County in 2012.

To find the insect’s natural enemy, Hoddle took multiple trips to Pakistan, where the psyllid is native. In the Punjab region, he and a team collected colonies of Tamarixia radiata, a type of wasp, and brought them back to the Quarantine Facility at UCR. Tests showed that the species were safe for the environment, and the first release took place in 2011. Since then, Hoddle and the California Department of Food and Agriculture have released more than 1 million Tamarixia radiata in Southern California at more than 350 different sites. Another parasitic wasp from Pakistan, Diaphorencyrtus aligarhensis, joined California’s battle against the psyllid in December.

Hoddle explains that using natural enemies to control invasive species reduces — and in some cases completely eliminates — the need for pesticides. “This is good for the environment, our food and water supplies, native plants and animals and people,” he says.
Few fruits are branded as strongly with Southern California’s fresh, laid-back image as the avocado.

Mary Lu Arpaia wants to make the avocado better. The UC Cooperative Extension subtropical horticulturist gives a checklist of traits that the ideal variety should possess. “The tree should be semi-dwarfing, adaptable to high density plantings, early-bearing and less prone to alternate bearing,” she says. “Ideally, it will be stress tolerant and have some salt tolerance and of course, be of excellent flavor and possess good shipping and ripening characteristics.”

Arpaia leads the avocado variety breeding program at UCR, which has existed since the 1950s. The goal of the research is to develop new and improved avocado varieties that meet the needs of California avocado growers.

In the early 1980s, the program released a variety called the Gwen. It was similar to the known-and-loved Hass in its flavor and thick, pebbly skin, though the trees required nearly a third of the space to grow and produced twice as much fruit. But the Gwen never took off commercially, in part because it didn’t turn black when it ripened like the Hass. After that, the program’s former breeder planted more than 60,000 variety seedlings on farms across Southern California. Avocados are a particular challenge since the selection rate for promising varieties is about one or two selections per 1,000 seeds planted, according to Arpaia. Four varieties were eventually released from this mass planting: Lamb Hass, SirPrize, Harvest and GEM.

The GEM avocado has the same excellent characteristics as Hass, but the variety is more consistent in its production and the trees are more compact, so growers have fewer harvesting and maintenance costs.

Now they’re evaluating even more varieties and hoping to release them over the next few years. Avocado lovers: Arpaia arranges avocado tastings each month at Batchelor Hall.
Abundant in protein and energy-rich oils, cowpeas — also known as black-eyed peas — are central to the diets of millions of people across Africa and Asia. But according to Timothy Close and Philip Roberts, the legume crop is only performing at 20 percent of its genetic potential. So they’ve set out to breed new cowpea varieties, ones with traits such as higher yield and quality, disease resistance, pest resistance and drought tolerance. To accomplish this, they’re not using the laborious breeding methods that have become the standard — crossing one variety with another, based on best guesses. Instead, they’re using a genetic tool called DNA marker-assisted breeding.

“We are at the dawn of a new era of worldwide cooperation for cowpea breeding and genetics, and it is exciting to be part of the transition that is underway,” Close says.

Placed in the plant genome, DNA markers are molecular flags that indicate the location of a particular genetic trait. They allow breeders to screen large populations of plants and locate genes linked to the traits they specify. Close, a professor of genetics, and Roberts, a professor of nematology, received two grants totaling nearly $7 million from the U.S. Agency for International Development (USAID) to continue developing better yielding varieties of cowpea through marker-assisted breeding and new genomic resources.

The support has allowed the pair to increase the resolution of the cowpea genetic map 40-fold, from about 1,100 genetic markers to about 45,000 genetic markers. Close calls it a “very detailed road map” of the cowpea genome.

“We now live in the light of the ‘genome era,’ Close says, describing the new landscape in which each organism can be studied directly or as part of an ecosystem. “The consequences for practical applications are tremendous for food security, renewable energy, conservation and to foster respect for human cultural diversity.”
When I was at UCR, I was reading Julia Childs books, thinking this is great. And then I became friends with her! –ROBERT DEL GRANDE

These five Highlanders made successful careers out of their love for food and merry-making. Here’s how UCR helped them get started.

From Biochemistry to Chef Artistry | ROBERT DEL GRANDE

When you ask world-renowned chef Robert Del Grande, Ph.D.’81, when he decided to pursue the culinary arts, he jokes, “I didn’t decide. I never decided — I still haven’t!”

Owner of the revered RDG + Bar Annie in Houston, Texas, Del Grande, 60, is celebrated for carving the path for modern Southwestern cuisine at a time when French and Italian reigned supreme. You could say that Del Grande helped American Southwestern cuisine gain its strong foothold in the culinary world.

Del Grande started as a science geek; he received his Ph.D. in biochemistry at UCR in 1981. “I lived in a house with two other guys who really loved to eat but didn’t know how to cook. I [learned to cook] as a kid, and that started it all,” he explains. “There was this rumor going around: ‘Those are the guys who live in that chateau on the other side of the citrus fields. They always have some kind of big dinner going on over there.’”

Del Grande would visit the campus bookstore for cookbooks to look for new recipes, adding to his arsenal of tried and trues from his mother. There was the roasted chicken nestled in perfectly caramelized onions and potatoes, and a traditional ham dinner whose leftovers were transformed into several other recipes that would last throughout the week.

Del Grande had planned on a post-doctorate after UCR, but spent his transitional three-month break in Houston, Texas with his then-girlfriend (now wife), working at her brother-in-law’s restaurant. He never left. And just like that, Del Grande says, “Three months turned into 30 years.” The restaurant — the legendary Café Annie — evolved into RDG + Bar Annie five years ago.
"When I was at UCR, I was reading Julia Childs books, thinking, ‘This is great,’” he says, chuckling. “And then I became friends with her! It was totally bizarre.”

These days, Del Grande has his sights on a new venture: ROXOR, the first-ever gin with Texas origins. Del Grande created ROXOR from lab equipment purchased online (“You’re right back there in the lab, aren’t you?” his wife said) and inspiration from a profile on Tracy Kahn, the curator of UCR’s Citrus Variety Collection, and the origins of the mandarin orange.

“Citrus and distilled spirits,” Del Grande sums up, “brought me back to UCR.”

**Brewing Up Excellence | MIKE PERRY**

Chat with Mike Perry ’96 and you’ll gain a new appreciation for coffee — including the science, art and passion that go into making the best cup.

As founder and CEO of Klatch Coffee Inc., Perry spends a third of the year traveling to places like Nicaragua, Costa Rica and Brazil to select the best beans. He then roasts them to perfection using the “peak of flavor” style he developed shortly after graduating from UC Riverside.

It’s a life the Harley-riding, sandal-clad CEO would never have imagined two decades ago.

He and his wife, Cindy, opened their first coffeehouse in 1993 as a way to keep financially afloat while Perry pursued his degree in biochemical engineering. Perry enjoyed the work so much, however, that after graduation he decided to stay in the business.

“I loved the interaction with the people and I loved the product,” he says.

Yet he felt the product could be improved. So when a friend gave him access to a roasting machine, Perry applied his engineering skills in search of a better coffee. First he adjusted the device’s temperature probe so it would function like a meat thermometer, allowing him to gauge bean temperature. Next he experimented with airflow, flame and other variables of the roasting process.

“I would take different paths, recording everything I did from the start to the finish. I soon realized I could develop a roast much the way a chef could manipulate meat or a sauce to get a different taste.”

With his technique perfected, Perry set out to find better beans. He secured his first batch from a farm in Nicaragua and was so impressed with the quality that he reached out to farmers in other countries. Buying direct from the farms gave Klatch great coffee at good prices while still paying farmers a better rate. Klatch now works with thousands of farmers, many of whom Perry personally visits each year.

The resulting coffees have garnered Klatch several awards, including Best Coffeehouse in America, Micro Roaster of the Year and World’s Best Espresso.

“Engineering is really about being creative,” Perry says. “UCR challenges students to take stuff to the next level and, for me, that fulfilled itself in coffee.”

Klatch’s custom blends are distributed to coffeehouses, restaurants and hotels nationwide. The brews are also available at Klatch coffeehouses in Rancho Cucamonga, San Dimas, Ontario, LAX and Korea.
Organically Fused with Flavor | LITTY MATHEW

Like all good things, Greenbar Distillery started out as a hobby. Melkon Khosrovian infused liquor for his wife, Litty Mathew ’91, so she could learn to enjoy the Russian brandies and vodkas his family loved so much. He took cues from Litty, who would often shop at farmer’s markets for fresh ingredients, and incorporated all-natural complexities into liquors.

“He would get a fruit or vegetable and back it up with a fresh herb of some sort and then a dry spice — a variety. He came up with some beautiful combinations,” Mathew, 44, says.

Khosrovian would affix beautiful handmade labels on these bottles and gift them to friends and family, who began spreading the word about these wonderfully fragrant bottles of liquor.

“It turns out I wasn’t the only fan,” Mathew explains. “Pretty soon people were calling us for these little treats. So we thought, we better get the phone number unlisted or go into business! That was 10 years ago.”

It’s really about putting flavor in the bottle. — LITTY MATHEW

Greenbar Distillery was founded by Mathew and Khosrovian in Monrovia, California, but the couple opened a new location in Downtown Los Angeles in 2012 — the first distillery in the city since Prohibition. Greenbar uses all organic ingredients, a decision made by Mathew and Khosrovian because they found that organic produce simply tastes better: “It’s really about putting flavor in the bottle,” Mathew says.

Mathew was an economics and political science double-major at UCR; she says Tracy Kahn, UCR Citrus Variety Collection curator, helped introduce some amazing citrus to the Greenbar ingredients list.

But she credits the year she spent studying in France as an undergrad for changing her life. “The ingredients were so good, the farmer’s markets were fabulous, and Lyon was the center of all this great food. Then I brought it together for my everyday life and then into a career finally,” Mathew says. (She also went on to earn her master’s in journalism at USC — where she met Khosrovian on the first day of class! — and attended culinary school in Lyon, France.)

Greenbar Distillery products are sold throughout America and even overseas. You can find the couple giving walking tours three nights a week at their 14,500-square-foot distillery.

“I really enjoy the tours because it’s so fun to see that flavor makes a difference. People will try something and be like, ‘Wow, that’s what it tastes like!’ ” Mathew shares. “It’s fun to see people say, ‘Wow, this tastes like real food.’ And that makes me happy.” BY V.C.

Crafting a More Creative Beer | RYAN WICKS

Wicks Brewing Co. is not your average son-and-pop shop. In fact, the brewpub founded by Ryan Wicks and his father, Brad, is quite possibly the only one of its kind, incorporating a restaurant, tap room and brew-on-premises system that allows customers to create their own craft beer.

“We wanted to make our place a destination that puts Riverside on the map in the craft beer world,” says Ryan Wicks, who studied at UCR. “Most microbreweries have a small tasting room with space for about 20 people. Here it’s a full venue with room for 230, plus we have live music and standup comedy.”

The unique business has attracted attention from several television networks such as The Food Network, which featured the brewpub in an episode of “Boss Under Fire.”

He and his dad launched the business in 2013 with the intent of sharing their love of craft beer with fellow enthusiasts. The restaurant was an afterthought, originally planned to give people someplace to eat while they waited the three hours for their custom brews to finish. But people soon flocked there for meals, enjoying a few beers while dining.

The tap list includes popular labels along with a few Wicks’ custom beers bearing names such as Black Night, Die Krausen and The Farmer’s Toil, a citrus wheat created using fruit from UCR’s Citrus Variety Collection.

“We wanted to honor Riverside’s citrus heritage and thought it would be cool to bring out a beer that tapped into UCR’s citrus program,” says Wicks. “We usually pick two to three citrus varieties — sometimes a sweet orange, other times it’s grapefruit or lemon — and no two batches are the same. We
cube up the whole fruit, put it in a cheesecloth bag and boil it with our beer.”

Wicks’ brew-on-premises system features six kettles that customers can rent to brew their own recipes, often with creative input from Wicks’ brewing staff. More than a hundred custom blends have been created with the system since the brewpub opened.

Some of the more interesting creations include a Macadamia Nut Brown that used nuts from a customer’s tree, a Citrus Saison that combined citrus fruit with rose hips, and two beers brewed in memory of fallen officers. Sheepdog, an American red ale, honors San Bernardino County sheriff’s detective Jeremiah MacKay, and Freight Crain, a chocolate malt stout, honors Riverside police officer Michael Crain. Both men died in the February 2013 pursuit of homicide suspect Christopher Dorner.  

We wanted to honor Riverside’s citrus heritage and thought it would be cool to bring out a beer that tapped into UCR’s citrus program —**Ryan Wicks**

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**A Journey Through Food | Dee Nguyen**

When chef/owner Dee Nguyen ’97 opened **Break of Dawn** in 2006, it was a hit. Devoted crowds flocked to the restaurant for Nguyen’s dishes: Asian-influenced California cuisine with house-cured pork belly nestled between delicate tempura eggs, napa slaw and kimchi-spiced crema, while Hawaiian sausage is served alongside green papaya, hijiki, scallions and fried eggs. **Break of Dawn’s** eclectic menu is filled with all sorts of ingredients most people would have to Google first, but it keeps guests’ curiosity — and hunger — satisfied.

Nguyen, 40, explains that he took up cooking as a necessity while in junior high. His family had just emigrated from Vietnam and his parents were occupied with work, so he learned to create food for himself: fried eggs, Chinese sausage, fried chicken wings, rice, that sort of thing.

Nguyen attended UCR as a biology major with a minor in psychology. But just as he’s carved out his own style as a chef, Nguyen has carved out his life the way he wants to live it. While his mom urged him to go on to dentistry school, Nguyen had other ideas.

UC Riverside, Nguyen says, is where the cooking and partying all started. As a student he lived in a Moreno Valley house with five roommates and five dogs. Nguyen, of course, cooked for them all.

“I made a lot of really good food; they were all my guinea pigs and it turned out pretty good,” Nguyen explains. He decided to head to San Francisco for culinary school. After landing on the culinary fast track that led to an executive sous chef position at the Ritz-Carlton, Laguna Niguel, Nguyen decided to pursue his own dream of opening a restaurant.

While the crowds are hearty and the waitlist is long, **Break of Dawn** to this day does not offer a dinner service. In fact, **Break of Dawn** is open for business five days a week for brunch, a very conscious decision made by Nguyen early on, who wanted more than anything to help raise his disabled son, Berlin, now 13. “Do what you love and keep your family close,” Break of Dawn’s website boasts.

As for the restaurant’s memorable name, Nguyen explains that the story behind it is twofold: Sure, it’s a breakfast place, but it also signifies a new beginning to a new journey.  

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**ONLINE**: Check out recipes from Robert, Dee, Mike, Litty and Ryan at magazine.ucr.edu
On a Mission to Help Children Learn
H. Lee Swanson, a distinguished professor in the Graduate School of Education, has held the Peloy Chair, an endowed professorship, since arriving at UC Riverside in 1991. His research focuses on helping children — particularly those in elementary school — with learning disabilities.

How did you end up studying children with learning disabilities?

I graduated from college during the Vietnam War and was a conscientious objector. So I had to do two years of alternative service and was assigned to a school for special-education kids. A lot of kids had behavioral problems, but others, who were smart kids, just couldn't read, write or do math. I became quite interested in those kids and realized we didn’t know a whole lot about how to help them.

How has your endowed chair helped you and your research?

It’s a nice addition to the position because I could support graduate students. It’s allowed me to carry on my research during the summer.

How did you come to work at UCR?

I had a wonderful job at the University of British Columbia, but this was a wonderful job, too, especially with the endowed chair. My wife has relatives in the area, so I applied for the position.

What do you like best about working on campus?

I like working with the students we have in the doctoral program and working in an area where research is needed.

What do you hope to leave as your legacy in your lifetime?

I started off my research with very theoretical models that focused on cognitive development in kids with learning disabilities. The last few years I have made a concerted effort to focus on interventions that work, primarily in the area of math cognition.

What do you do in your spare time?

I just got back from a golf-palooza with my three boys in Washington, D.C. I would say I am abysmal in terms of my abilities in that area. I read a lot, too, mostly history and biographies.
Multicultural America: A Multimedia Encyclopedia
Carlos E. Cortés attempts to catalog the changing population of America

PROFESSOR EMERITUS OF HISTORY CARLOS E. CORTÉS
retired from active teaching at UC Riverside in 1994, but that
didn’t mean he stopped educating people. As the author of “The
Children Are Watching: How the Media Teach About Diversity”
and the creative/cultural advisor for Nickelodeon’s Peabody
Award-winning children’s television series “Dora the Explorer”
and its spinoff, “Go, Diego, Go!,” Cortés has always been able to
teach cultural sensitivity — and through varied, popular channels.
He also lectures about diversity and multiculturalism around the
world to this day. Most recently, he edited “Multicultural America:
A Multimedia Encyclopedia,” which explores how the country is
pivoting from a white-black-dominated American population to
one that is multiracial and multicultural.
1. Professor Carlos Cortés came to UCR in 1968 as a Latin American History professor. In 1971, he was appointed to a state-wide task force by the California Department of Education. For five weeks, his job — alongside many other scholars of different ethnicities — involved looking at how minorities were represented in social studies textbooks that the state of California was considering for adoption. “In those five weeks, something crystallized in me,” Cortés said. “I saw just how badly minorities have been served in the textbook industry, and from there I just jumped into it.”

2. Cortés began to get more involved in educating people about diversity. He started writing textbooks, then spread out into research, publishing and now consulting with TV shows. “My most famous thing is [the kid’s TV show] ‘Dora the Explorer,’ where my official title is Creative/Cultural Advisor.”

3. As an established authority on diversity in the United States, Cortés regularly received requests for seminars and talks. On July 4, 2011, Geoff Golson, who develops encyclopedias for academic social science publishers, reached out to Cortés to ask if he could serve as an editor for a multicultural encyclopedia.

4. The 2010 Census was the impetus for the project. “The census had such remarkable results, particularly in the enormous increase in people of color in the United States; the Asian and Latino population jumped 43 percent in the 2000s!” Using that as a take-off point, Golson pitched the idea to a publisher, saying, “I think America is ready for a multicultural American encyclopedia. There’s nothing like this out there.” He found Cortés by the magic of the Internet offered him the position of editor. “And that was that!” Cortés said.

5. The encyclopedia devotes a large section to the U.S. Census, its history and how minorities have been categorized through the years. Even as a diversity expert, Cortés says working on the encyclopedia taught him much more about the subject. “I learned so much history — about court cases that dealt with ethnicity in America, about how the census dealt with immigration, and the relationship of wars to multicultural America.”

6. Cortés settled on 915 entries for the encyclopedia, which include topics such as major ethnic groups, art, culture and more. “I just thought, what don’t you see in traditional encyclopedias? Maybe there’s a relationship between multicultural Americans and opera, or multicultural America and disability, or multicultural America and sexual orientation. There’s all these intersections that people usually don’t think about, so I thought, let’s [create] something that readers are not going to find anywhere else.”

7. The project took more than two years to complete. These entries — which are written in an accessible language — aren’t just for scholars, but for everyone interested in race, culture and history. “There were some entries that made me say, ‘We’ve gone through a really tortuous history in our relationship to ethnicity in America,’” Cortés said. “As an expert, I’m still finding ‘Aha!’ moments. Grappling with diversity makes America a better place.”
In the series “The First 50,” we follow members of the inaugural class of the UCR School of Medicine through the challenges they face.

Rafael Ornelas has successfully completed his first year at the UCR School of Medicine and, after a long summer break, he is returning as an experienced second-year medical student.

“I came into the classroom more comfortable,” said Ornelas. “In terms of rigor, compared to last year, classes are more intense, but you also have the feeling that you’ve been through this already. It’s not bad when you have the context of first year.”

The new year comes with a new set of challenges, including the Step 1 exam, or “Boards.” Along with their degree, physicians are required to obtain a license to practice medicine by passing a series of national exams — a three-step process.

“Studying for the Step 1 exam is [on everyone’s] mind,” Ornelas explains. “By the end of this year, we have to take that national exam and it’s pretty daunting!”

Leading the new Medical Spanish (MedSpa) class for students who do not already speak Spanish is another task for the second-year medical students. Over the summer, Ornelas, along with three other second-year medical students, re-wrote the MedSpa curriculum from scratch and focused on creating the course’s workshops, modules and luncheons for the year. The group is using all the material they created this school year. “It’s what this medical school needs, especially because of our location. Southern California has a lot of Spanish-speaking patients, and it’s good that the medical students who come out of UCR will have some exposure to medical Spanish so they can connect to the patients culturally.”

Ornelas also kept busy this summer with a six-week research project for Huntington’s Disease through Johns Hopkins University. “I was on a different stage trying to learn something. It felt very different compared to UCR, a place that I am comfortable in and have been at for more than six years.”

With one year of medical school under his belt and his second year taking form, Ornelas is ultimately one step closer in his journey to becoming a doctor. He said, “Coming into medical school, I’ve had this mentality — and I still have it — that’s basically to become the best and most efficient physician that I can possibly be.”
Love, politics, transnational communities and other Page Turners

The Feel Trio
by Fred Moten
Letter Machine Editions
April 2014, 104 pages

According to Fred Moten's description, "The Feel Trio" is Cecil Taylor, Tony Oxley and William Parker. In the wake and air and light of The Feel Trio, what it bears and what propels them, which is everything in particular, The Feel Trio tries to put some things together. Alabama runs through those things like nobody's business. To celebrate the varieties of black devotion. But coalition can't be too easy; it's in our nature not to come naturally lyrically, beautifully violently. The organizing principles, in our extramusical tailor's retrofit of fitting, sharp as a tack from the tone worlds of east by southeast of Sheffield, the Bronx's compassionate project/s and fly, flaired, flared Corona: listen to everything, relax the shape, approach with love, be worthy of a lovely t!

Moten is a professor of English at UCR. “The Feel Trio” was nominated for a National Book Award. Read his interview on page 36.

Smart People Don't Diet: How the Latest Science Can Help You Lose Weight Permanently
by Charlotte Markey ('00 M.A., '02 Ph.D.)
Da Capo Lifelong Books
December 2014, 280 pages

Being on a diet is a miserable experience for most people, and it rarely leads to the desired goal of shedding fat. In fact, studies show that dieters often gain weight rather than lose it because most diets' intensity, restrictions and short duration are ill-equipped to produce long-term effects. In this book, Charlotte N. Markey offers a refreshingly different approach to weight management. Based on more than 100 years of research by scientists, doctors, nutritionists and psychologists, Markey's plan addresses the underlying causes of weight gain and offers proven strategies for healthful, lasting weight management, including advice on how to eat well, lose weight and keep it off.

Markey is a professor of psychology at Rutgers University at Camden.

Mario Vargas Llosa: A Life of Writing
by Raymond Leslie Williams
University of Texas Press
December 2014, 250 pages

Awarded the Nobel Prize in 2010 at the age of 74, Peruvian writer Mario Vargas Llosa has held pivotal roles in the evolution and revolutions of modern Latin American literature. Providing a unique perspective on the complexity, nuance and scope of Vargas Llosa's lauded early novels and on his passionate support of indigenous populations in his homeland, Williams analyzes recent works and provides a detailed description of Vargas Llosa's traumatic childhood and its impact on him, as well as of the authors who influenced his approach, from Faulkner to Flaubert.

Williams is distinguished professor of Hispanic studies at UCR.

The Original Guitar Hero and the Power of Music: The Legendary Lonnie Johnson, Music, and Civil Rights
by Dean Alger ('74 M.A., '78 Ph.D.)
University of North Texas Press
March 2014, 384 pages

Lonnie Johnson (1894–1970) was a virtuoso guitarist who influenced generations of musicians from Django Reinhardt to Eric Clapton to Bill Wyman and especially B.B. King. Born in New Orleans, he began playing violin and guitar in his father's band at an early age and can be heard on many Duke Ellington and Louis Armstrong records.

In this book, Dean Alger answers many biographical mysteries, places Johnson and his musical contemporaries in the context of American race relations and argues for the importance of music in the fight for civil rights. Alger also analyzes Johnson's major recordings in terms of technique and style.

Alger is a writer and a public affairs and media consultant.

These books are available for purchase at the UCR Campus Store and online at www.ucrcampusstore.ucr.edu. They have been discounted up to 30 percent.
What guarantees success at the University of California, Riverside? It’s not whom you know, and it’s not who your parents are. It’s what you know and who you are.

That’s the message that Chancellor Kim A. Wilcox imprinted upon his guests at the annual Chancellor’s Dinner, held Oct. 18, 2014. That night, more than 300 campus friends, students, alumni and donors gathered to raise support for the best and brightest UCR students.

After reading a lengthy list of UCR’s recent accomplishments, Wilcox said, “We are so proud of who we are and where we are going, but we’re also excited about the time in which we’ve arrived.”

UCR has hit its stride and is currently at a place of distinction for faculty research and for putting education within reach for students who rely on Pell grants and are the first in their family to go to college.

Wilcox spoke of the transformative role that UCR plays in the lives of more than 21,000 students and thanked all those who contribute their personal and financial resources to sustain the institution’s mission.

The evening was also the 28th anniversary of the UC Riverside Alumni Awards of Distinction. Colorful lights transformed Highlander Union Building’s main ballroom into a showcase for the stories of UCR’s outstanding alumni, scholarship recipients and the donors who make those scholarships possible.

This year, the Outstanding Young Alumni Award was presented to Shah Selbe ’04 for his work and research on ocean conservation. Partnering with organizations such as the Center for Ocean Solutions and the Monterey Bay Aquarium, Selbe earned the recognition of the National Geographic Society as one of its 2013 Emerging Explorers.

The Alumni Service Award was presented to Bill Kroonen ’60. In addition to serving on the Desert Sands Unified School District’s Board of Education and the Riverside County Board of Education, Kroonen has volunteered on behalf of many Coachella Valley community organizations over the years, including the educational programming committee for UCR Palm Desert.

Michael Devirian ’66, a former ASUCR president, was honored with the Distinguished Alumni Award for his extraordinary career at JPL and NASA. Among his many achievements, Devirian worked as Mission Control for the Mars Mariner and Lunar Lander Missions from 1966-70. He was also the operations manager for the Hubble Space Telescope and Camera Installation.

Pamela and Mark Rubin received the UCR Medallion in recognition of their impact on UC Riverside and the greater Riverside region through their vision for building community, leadership and philanthropy. The event was sponsored by the UCR Alumni Association and the UCR Foundation.

“For we are so proud of who we are and where we are going, but we’re also excited about the time in which we’ve arrived.”
HOW I SEE IT

UCR’s beloved mascot, Scotty Highlander, took on paper form in the #MiniScotty photo contest for Homecoming 2014. People took a die-cut paper figure of Scotty in the previous issue of UCR Magazine, assembled him and then took creative photos to post on Facebook, Twitter and Instagram, hashtagged #MiniScotty, of course! The bear was seen at the State Capitol, with alumni and their children, and everywhere on the UCR campus. Behind each picture, the Highlander Pride was strong!

Barnes & Noble gift cards were awarded for photos with the most school spirit, creative location and clever caption. The grand prize winner was Maria Jaramillo, who made a collage of Mini-Scotty in an orange orchard.

ON THE WEB

@UCR

#miniscotty
On Advocacy Day, alumni, parents and friends meet in small groups with elected officials to discuss issues affecting higher education and UCR in particular. Join us in Sacramento as we carry our message to elected leaders. For more information and to register, visit www.alumni.ucr.edu/ucday.

Travel the Globe and Expand Your Horizons

The UCR Alumni Association travel program offers a mix of exploration, education and adventure in partnership with reputable, prescreened tour operators. These are just two of the many trips we have available this year. Visit www.alumni.ucr.edu/travel for details about the trips we are offering in 2015.

• Grand Danube Passage, 14-day land and cruise journeys, Sept. 8-22
• Greece, 10-day land journeys, Oct. 7-17

Tour participants, whether UCR alumni or not, must be members of the UCR Alumni Association. Each member may bring up to three travel companions as guests.

How to contact the UCR Alumni Association:
Website: alumni.ucr.edu
E-mail: ucralum@ucr.edu
Phone: (951) UCR-ALUM or (800) 426-ALUM (2586)
50s

Charles Field ’58 was honored at the fall 2014 Citizens University Committee (CUC) Kick-off Reception. A former CUC chair, Charles was the first UCR alumni regent, the first UCR Foundation Board of Trustees chair, and a member of UCR’s 1954 pioneer class. He is a retired Riverside Superior Court judge and serves on the Western Municipal Water District Board.

70s

Pamela Clute ’71, M.A. ’78, Ph.D. ’82 was honored at the fall 2014 Citizens University Committee Kick-off Reception. Pam established the ALPHA center at UCR in 1998; it is through this center that she has been able to inspire and motivate young people — especially women — toward success in science and math careers.

Joan I. Senyk ’72 is still going strong at the age of 76. Since April she has served as a chemistry tutor for students online on Tutor.com. It’s a transition from 20 years of teaching chemistry at high schools and colleges across the country. After earning her master's degree in chemistry, Joan moved to Oregon, where she met her husband and raised her family. She now loves the mild climate and the vibrant community in her new home.

T H A N K F U L

Melody Ellis Valdini is an associate professor of political science at Portland State University and co-author of the book “The Character of Democracy: How Institutions Shape Politics.”

What are some of your favorite UCR memories?

I had a minor in music and I played the drums with the UCR jazz band. That was a lot of fun. I also worked at the UCR Music Library and the UCR ticket office to pay for a study abroad trip. I did the Education Abroad Program during my fourth year at UCR. I went to England for a year and it was the greatest thing ever! I highly recommend that every undergraduate pick a country and study abroad, because it was worth it.

How was the transition from California to Oregon?

The academic job market is very competitive — probably because we get paid to read books and to think about ideas, which is a great gig — so I feel quite lucky that Portland State University decided to hire me. Basically, I’m paid to be a nerd and that’s pretty fantastic! It was rough at first because it’s dark and rainy for months but now I love it here.

Tell me about the book that you co-authored.

It examines the different institutions used in democracies, as every country has different political institutions that drive various outcomes. The book lays out five democratic ideals (for example, representation, or whether or not voters feel they can hold the legislators accountable) and investigates how the institutional structure of each democracy affects the expression of these ideals.

What was your inspiration behind the book?

I’ve always been a big fan of governing institutions, particularly electoral systems, so I jump at any chance to write about them. Our book takes a very unique approach because we argue that there is no perfect set of democratic institutions, and that every institution — electoral systems, court structures, and executive designs — has costs and benefits.

How did UCR prepare you for your position today?

The professors that I worked with in the political science department, particularly Shaun Bowler, gave me a really strong foundation in the field. They were really instrumental in my career. UCR also taught me to cultivate my independence, put myself out there and seek out opportunities.
of divinity degree in 1994 from Wesley Theological Seminary in Washington, D.C., Joan served as a United Methodist minister for 16 years in Baltimore, Maryland and Katy, Texas.

Jose Medina ‘74 has been re-elected to represent California’s 61st Assembly District, which consists of Riverside, Moreno Valley, Perris and Mead Valley.

80s

James D. Woods ’82 has been voted to represent District 2 in the California Assembly. Originally from Southern California, he has lived in Northern California since 1987 when he opened his family dental practice in Cloverdale. He practiced dentistry for 26 years before becoming an elected official.

Shedrick (Rick) Davis ’84 is the regional director of the Western Regional Office for Lambda Legal, the oldest and largest national legal organization committed to achieving full recognition of the civil rights of lesbians, gay men, bisexuals, transgender people and people with HIV. He is responsible for expanding Lambda Legal’s organizational reach in 11 Western states. Rick obtained his law degree from the UCLA School of Law after receiving his bachelor’s degree in political science at UCR.

90s

Brian Anderson ’94 has been appointed to the State Board of Mining and Geology. Brian has been vice president of property permitting and environment at Vulcan Materials Co. since 2013, where he has held several positions since 2002 including director of environment.

William D. Quan ’94 was recently elected as Superior Court judge of Imperial Valley and was sworn in January 2015. Quan earned his bachelor’s in political science at UCR.

Karen Fernandez ’91, formally Karen Guereca, is the author of “ABC Trace and Say Alphabet Book,” which was recently awarded the 2014 Moonbeam Children’s Book Award. The book uses proven techniques to help children read and write easily. Fernandez is an educator, author and home-school mom. She has taught young readers for 15 years in Southern California, and early literacy is her passion. While at UCR she earned her master’s degree in education and is a Reading Recovery teacher. She resides in San Diego with her husband, daughter, dog and three rabbits.

Mark Takano ’98, M.F.A. ’10, has been elected to represent the 41st Congressional District, which includes Riverside, Moreno Valley, Perris and Jurupa Valley.

Lance Merker

'87, M.B.A. '91

Lance Merker is the president and CEO of OmniUpdate, a company whose Web content management system, OU Campus, is used to manage more than 700 colleges and universities (including UC Riverside's!)

Why did you choose UCR?
I started off as an undergraduate at UC San Diego, but I felt lost. After two years I transferred to UCR. I really liked the fact that UCR was a smaller university. It was easy to fit in, I had a terrific experience with all of my professors and I learned more at UCR than I did in my whole college career up to that point. The size of the campus and the ability to connect with professors and fellow students made my undergraduate experience truly memorable.

What made you decide to return to UCR for your M.B.A.?
About a year after I graduated, someone from UCR contacted me and encouraged me to consider the M.B.A. program. It seemed like a great opportunity to return to the campus that I really liked and that gave me so much. I was a teaching assistant for one of my favorite professors and the program was terrific. UCR’s M.B.A. program was the thing that put it all together for me and helped me the most in my career.

What is your favorite memory from your time at UCR?
I have vivid memories of being in the computer labs. There was this amazing amount of technology available to us as students, allowing a business major like me to make and present projects of incredible professional quality. I also met two people who became very important in my life: My wife, whom I've been married to now for 22 years, and someone who later became the chief financial officer at OmniUpdate.

Describe your work with OmniUpdate. What principles have guided you through your management of the company?
I joined OmniUpdate in the early '90s and helped rebuild the company from the ground up to create a product that is absolutely loved by our customers. We managed to outpace the competition with extreme hard work, good strategy, a little bit of luck and a lot of focus. We focused on becoming the best in the world at something, which for us was becoming the best customer management system for higher education.

What advice would you give to students?
First, learn your curriculum. Take this seriously and learn it really well. Second, while you’re in college, take time to learn how to live on your own and learn important skills that go way beyond the classroom. College is a good, safe environment to learn these life lessons. Finally, make connections. The connections you make in college might even become business partners later in life. Think not about how to apply to the job market, but rather how to apply what you learned to the world that’s evolving around you.
Javier Amaya ’12 became engaged to fellow Highlander Penelope Quintero in December 2013 and is now a second-year law student at the University of New Mexico School of Law. This past summer, Amaya was an extern for Justice Edward Chavez at the New Mexico Supreme Court. He is a member of the Tribal Law Journal and recently attended the National American Indian Court Judges Association Conference in Colorado, where he co-presented research on implementing traditional justice in tribal courts.

Kareem Gongora ’13 is working for Riverside County for Community Action Partnership as a program manager. The organization helps families in poverty become self-sufficient. Most recently, Kareem ran for the Fontana School Board.

James Ruby Barsalou ’13 works at Indian River Charter High School in Vero, Florida, where he moved a year ago with his wife and two children to be the communications and community relations specialist. James, an accomplished photographer, earned his bachelor’s degree in studio art at UCR.

Erika Michelle Nakajima ’09 recently moved to Japan to work as a volunteer in the disaster area affected by the great Japanese earthquake of 2011.

Heidi Garrett ’10 spent a month in Siem Reap, Cambodia, last August as part of the Trade Foundation, a nonprofit organization made up of hairstylists, makeup artists and counselors who help women rescued from the sex trade learn new skills.

Penelope Quintero ’10 became engaged to fellow Highlander Javier Amaya ’12 in December 2013. After graduating from Loyola Law School in May 2014 and passing the New Mexico Bar exam in July, Quintero is now an associate attorney for Rose Little Brand & Associates P.C., a creditor’s rights law firm.

Michael Walkusky ’11 is the senior editor of EDM.com, one of the most respected media outlets for dance music in the world. He has interviewed top DJs such as Armin van Buuren and Steve Aoki.

Philip Vieira ’11 earned his master’s in psychology and has been busy working on his Ph.D.
Carla Dodd ’58, wife and mother. 
August 2014.

Milton Hiroshi Tenno ’79, teacher, counselor and coach at Bolsa Grande and Los Amigos high schools and at Golden West College. September 2014.

Faculty

Robert Chilton Calfee, former dean of the Graduate School of Education, died on Oct. 24, 2014, in his home in Stanford, California. The cause of death was stomach cancer. He was 81.

Calfee, professor emeritus of education at Stanford Graduate School of Education, was an influential scholar who wrote extensively about pedagogy.

He pioneered new approaches to training classroom teachers and working directly with schools. He also helped launch LeapFrog Enterprises Inc., a leader in the educational entertainment market.

Calfee became an education professor at Stanford in 1969. In 1998 he became the founder of the North American Nietzsche Society. He also received a prestigious Guggenheim Fellowship for his research on Nietzsche.

After his retirement, the philosophy department started the Magnus Lecture, which brings an internationally known philosopher to campus once a year to speak about Nietzsche or related topics.

Magnus is survived by his wife, Lore Woodcock Magnus; his children, David Magnus and Victoria Varnals; his grandchildren, Tyler and Ryan Varnals; and his sister, Miriam Eis.

George Edgar Slusser, co-founder of the Eaton Collection of Science Fiction & Fantasy, died Nov. 4, 2014, at his home in Highland, California. He was 75.

Slusser, curator emeritus of the Eaton Collection and professor emeritus of comparative literature, joined the UCR Library in 1979 and, beginning in 1991, held a joint position as professor of comparative literature until his retirement in 2005.

Under his leadership the collection – formally known as the J. Lloyd Eaton Collection of Science Fiction, Fantasy, Horror, and Utopian Literature – grew from 7,500 volumes to the internationally renowned collection it is today, a collection that includes books, journals, fanzines, comic books, authors’ manuscripts, media and memorabilia. He taught the first courses in science fiction studies at UCR and originated the Eaton Conference, which he chaired for more than 20 years.

Slusser is survived by his wife, Daniele Chatelain-Slusser.

Siegfried Schaible, emeritus professor of management science, died on Sept. 7, 2014. He was 74.

Schaible was born in Marburg, Germany, during World War II. He went on to study mathematics and physics to earn two doctorates from the University of Cologne.

In 1987, he became a tenured professor at UC Riverside, teaching at the A. Gary Anderson Graduate School of Management until his retirement in 2006. He then moved to Taiwan, where he taught at Chung Yuan Christian University.

Schaible wrote and edited a number of scientific journals and books in his area of expertise, generalized convexity.

He is survived by his siblings, Dieter Schaible and Waltraud Kippenberger; his daughter and son-in-law, Sue and Frank Suranyi; his son and daughter-in-law, John and Christy Schaible; his daughter Rickie Schaible; and his seven grandchildren.

Dr. Richard “Dick” Perry, former athletics director, died at his Riverside home on Oct. 19, 2014. He was 85.

Perry began his journey in athletics coaching basketball, baseball and football at Emporia College in Kansas. In 1958, he became the head basketball coach, assistant football coach and an instructor in physical education at Cal State Long Beach. After completing his Ph.D. at the University of Southern California, he was invited to join the USC teaching faculty in 1968. In 1975, Perry served as the director of athletics at USC. During his nine years there, USC teams won 20 national championships.

In 1987, Perry was hired as the Highlanders director of intercollegiate athletics at UCR. During his tenure he worked diligently to improve the athletic facilities and teams at the university. Through his efforts many local business leaders came together in an attempt to help UCR move up to become a Division I university. He retired from his position as the UCR Athletic Director in 1992.

Perry is survived by his wife, Donna; children Jim, Joan, John and Janelle; and six grandchildren.

Wilbur (Bill) W. Mayhew, professor emeritus and a founding member of the UCR campus in 1954, died on Sept. 19, 2014. He was 94.

Mayhew served as an active professor in the Department of Zoology until his retirement in 1989. Prior to that, Mayhew was a decorated veteran of World War II who completed his military service with a Distinguished Flying Cross, Air Medal, Purple Heart, and Presidential Unit Citation with two oak leaf clusters. After the war he earned his bachelor’s, master’s and doctoral degrees in zoology from UC Berkeley (1948, 1951, and 1953, respectively). His graduate research was conducted under the mentorship of A. Starker Leopold.

While at UCR, Mayhew taught more than 5,600 students in numerous field classes.

Mayhew was also deeply involved in the protection of natural California habitats. He was one of the founders of the UC Natural Reserve System, which today is comprised of 34 reserves with over 130,000 acres of protected land for research and teaching.

Mayhew’s wife, Corinne, and his family were highly supportive of his legacy in protecting California’s critical habitat and energizing young minds about the natural world.

Bernd Magnus, professor emeritus of philosophy, passed away on Nov. 3, 2014. He was 76. Professor Magnus, a survivor of the Holocaust, was an internationally recognized expert on 19th- and 20th-century European philosophy and, more specifically, a leading scholar of Friedrich Nietzsche.

Born in Danzig, Germany, Magnus immigrated to the United States in 1947. He went on to earn a Ph.D. in philosophy at Columbia University in 1967. He joined UCR in 1969 and was part of the faculty for more than 35 years. He served as the chair of the Department of Philosophy and as an associate dean in the College of Humanities, Arts, and Social Sciences.

Magnus co-edited the influential “Cambridge Companion to Nietzsche,” served on the editorial board for the “Complete Works of Nietzsche,” and was the founder of the North American Nietzsche Society. He also received a prestigious Guggenheim Fellowship for his research on Nietzsche.

After his retirement, the philosophy department started the Magnus Lecture, which brings an internationally known philosopher to campus once a year to speak about Nietzsche or related topics.

Magnus is survived by his wife, Lore Woodcock Magnus; his children, David Magnus and Victoria Varnals; his grandchildren, Tyler and Ryan Varnals; and his sister, Miriam Eis.
“When I say I love poetry, I’m really saying that I love surprises,” says Frederick Charles Moten, professor of English at UCR.

“Poetry is important today because it’s fun and beautiful; it allows us to celebrate and to critique, two activities that are indispensable now more than ever.”

Moten had quite the surprise when he was nominated as one of five finalists for the National Book Award in Poetry for his collection “The Feel Trio” (Letter Machine Editions), named after the jazz improvisational trio of Cecil Taylor, William Parker and Tony Oxley.

He describes his lauded collection as a preliminary report rather than the last chapter of his lifelong observations. He likens the energy and vibe of his three-part work to that of the cult jazz trio.

Born in Las Vegas, Nevada in 1962, Moten comes from a family of music lovers. “Most of the folks in my family were very brilliant and poetic in the way they used language in ordinary situations. Everyone was infected by, everyone’s speech was infused with, poetry.”

However, Moten is reluctant to give himself that title, although many of his peers — including those who nominated him for the National Book Award in Poetry — have done just that. “I still haven’t had the moment — the one when I’ll know I’m a poet. And I’m not particularly worried about having any such moment, either,” notes Moten.

“I think I’m just one of many people who is interested in poetry, and who loves poetry. Sometimes I write things down that I hear; and I like to make patterns and shapes with words and sounds. But who doesn’t?”

Moten’s journey to UCR is just as lyrical. “I came to UCR in the hope that I would find more students who would be truly interested in the kinds of classes I had to offer. And even my wildest dreams and expectations have been exceeded.” He also credits the brilliance of his colleagues in the English department.

“The importance of poetry is only intensified by the ubiquity of its presence,” says Moten. “The more poetry the better.”
By studying how the human immune system is affected over a lifetime by diet and aging, UCR immunologist Ilhem Messaoudi can develop more effective vaccines for older populations.

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“Water is a limited resource, and yet it’s vital to all of us. It’s unconscionable to waste it.”
– Reuben Muñoz and Paul Velen

Reuben and Paul are supporting water research at UCR through a bequest.

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