Spring meltdown:  
A special climate change issue

What’s inside:
Measuring Greenland’s vanishing glaciers
Helping communities cope with rising tides
Keeping ‘ahead of the curve’ with Abigail Reyes
Dear fellow Anteaters,

In 1972, Professor Sherwood Rowland, founding chair of our chemistry department, began looking at the question of what happens to chlorofluorocarbon molecules when they rise into the ozone layer of the upper atmosphere. CFCs are man-made compounds then widely used in many applications, most commonly as refrigerants and aerosol propellants. The ozone layer establishes the temperature structure of the atmosphere and simultaneously protects us from solar ultraviolet radiation. In a very real sense, the ozone layer makes life on Earth possible.

Rowland discovered that CFCs, broken down by solar radiation, are highly efficient ozone destroyers – one CFC molecule can destroy 100,000 ozone molecules. His work ultimately led to global regulation of CFC production and use. And in 1995, Rowland shared the Nobel Prize in chemistry for this research; the award citation said he “may have saved the world from catastrophe.”

This research was also one of the first, if not the very first, scientific proofs of man’s long-term harmful effects on the Earth’s climate. And in the 40 years since Rowland’s key discovery, UCI scientists have been at the forefront of climate change research. This issue of the magazine explores some examples of our remaining “ahead of the curve,” as President Obama so aptly put it. I hope you enjoy reading about how we are leading the way, once again, to save the world from catastrophe.

Chancellor Howard Gillman

On the cover:
In August 2014, UCI glaciologists set out aboard the Cape Race to continue their pioneering quest to map remote Greenland fjords for the first time. Their work has revealed an alarming acceleration in the shrinking of glaciers due to global warming. Read about the expedition on page 4.

Front cover photo by Maria Stenzel / For UC Irvine
Spring thaw: Special climate issue

Measuring Earth’s meltdown:
An expedition to Greenland with UCI glaciologists reveals “time bomb” effects of global warming.

Climate change at the front door: UCI researchers help residents from Tijuana to Newport Beach plan for higher waters via the FloodRISE project.

Earth’s defender: As director of UCI’s Sustainability Initiative, Abigail Reyes champions campus efforts to meet the challenges of a changing climate.
An expedition to Greenland with UCI glaciologists reveals ‘time bomb’ effects of global warming
“Come quickly – look at the glacier!” urges UC Irvine researcher Isabella Velicogna, running to the bow of the Cape Race to gaze at the massive, crumbling face of Eqip Sermia. She’s stunned by what she sees. “So much is gone since a year ago. All that land over there was covered with ice last time.”

It’s mid-August in Greenland’s North Atlantic fjords. UCI glaciologists and students, joined by a NASA oceanographer and technicians from TerraSond Ltd., are pushing to reach remote glacier faces that are melting faster and faster and to map for the first time the contours of these frigid deeps.

“In Greenland we have melt rates of a few meters a day in the summer months,” says expedition leader Eric Rignot, who – like Velicogna – is an Earth system science professor with a joint appointment at NASA’s Jet Propulsion Laboratory. “And we know the ice sheet is going to melt more and more with climate change.”

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UCI glaciologist Eric Rignot is known for documenting the unstoppable loss of the West Antarctic Ice Sheet and accelerated melting of Greenland’s glaciers.

An onboard computer screen shows a topographical map being created for the first time of the bottom of a remote fjord and adjoining glacier faces. As the Cape Race (shown in pink at the center of the circle) moves along the water, new data is collected and the map grows.

Photos by Maria Stenzel / For UC Irvine
His team, which like Velicogna’s has received worldwide attention in recent years for its findings, is detecting an ominous feedback loop. It appears Greenland’s ice melt is accelerating because warmer ocean waters are hitting submerged glacier faces well below the cold, freshwater surface. The marine waters shoot upward, bringing heat to a larger portion of the face, which in turn melts down faster. Reaching glacier faces and documenting this process offers critical clues about the detailed mechanisms of the melt.

The researchers are also finding that most fjord bottoms are far deeper than previously thought – plunging as much as 2,000 feet. That means more subsurface ocean heat can flow in and collide with glacier fronts.

It’s not easy gathering such data.
If all of Greenland’s mile-thick ice sheet were to melt, it would raise ocean levels worldwide by 21 feet.

Greenland is so remote and huge that much of its collapsing 25,000-mile coast has never been mapped. There’s little commerce, few tourists and oil wells. Inuit fishermen know their way through the tortuous fjords, but they pass on this knowledge verbally.

Rignot and others say precise information is crucial to better predict how fast and where glaciers will give way. They also want to model the physics of salt water interaction with ice – not just for here, but to use along Antarctica’s mammoth ice sheets. Rignot was the first to report last May that a rapidly melting section of the West Antarctic Ice Sheet appears to be in irreversible decline, with nothing to stop the entire glacial basin from disappearing into the sea.

But East Antarctica is far larger, and little is known about what’s occurring there. New satellite missions by NASA and the European Space Agency help, but that data is large-scale. The researchers want to know exactly where warmer marine water is fingering its way into Greenland and how large a channel it’s entering.

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Cape Race crew member Francoise Cervais paddles back to the main boat after a failed attempt to find a deeper channel through which the research vessel could approach a glacier face.
Researchers race to retrieve equipment as sloughed-off glacial ice threatens to trap the boat.

“There’s no other way at present ... but by coming with a boat and dropping instruments in the water,” Rignot says.

The team sets out of Ilulissat’s harbor on a fine Monday afternoon: 43 degrees with mostly clear skies and water. They’re treated to a spectacular six-hour Arctic sunset before darkness finally falls but waste little time sightseeing. The boat and work aboard it proceed around the clock; the scientists catch a few hours’ sleep when they can.

There are three major tasks: taking “salinity conductivity, temperature and depth” casts off the port side, mapping the crucial underwater intersection of water and ice off the starboard, and pushing toward outlier “renegade” glacier faces they couldn’t reach in previous years.

By midnight, Rignot is confronting a difficult situation. The ice has piled up so thick in a daunting strait called Torsukattak that boat owner Milos Simovic, inching the 294-ton craft forward, warns they risk getting stuck.

A stiff breeze blowing the right way would quickly clear the jammed fjord, but the air is still.

Greenland is so remote and huge that much of its collapsing 25,000-mile coast has never been mapped. There’s little commerce, few tourists and oil wells.
Peppered with traditional brightly colored houses, Ilulissat is Greenland’s third-largest town, sitting on the west coast of the world’s largest island. There are only 56,000 people in 840,000 square miles, making it the least densely populated nation on Earth.

But Rignot had the crew winch it to the side and tilt it to map glacier faces as well as the sea bottom. This means the team must work ceaselessly to shove an onslaught of iceberg debris away from the delicate equipment with handmade plastic poles. The closer the boat comes to a glacier that’s disgorging ice, the more frozen hunks the scientists, technicians and crew members must push back. When a patch of clear water appears, they joke, gulp soda or beer, grab a plate of food from the galley and shake out their tired hands before going at it again.

Up on the bridge, a first-ever map of the bottom of the top of the world unfurls on a computer screen a meter at a time.

“I love it! I love being here; it’s so beautiful. And what we’re doing is so important,” says UCI doctoral student Cilan Cai, 28, of Tianjin, China, onboard for a second summer. She spends hours on the frigid bow, sizing up approaching bergs and shouting numeric warnings.

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to the polers: 3 means “Relax,” but 4 or above means “Look out!” and 10 means “Stop the boat!”

The last night of the two-week Greenland expedition, the group returns to Torsukattak in a final attempt to reach huge twin glacier faces at its terminus. The boat weaves between bergs the size of houses. Plastic poles poke away ice like a blind person tapping out the route ahead. At four miles out, the glaciers appear a hand’s reach away – an Arctic mirage. A maze of ice blocks the path.

Most of those onboard must make harbor in 12 hours to catch planes, including connections for a U.S. troop carrier’s last flight out for the year.

Rignot orders retreat. The multi-beam is pulled up, the battered poles tossed aside on deck. Semisonic’s “Closing Time” floats from the speakers, and the scientists break into spontaneous dance.

They’ve collected comprehensive new data that will help researchers worldwide better understand how ice sheets are melting and how salt water is speeding up the process – information that could be used to persuade policymakers and ordinary people to alter their carbon-busting ways.

“We’re heading toward something that’s not very pleasant, that’s for sure,” Velicogna says. “Do not buy a house too close to the beach!”

In a more serious tone, she adds: “I’m worried that if we just say something terrible is happening, it makes people feel like they don’t want to do anything. I think we should take it as a good challenge. There are a lot of young people with good ideas … that should be tried. We need to just look at this whole thing and try to find … a way to better deal with the changes we’re causing.”

Janet Wilson, UC Irvine

For more on the Greenland expedition, visit http://news.uci.edu/greenland.

“We’re heading toward something that’s not very pleasant, that’s for sure. ... Do not buy a house too close to the beach!”
S

ilvia Rico Medina and her family live in a cinder-block hut they built by hand at the bottom of one of Tijuana's poorest canyons. Their roof is a sagging plastic campaign sign for a Mexican presidential candidate. Her sons, 7 and 10, scamper across dried mudslides that nearly buried their old home next door. When a storm blows, rain whips sideways through the makeshift windows and water starts to rise in the dirt road out front.

UC Irvine engineers say that with climate change bringing fiercer storms to this part of the world, Medina's modest home and her neighbors' could well be destroyed.

Two hours and 100 miles north, Lee Sutherland sits on his back patio on Newport Beach's Balboa Island, enjoying the sunshine but keenly aware of the future. The low-lying enclave is ringed with huge storm drains, but when a winter high tide combined with a heavy squall hit the island in 2010, waves lapped over the top of the island seawall, threatening multimillion-dollar homes. Thanks to climate change, those “king” tides could well be tomorrow's normal tides here, increasing property owners' risk even more, according to UCI civil engineers.

**Flood warning**

As global warming takes hold, melting glaciers are raising sea levels and more extreme storms could become the norm, which climate scientists have long predicted. While international leaders will debate whether to finally slash greenhouse gases at the 21st United Nations Climate Change Conference in Paris this December, some local communities are grappling with what is already at their front door.

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UCI professors and students across a wide range of disciplines are stepping up to help via the Flood-Resilient Infrastructure & Sustainable Environments – or FloodRISE – project, a five-year, $2.7 million effort funded by the National Science Foundation.

Now in its second year, FloodRISE seeks to educate residents and community leaders about increasing risks on a parcel-by-parcel basis and work with them to find possible solutions.

UCI engineers have crawled through culverts and used low-flying plane data to devise new models that pinpoint what kind of inundation residents can expect in coming years. That’s the first step. Social ecologists, psychologists, economists and students are also knocking on doors and sitting at kitchen tables. The aim is not to impose ideas but to interact with affected communities to help them design suitable, effective strategies.

“Here’s the big thing: All around the world, there’s a top-down approach to climate change. Scientists and government agencies are telling people what’s going to happen,” says FloodRISE co-director Richard Matthew, professor of planning, policy & design. “Flooding is a huge problem, and it’s going to get worse – our infrastructure is not equipped to handle it. There will be $1 trillion annually in economic damage due to flooding globally by 2050, according to the World Bank. But there’s also this huge gap between what scientists know is happening and what people are willing to do.

“Our project is unique because we’re learning from the communities about what they value, where they see problems and how they respond to scientific evidence. What sort of measurements or percent chance of flooding over the next decade or the next century will be valuable for them? The end result could tighten this huge gap.”

Building better models

FloodRISE is the brainchild of Brett Sanders, professor and chair of civil & environmental engineering, who realized that he and his students could use new technology to map flood risk with greater accuracy than overly broad or outdated federal maps. And he didn’t want to just come up with numbers.

“Standard engineering courses offer highly specialized skills for hydrologic analysis,” Sanders says. “FloodRISE expands that context to also offer something very valuable to real people. Every community has different demographics, different economics, different factors of so many kinds.”

He approached Matthew, and they devised the strategy to develop climate-related flood models, to inform potentially affected residents and local policymakers without panicking them, and to help craft possible answers – from building higher seawalls to moving if necessary.

Baseline surveys have now been completed in both Tijuana’s Los Laureles Canyon and Newport Beach’s coastal areas. Detailed flooding maps have been given to residents, and adjustments will be made based on input received from them.
That’s crucial, says Ana Xochilt Eguiarte, binational liaison at the Tijuana River National Estuarine Research Reserve, who’s been working in flood-prone Los Laureles Canyon for six years. She’s tackled such projects as using hundreds of tires dumped in the watershed to build retaining walls on badly eroding hillsides.

Forging relationships
Community partners are a key aspect of FloodRISE. Newport Beach and the Tijuana River estuary area were selected because they offer starkly different demographics and because faculty and students have strong pre-existing relationships there.

UCI social ecology doctoral student Kristen Goodrich, who has been at the research reserve since 2009, knew that Eguiarte might be able to help. Eguiarte recruited five local women who had done government census work to conduct the lengthy initial surveys for FloodRISE.

As part of the process here and to the north, residents were asked about their experiences with heavy rain, along with questions about everything from age and occupation to what route they usually take to leave home.

Eguiarte says the first phase has already empowered people often consumed with just trying to survive.

“These are people who are living day to day, figuring out how to find money for food. Rain is just part of the cycle,” she says. “But since this survey, they know they have to be ready for the future, they have to find another way. They want to be part of planning their own future, of training – whatever it takes.”

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fully three-dimensional representations of rivers and their floodplains.

Instead of regional maps showing areas that could end up either inside or outside a flood zone, Luke can model how the height and velocity of water in a particular flood channel could rise by the minute during a storm.

It’s also important, Eguiarte notes, “for professors to try to see outside the university, away from their computers, and to help a little bit.”

Victoria Basolo, professor of planning, policy & design, agrees: “For the graduate students and myself, being in Los Laureles, walking the rugged streets and slopes of the canyon, observing training in one of the hillside homes and seeing the perilous conditions firsthand has been a great learning experience.”

A grad student’s quest

Much of the UCI modeling is being done by Adam Luke, who’s pursuing a master’s degree in civil & environmental engineering. He’s thrilled with the FloodRISE project, which builds on work he did as an undergraduate in the Midwest.

Traditional flood maps rely on relatively crude geographic information systems data and older, simplistic computer models. But new light detection and radar techniques and advanced computer models offer higher-resolution,

“Our project is unique because we’re learning from the communities about what they value, where they see problems and how they respond to scientific evidence.”
This sign warns of rising waters in Los Laureles Canyon. UCI engineers have devised new models showing that more severe storms caused by climate change will mean even greater flooding here.

"We can help people with this information," he says. The toughest conclusion he’s made so far is what could happen to residents of Tijuana’s Los Laureles Canyon.

**In harm’s way**

“All these homes would be washed out in a hundred-year flood,” Luke says, pointing to parcels clustered at the bottom of steep road embankments on one side and badly eroded scrub hillsides on the other.

Medina’s home sits in this hazard zone. A rusted warning sign on the street shows a block-figure pedestrian slogging through flood-water up to his knees. Medina is aware of climate change but has no idea what to do about it. “God only knows,” she says. “I just want to be relocated.”

Her husband, Eduardo Quezada, works long hours making dental implants, earning as little as 15 pesos for a tooth that may ultimately cost a patient $1,000. Her in-laws have lived in this spot for two decades. They don’t know where else to go.

Rapid new development is making the situation worse – including, ironically, homes being built by a church group at the upper end of the canyon. Slopes are being carved up, exacerbating erosion and mudslides for those below. It rarely rains, but when it does, downpours are heavy, Goodrich notes. Sediment, sewage, old tires and other trash are swept through the canyon by the raging waters, blocking storm drains and overflowing drainage basins.

“In Los Laureles, the conditions of the natural environment interact with the development of the built environment to produce a complex, hazardous place to live,” says Basolo, who has also studied residents’ behavior in hurricane- and earthquake-prone New Orleans, Los Angeles and Miami-Dade County.

Abigail Reyes, UCI’s Sustainability Initiative director, adds that if people like Medina and her neighbors formed community aid groups and organized to lobby municipal officials to better protect them, for instance, it could help.

UCI’s flood risk maps will be given to IMPLAN, a Tijuana planning agency, to assist in the construction of retention basins and other flood prevention infrastructure. There are no easy answers, but there’s newfound knowledge and hope. 

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Newport’s threatened coast

In Newport Beach, undergraduates called FloodRISE Hazard Scholars earned credits for conducting baseline surveys last spring. Sutherland, of Balboa Island, was the first person questioned by the UCI team.

“I think it’s great. The more information we can get, the better. We need it,” says the retired aerospace engineer, who has lived on the bay since 1991. “When we bought our property, we didn’t even think about global warming … but we need to think about it now.”

Not everyone shares his opinion, even after seeing the updated flood maps. An initial review of the survey data shows more of a split here than in Tijuana among respondents about how big a risk they think climate change will pose. The difference may be due to demographics, including greater personal wealth, political affiliation and absentee property owners.

“My guess is that Newport Beach has people who are very confident about their abilities and resources, who feel they will be able to handle whatever comes their way. They’re not interested in having government involved,” Matthew says.

City officials and Balboa Island homeowner associations are already strategizing about replacing and possibly raising aging seawalls, says Public Works Director David Webb. But there are debates about who will pay, how high the walls should be and other issues that matter deeply to residents. UCI social ecologists and sustainability experts are seeking to meet with officials, local businesspeople and residents to offer help. Webb thinks it may prove valuable for the academics too.

“I think it’s a good real-world exercise,” he says. “Some civil engineering students are trained how to address worldly problems but can’t make the connection to how that affects us right down the street. It’s not just a civil engineering project: There’s science, there’s economics, there’s perception vs. reality, there’s politics, there’s emotions, there’s questions about people’s harbor views going away. We have to figure out how to balance all of that.”

In both Newport Beach and Los Laureles Canyon, focus groups of residents, businesspeople, officials and nonprofits are being formed as part of the next phase.

“I’ve been so impressed by how rapidly the FloodRISE team has mobilized to implement the research and engage with people in these communities,” says project manager Kimberly Serrano. “The best work is yet to come.”

Janet Wilson, UC Irvine
Because of that experience, which occurred when I was in my mid-20s and a few years out of college, I resolved to create a world in which that doesn’t happen,” Reyes says.

A. T. – after Terence – she became a human rights and environmental lawyer, working primarily with communities struggling to protect themselves from unwanted mining, oil and gas projects.

Reyes now serves as director of UC Irvine’s Sustainability Initiative, with the goal of harnessing the top research university’s scholarship and resources to develop new systems and cultures that no longer harm the planet – or people.

“The initiative is making community-engaged sustainability scholarship an integral part of UC Irvine’s excellence as a research, teaching and service campus,” she says, “and we’re doing that so our faculty and students have the support they need to play bigger roles in addressing critical sustainability challenges here in Southern California and wherever their research takes them.

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“The initiative is making community-engaged sustainability scholarship an integral part of UC Irvine’s excellence as a research, teaching and service campus.”

“Many communities that are already living with the consequences of the changing climate are way ahead in finding the solutions, and we see our role in part as making sure we engage them to lift up those solutions. For us, scholars and communities together lead the sustainability shift."

**Staying ‘ahead of the curve’**
Leading the Sustainability Initiative is a high-profile job at a university proud of its “Coolest School” status and its significant contributions to the pressing issue of climate change. As President Barack Obama remarked in his 2014 commencement speech: "UC Irvine set up the first Earth system science department in America. A UC Irvine professor-student team won the Nobel Prize for discovering that CFCs destroy the ozone layer. A UC Irvine glaciologist’s work led to one of last month’s reports showing one of the world’s major ice sheets in irreversible retreat. … UCI is ahead of the curve."

Reyes, her husband (Sunil Gandhi, UCI assistant professor of neurobiology & behavior) and their two children were among the fortunate few who met Obama backstage before his speech. She used the opportunity to assure the president of UCI’s commitment to confronting global climate change.

“After our photo, I told the president of the sustainability efforts at UC Irvine, and that I was encouraged to see bolder action on climate,” she recounted in her blog. “I told him that he could count on the University of California for leadership. He said he very much does.”

**Turning back the tides**
Reyes can already point to several efforts sparked by the Sustainability Initiative that put UCI on the front lines with communities grappling with climate change.

She’s co-principal investigator and a team leader of the Flood-Resilient Infrastructure & Sustainable Environments – or Flood RISE – project, which educates and assists communities along the California coast and Tijuana River Estuary that are endangered by rising waters and stronger storms attributed to global warming. (See related story on page 9.)

And she helped create UCI’s interdisciplinary Salton Sea Initiative to address public health, land use, water allocation and other sustainability issues facing the desert region, with the goal of finding solutions that will benefit similarly situated communities worldwide.

The Sustainability Initiative also mobilizes campus efforts in the areas of oceans, food, and environmental health and justice. This spring, Reyes’ office will partner with UCI faculty and students at the university’s Steele/Burnand Anza-Borrego Desert Research Center in Borrego Springs to advance the community’s long-range plan for achieving sustainability in an extreme environment. Some students will be chosen to share what they’ve learned with local public schools, teaching a younger generation about the climate crisis and how to foster community change.
Sustainability for all
Reyes is working to incorporate sustainability in all academic disciplines. She and Tom Peterson, UC Merced’s provost & executive vice chancellor, co-chair the systemwide effort to make climate neutrality and sustainability part of the university experience for all UC students by 2020. (Read more about UC’s sustainability commitment at ucop.edu/sustainability).

It can be overwhelming when students recognize how climate change is altering their own world, Reyes notes.

“No matter where we are – whether it’s an urban environment or we’re lucky enough to be in touch with nature – we all develop our love of place, our love of culture, our ability to move in the world supported by natural systems with clean air, clean water, a livable climate and accessible food,” she says. “And then the reality hits, through education and experience, that the ways in which we’re living now in our systems and culture of industrial growth don’t support the long-term sustainability of the things we have come to love and depend on.”

From classrooms to careers
It’s not enough to just make students aware of climate change, Reyes says. They need to learn how to take action.

Her office has joined with UCI’s Academic Affairs, Student Affairs and Division of Undergraduate Education to support the Global Sustainability Resource Center, a hub for student leadership and sustainability education.

Students who participate in the center’s education programs go beyond textbooks to the living lab – to homes threatened by rising seas, parched farmlands, vanishing glaciers and other climate-threatened sites in the real world.

“In our programs, we allow students to have their own experience of what that loss looks like and how it affects them, and then we help them move from that state into imagining the world they want to create,” Reyes says.

In January, the center held a weekend retreat at the Anza-Borrego facility for about 30 students enrolled in the global sustainability minor to teach them how to become leaders in climate change efforts – and stay ahead of the curve, as Obama exhorted them to at commencement.

The training was one in a series recognized by the White House at the recent launch of a new national Climate Education & Literacy Initiative.

“What’s needed now is action – considered action – so that our activities are about not just improving or reforming the current systems and cultures but creating new ones,” Reyes says. “The intellectual work needed to envision and build an equitable economy based on responsible growth, resilience and regeneration instead of extraction is significant. Research universities like UCI have a big role to play in that.”

Kathryn Bold, UC Irvine
There’s been a history of biology being abused or exploited for criminal acts,” You notes.

In 2001, deadly anthrax spores were sent through the mail to several media outlets and two U.S. senators, killing five people and infecting 17 others. The attack was one reason the FBI created the WMD Directorate in 2006 to deal with incidents involving nuclear, radiological, biological or chemical weapons.

You’s focus is synthetic biology, a rapidly emerging field that’s giving scientists the unprecedented power to re-create the building blocks of life. Instead of splicing genes from different species, they stitch together pieces of synthetic DNA to produce organisms that don’t exist in nature.

Still in its infancy, synthetic biology could revolutionize the pharmaceuticals industry, food production, the quest for renewable fuels, and other sectors. It holds great promise – and carries great risk. For instance, You says, it could be absconded to someday manufacture illicit narcotics.

“If potent narcotics could be produced from merely brewing a modified strain of yeast, for example, it would have a profound impact on society,” as methamphetamine has had, he says. “It would make it incredibly challenging for entities like the FBI and DEA (Drug Enforcement Administration) to interdict such activity. We’d be going from ‘Breaking Bad’ to ‘Brewing Bad.’”

“Espionage, domestic and international terrorism, individuals trying to steal intellectual property, even workplace violence in a lab setting – it’s a world the science community isn’t educated about.”

Biological agents – including bacteria, toxins and viruses such as modified avian influenza – could cause great harm if intentionally released by terrorists.
In 2002, scientists at Stony Brook University in New York used synthetic biology to re-create the polio virus – raising fears that in the wrong hands such deadly material could become a potent weapon.

You strives to educate those engaged in biotech research about the risks and how to recognize and report suspicious activity.

His unit also has developed an outreach program in which WMD coordinators in FBI offices nationwide build relationships with local contacts in academia, institutions, industry and other organizations. The collaboration has encouraged the evolution from just “do no harm” to a “not on my watch” mentality in labs. (The Los Angeles office has worked with UCI’s bio-safety training program, and in 2012 the university hosted a biosecurity workshop presented by the FBI.)

“In the past, the science community has been viewed as the source of the [security] problem and in need of more training in ethics and responsibility,” You says. “But coming from the lab, I determined that scientists are absolutely part of the solution, whether they’re students, tenured faculty members or university administrators.”

You began his career as a scientist after earning a bachelor’s degree in biological sciences at UCI in 1991 and a master’s in biochemistry & molecular biology at USC. He then spent three years at the biotech firm Amgen Inc. conducting cancer research.

“I was always interested in the life sciences and fascinated by the whole aspect of doing research,” You says. “I liked pushing the envelope.”

But the horrific events of 9/11 radically changed the course of his career.

They “galvanized me to do something to prevent future terrorist attacks,” he says. “I wanted to contribute to society more directly. So I applied to the FBI and was surprised to find that I was accepted based on my biology background and research experience.”

In 2005, after graduating from the FBI National Academy in Quantico, Va., You joined the agency’s Los Angeles Joint Terrorism Task Force. Four years later, he was promoted to the WMD Directorate in Washington, D.C.

He’s active in policymaking, serving on two National Academies committees – the Forum on Microbial Threats and the Forum on Synthetic Biology – and multiple organizations dealing with biosecurity, including the National Science Advisory Board for Biosecurity and the National Security Council working group on countering biological threats. You has twice been part of the U.S. delegation to the United Nations’ Biological Weapons Convention in Geneva and has given presentations to the European Commission.

He has visited UCI several times to meet with administrators on biosecurity policy and to talk to students about alternative careers in the life sciences.

“There’s a huge need for policymakers who have a background in science, and there’s potential for working for the FBI,” You says. “They play a vital role in safeguarding research and the future.”

He encourages students to be passionate about their work, and to become teachers and mentors, so that they can encourage a new generation to “always be the guardians of science.”

Kathryn Bold, UC Irvine
There’s no place like homecoming

*Alumni and friends celebrate with a party in the park and a victory for men’s basketball*

Aldrich Park was hopping Jan. 31 as nearly 5,000 alumni, students and friends of the campus showed up for UCI’s 50th anniversary homecoming.

Those attending were lured by promises of live entertainment and music, a new Anteater Reunion Corner and a Disneyland Resort Family Fun Zone, none of which disappointed.

Some of the longest lines could be found at the Hotel Irvine Beer Garden, where those 21 and older queued up for the signature Anteater Ale – a golden anniversary beverage by alumnus Brandon Fender ’08, co-owner of The Good Beer Company in Santa Ana.

UCI’s schools entertained alumni with “exploration programs” such as “Adventures in Physics: Quantum
UCI guard Luke Nelson gets between two UC Santa Barbara defenders during the basketball game, which the Anteaters won 77-55.

A homecoming crowd of 3,773 watched the Anteaters rout the UC Santa Barbara Gauchos in the Bren Events Center.

Circuits,” “What’s the Big Deal About Big Data?” and “Arts Alive in the Plaza.”

The evening was topped off by the UCI men’s basketball team’s decisive 77-55 win over UC Santa Barbara. Eleven of the 13 Anteaters who saw action scored, and the squad sank a season-high 11 3-pointers.

“UCI homecoming rang in our 50th anniversary with a lively combination of celebration, reconnecting and discovery of the best UCI has to offer,” says Barney Ellis-Perry, assistant vice chancellor for alumni relations and CEO of the UCI Alumni Association. “Thousands of alumni were thrilled to come back to campus, and many who missed out have vowed to make it next year.”

UCI guard Luke Nelson gets between two UC Santa Barbara defenders during the basketball game, which the Anteaters won 77-55.

Nicholas Leber and Regine Saldivar, UCI’s 2015 homecoming king and queen, embrace.
The UCI Alumni Association will host its 45th annual Lauds & Laurels awards ceremony at 6 p.m. Thursday, May 14. Nineteen distinguished individuals and the entire inaugural class of the UC Irvine School of Law will be honored.

This year’s 50th anniversary theme will be reflected in the 1960s decor and entertainment. For location (to be determined) and other information, call 949-824-2586 or visit alumni.uci.edu/events/lauds.

Attending the 2014 Lauds & Laurels gala were (from left) UCI Alumni Association president Bruce Hallett ’78, honoree Arif Alikhan ’90, and executive director of alumni relations Jeff Minhas ’04.

More upcoming events

**March**
Chancellor Howard Gillman investiture – March 31

**April**
Celebrate UCI – April 18

New York alumni reception with Chancellor Gillman – April 27

**May**
UCI Night with the Angels – May 9

UCI Alumni Association annual meeting – May 11

Lauds & Laurels awards ceremony – May 14

**June**
Washington, D.C., alumni reception with Chancellor Gillman – date to be determined

Los Angeles alumni reception with Chancellor Gillman – June 23

**July**
Pageant of the Masters & alumni wine reception – July 23

**August**
The New Swan Shakespeare Festival & alumni reception – date to be determined

Recruit OC alumni career fair – date to be determined

**September**
San Diego alumni reception with Chancellor Gillman – Sept. 10

**October**
Fifty for 50 Volunteer Week – Sept. 28-Oct. 2

Anteater 5K & Family Fun Run – Oct. 3

50th Anniversary Festival of Discovery – Oct. 3


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Visit alumni.uci.edu/events for updates and more information.

*Dates and events are subject to change.
Class notes

1980s

Kem Nunn (arts ’81), novelist and television writer, recently released his latest work, Chance. Nunn’s novels have been described as “surf noir” for their dark themes, political overtones and coastal settings. Nunn and producer David Milch co-created the HBO surfing drama series “John from Cincinnati” and collaborated on the HBO Western drama series “Deadwood.”

1990s

Nadia Bermudez (social sciences ’98) received the San Diego County Bar Association’s Service to Diversity Award in recognition of her commitment to promoting and encouraging diversity in the legal profession. Bermudez is a partner in the California law firm of Garcia, Hernández, Sawhney & Bermudez LLP. She’s a 2012 recipient of UCI’s Lauds & Laurels Distinguished Alumna award and the 1998 social sciences Order of Merit.

2000s

Martin Ngo, S.J. (information & computer sciences ’05) is studying comedy and improvisation at The Second City Training Center in Chicago. Ngo’s concurrent role as a Jesuit priest is unique among his Second City peers. He entered the Jesuit Novitiate of the Three Companions in Culver City in 2009.

2010s

Keith Curry (education Ed.D. ’11), CEO of the Compton Community College District, recently established a scholarship for doctoral students in UCI’s School of Education and led a campaign to pass a $100 million facilities bond for major improvements to Compton Community College. Curry is a 2013 recipient of UCI’s Lauds & Laurels Distinguished Alumnus award.

Correction:

Celeste Lanuza (arts ’13) is not an adjunct dance faculty member at Grossmont College in El Cajon, as reported in the fall 2014 issue.

Have news to share?
Just got a promotion? Changed jobs or published a book? Let your fellow Anteaters know what you’re up to with a UC Irvine alumni class note. Visit alumni.uci.edu/update.

Behind the scenes with the CEO

I want to send a big “Thank you!” to all who participated in our survey last November. The results told us that alumni love UCI, are very proud of the education provided here and value the impact of research. We also learned that we can do more, including offering more career services, volunteer opportunities and venues for meeting fellow alumni.

We are using the survey results as the basis for a new strategic plan. The board met in December to devise a framework for the plan that will focus on supporting alumni careers, enabling alumni to be a bridge to the community and creating a culture of alumni engagement at UCI.

We have much to do, and board members and other volunteers are hard at work. Let me know if you would like to help! barney@uci.edu

Barney Ellis-Perry
CEO, UCI Alumni Association
Assistant Vice Chancellor, Alumni Relations
Remembering Coach Irwin

A 1937 graduate of Newport Harbor High School, Irwin was that school’s first four-year, five-sport letter winner. He went on to play football at the University of the Pacific (then called the College of the Pacific) under legendary coach Amos Alonzo Stagg.

Irwin served in the U.S. Navy during World War II before beginning his coaching career in football at Antioch High School and Valencia High School. He returned to his alma mater, Newport Harbor, to teach and serve as head football coach from 1948 to 1955.

He then coached football and swimming at Orange Coast College before becoming a staff member in UCI’s athletics department.

Irwin lived most of his life in Newport Beach, where he was a longtime lifeguard and trainer and was seen many mornings walking near the Newport Pier. In 2009, he established a scholarship to be awarded annually to a seasonal lifeguard.

He was one of the first inductees into the UCI Athletics Hall of Fame in 1983 and a member of Newport Harbor High School’s first Hall of Fame class in 2014. A celebration of Irwin’s life was held Jan. 19 in Newport Beach.

Albert M. Irwin, a prominent figure in the development of UCI Athletics and in Orange County sports history, died Dec. 22 at the age of 96.

Irwin was the UCI men’s water polo and swimming coach when the university opened in the fall of 1965. He coached the Anteaters to their first athletic victory, a 22-6 water polo win over Cal Poly Pomona, on Oct. 8, 1965.

He served as head coach of the UCI men’s swimming & diving team that won the 1969 NCAA championship and was an assistant coach of the 1970 men’s water polo team that earned the squad’s first-ever NCAA Division I championship.

In addition to his coaching legacy at UCI, Irwin was acting vice chair of the UCI physical education department and assistant director of athletics until his retirement in 1978.

UCI dedicated the Al Irwin Academic Center, a first-class academic support services area for student-athletes, on Oct. 30, 2013. The state-of-the-art center houses 24 workstations to assist UCI’s student-athletes with their academics.
Aikhionbare, Fernandez named Scholar-Athletes of the Year

Women’s track & field standout Itos Aikhionbare and men’s golfer Pete Fernandez were recognized as UCI’s Big West Conference Scholar-Athletes of the Year.

The two seniors were honored in March along with their peers from the other conference schools at a banquet held at the DoubleTree Hotel in Anaheim during the Big West basketball tournament. The Big West Conference annually names one male and one female Scholar-Athlete of the Year from each of its member institutions.

This was the second straight year that Aikhionbare has earned the scholar-athlete distinction. A biological sciences major, she was Big West champion in the shot put and discus throw in spring 2014 and holds the school records in both events. She finished 14th in the shot put and 16th in the discus throw at the NCAA West Preliminary Round in May 2014.

Fernandez, a criminology, law & society major, was a 2014 All-Big West first-team selection and competed at the NCAA regional in Eugene, Ore. He led UCI with a 73.06 average and six top-10 finishes last season, including medalist honors in the Anteater Invitational at Mesa Verde Country Club.

Women’s water polo aims for another Big West title

The women’s water polo team is vying for its sixth Big West Conference title in seven years following a series of impressive wins this season, including victories over Santa Clara, UC San Diego and Arizona State at the UC San Diego Triton Invitational in February.

The Big West tournament will be held Friday through Sunday, April 24-26, in Honolulu, with the NCAA championship taking place Friday through Sunday, May 8-10, at Stanford.

Dan Klatt, five-time Big West Coach of the Year, led UCI to the league’s regular-season and tournament championships in 2014, as well as to the program’s third appearance in the NCAA tournament.

The 2015 team includes a talented group of returning players led by Danielle Warde, a three-time All-American and reigning Big West Player of the Year. The senior scored a team-high 55 goals last season.
Events

Mark your calendar

UCI Illuminations, through 2016
UCI Illuminations: The Chancellor’s Arts & Culture Initiative will offer a variety of public events through 2016, including:

- Pacific Symphony’s “Romeo & Juliet Reimagined,” Sunday, April 19, at Segerstrom Hall in Costa Mesa (departing from UCI flagpoles at 11 a.m.)
- Brown Bag Theater Company’s “The Service Worker Project,” Thursday through Saturday, April 30-May 2, Robert Cohen Theater
- Improv Revolution’s the “Coup de Comedy Festival,” Wednesday through Saturday, May 6-9, various campus locations
- “Music in Motion” interactive dance project by UCI dance and media arts professor John Crawford, Monday through Thursday, May 11-14, UCI Student Center Crystal Cove lobby
- Screening of award-winning documentary “Here One Day” and Q&A with filmmaker Kathy Leichter, 7 p.m. Tuesday, May 12, location to be determined
- “Shaken Shakespeare,” featuring short performances all over campus, spring 2015

All events are free to UCI undergraduates, and many require an advance ticket. More: http://illuminations.uci.edu

‘Boeing-Boeing,’ April 25-May 3
The drama department will stage the French farce “Boeing-Boeing,” directed by Eli Simon, UCI Chancellor’s Professor of Drama. Set in the 1960s, the play features a swinging bachelor (Bernard) who’s happily engaged to three stewardesses until the new, speedier Boeing jet lands all of his fiancées in town at the same time. 8 p.m. Saturday, April 25, and Thursday through Saturday, April 30-May 2; 7:30 p.m. Wednesday, April 29; 2 p.m. Sunday, April 26, and Saturday and Sunday, May 2 & 3. Little Theatre, Humanities Hall. $11-$15. More: 949-824-2787, artstix@uci.edu or arts.uci.edu/event/boeing-boeing

More campus events >> http://today.uci.edu/calendar/
Letter from Vice Chancellor
Gregory R. Leet

Much like environmental sustainability helps to preserve our planet, sustainable philanthropy helps to preserve our university. Sustaining donors play a pivotal role in balancing our educational ecosystem by supplying a predictable stream of annual revenue that enables us to maintain the highest standards of excellence.

Put simply, sustaining donors shape UCI’s environment day after day, year after year. And their enormous impact can often be seen across generations of students.

Drs. Francisco and Hana Ayala are living proof that sustained giving can have tremendous, long-lasting effects. They have supported UCI longer than most of our current students have been alive. Approximately 27 graduating classes of Anteaters have benefited from the Ayala’s sustaining generosity.

Francisco and Hana met before coming to teach at UCI almost three decades ago. They immediately fell in love with the university. When they realized substantial profits from their winery business, Francisco and Hana pledged $10 million to UCI – the largest gift ever from faculty members. And when Francisco earned the 2010 Templeton Prize, he donated the entire $1.5 million award to UCI without hesitation.

The Ayalas’ willingness to provide long-term support to UCI stems from wanting to help the university continue to grow and thrive.

Although Hana has left her teaching post here, she says her connection to UCI has never been stronger.

Her passion has expanded globally with Pangea World, an organization she founded that seeks to elevate the conservation of the planet’s most exquisite and vulnerable places into an economic imperative.

Francisco still teaches in UCI’s Department of Ecology & Evolutionary Biology and regularly publishes research.

When he walks around campus, Francisco witnesses the results of his and Hana’s sustaining contributions firsthand. As students face diminishing public funding, the Ayalas’ passion for giving increases. Their decision to provide scholarships and substantial ongoing support is helping countless students achieve their dreams. Regardless of an economic boom or bust, the Ayalas have stood by UCI, proving that sustainable philanthropy is the university’s single most important source of renewable opportunity.

Best regards,
Gregory

Gregory R. Leet
Vice Chancellor | University Advancement
Shaping the Future campaign
www.ucifuture.com

“Put simply, sustaining donors shape UCI’s environment day after day, year after year. And their enormous impact can often be seen across generations of students.”
Inspired to action

Donors and students give infants a fighting chance

Time is of the essence for infants struggling to survive a traumatic birth, which can starve the brain of oxygen. During the first few hours – when brain swelling is the critical concern – whole-body cooling can affect not only the baby’s survival, but also his or her quality of life for years to come.

This process immerses a baby’s body in a cool environment after delivery to slow circulation and prevent or reduce brain damage. If the process is started within six hours of birth, the infant has a much better outcome.

Thanks to the incredible generosity of donors like Marc and Michelle Tuchman and the dedication of hundreds of UCI students, alumni and staff members who participate in an annual fundraising event, newborns have a growing number of lifesaving resources like this on their side.

A few years ago, Marc Tuchman – the retired director of the UCI Student Center – and his wife, Michelle, decided they wanted to make a gift to the university that would have a lasting impact. The neonatal intensive care unit at UC Irvine Medical Center was one of the locations they toured in making their decision.

“Once you’ve visited the NICU and have seen these infants, your heart simply breaks for them. You can’t stand by and do nothing,” says Marc. “We were just so impressed with what the physicians, nurses and staff do there, along with their caring and devotion. As soon as Michelle and I left the unit, without saying a word to one another, we both knew that this was where we were going to put the resources that we’ll leave behind when we’re gone.”

Marc Tuchman, retired director of the UCI Student Center, and his wife, Michelle, donated the bronze Anteater that adorns the entrance to the center’s west food court.
The Tuchmans established an estate gift that will go to the NICU, providing resources for future technologies and programs that keep UC Irvine Health at the forefront of care for critically ill, premature and full-term infants.

Like the Tuchmans, many students and alumni have demonstrated compassion for the youngest among us as participants in the UCI Care-a-thon, an annual dance marathon hosted by the UCI Student Alumni Association and held in the same Student Center that Marc Tuchman helped to expand. The event dedicates proceeds to the NICU, home to the region’s only high-risk perinatal/neonatal program and only maternal-fetal transport system.

Since 2009, Care-a-thon participants have tallied thousands of hours of time on their feet and raised more $60,000 in support of the NICU babies. In 2014, more than 500 people danced the night away, raising enough money for the unit to purchase a new whole-body cooling system. (The event was opened to the public for the first time this year.) This system is small enough to use during transport, which means the cooling process can begin up to several hours before an infant is admitted.

As you enter the Student Center, where the Care-a-thon takes place, an Anteater donated by the Tuchmans adorns the entrance above the west food court; he’s a 12-foot bas-relief copy of a statue at the Bren Events Center. Marc dedicated 19 years of an accomplished career to the UCI Student Center. For the Tuchmans, the pledged estate gift is just one more example of their commitment to UCI.

“When I retired, I wanted to do something to thank the university for the best years of my career,” says Marc. “The Anteater was my way of showing my appreciation. In addition, Michelle and I decided to make a legacy gift to the NICU.”

To learn how to make a lasting impact like the Tuchmans’, contact Roland Ho, executive director of Planned Giving, at 949-824-6454.

“Once you’ve visited the NICU and have seen these infants, your heart simply breaks for them. You can’t stand by and do nothing.”

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UC Irvine Health Heroes Gala, June 6

Join us for a memorable celebration of the UC Irvine Health heroes, whose actions have helped people across the community and around the world discover and experience wellness as a path to a longer, healthier life.

The black-tie-optional event will take place Saturday, June 6, at the Disneyland Hotel in Anaheim. The elegant evening starts with a cocktail reception, followed by a seated dinner, dancing to JT & Friends, and a special tribute to philanthropist Susan Samueli.

Proceeds will fund exceptional medical research, education and treatment initiatives focused on helping individuals achieve optimum health and well-being at every level of care. For more information, call 714-456-3750 or email gloria.crockett@uci.edu.
UCI experienced a 7.7 percent rise in applications this year, with a record 88,792 students vying for admission in fall 2015. The growth outpaced the systemwide increase by nearly 2 percentage points.

The university also saw impressive gains in Chicano/Latino and African American freshman applicants. And the campus had 68,740 combined freshman and transfer applications from California residents, the second-largest number of in-state applications in the University of California system.

In addition, UCI continues to be a draw for first-generation college students, who made up 42 percent of applicants, and for low-income students, who made up 32 percent of applicants.

UCI's online program for a Master of Advanced Study degree in criminology, law & society has been named the top online graduate criminal justice program in the country by U.S. News & World Report.

This is the first year the publication has ranked online criminal justice programs, and UCI's excelled in faculty credentials, admissions selectivity and student engagement.

Founded in 2002 for full-time workers seeking to further their education, it was the first online degree program in the University of California system. Currently, 120 people with backgrounds in criminal justice, law and social services are enrolled.

Since the program began, 256 students have earned M.A.S. degrees, with another 65 set to graduate in June. Teresa Dalton, social ecology lecturer, and George Tita, professor of criminology, law & society, co-direct the program.
**Chemists find a way to unboil eggs**

**UCI and Australian chemists have figured out how to unboil egg whites — an innovation that could dramatically reduce costs for cancer treatments, food production and other segments of the $160 billion global biotechnology industry, according to findings published in the journal *ChemBioChem*.**

“‘Yes, we have invented a way to unboil a hen egg,’” said Gregory Weiss, UCI professor of chemistry and molecular biology & biochemistry. “In our paper, we describe a device for pulling apart tangled proteins and allowing them to refold. We start with egg whites boiled for 20 minutes at 90 degrees Celsius and return a key protein in the egg to working order.”

Like many researchers, he has struggled to efficiently produce or recycle valuable molecular proteins that have a wide range of applications but which frequently “misfold” into structurally incorrect shapes when they are formed, rendering them useless.

Four UCI scientists join AAAS

Four UCI researchers in the areas of medicine, computer science, biological sciences and physics have been made fellows of the American Association for the Advancement of Science, the world’s largest general scientific society.

“The AAAS plays an important role with the advancement of scientific research, education and outreach in the U.S.,” said John Hemminger, UCI vice chancellor for research and an AAAS fellow himself. “These four brilliant scientists personify the innovation and excellence that mark research at UCI, and we are proud of their achievements.”

With this year’s class, UCI has 140 AAAS fellows. The new members are:

- **Christopher Hughes**, professor and chair of molecular biology & biochemistry, for his distinguished contributions to the field of vascular biology, particularly in angiogenesis (the growth of new blood cells). He and his team have identified critical pathways that allow blood vessels to interact with – and regulate the function of – various cells of the immune system.

- **Eric Mjolsness**, professor of computer science, for his distinguished contributions to the fields of computer science and biology, particularly for new computational models of gene regulation (networks of genes that turn each other on, off or partly on) and resulting technologies.

- **Paolo Sassone-Corsi**, Donald Bren Professor of Biological Chemistry, for his distinguished contributions to the understanding of circadian clocks, particularly for unraveling the links among environmental influences, cellular signaling and gene expression. He is the director of UCI’s Center for Epigenetics & Metabolism.

National Women’s History Month honors Vicki Ruiz

Vicki Ruiz, professor of history and chair of Chicano/ Latino studies, has been named an honoree for the 2015 National Women’s History Month. Her achievements were celebrated by the National Women’s History Project in March at the Autry National Center in Los Angeles.

Ruiz has been a major force in shaping the field of Chicano/Latino studies and has written extensively about the role of Mexican American women in the history of the U.S. Southwest and Pacific Coast. In 2012, she became the first Latina historian inducted into the American Academy of Arts & Sciences.

The 2015 theme for National Women’s History Month, “Weaving the Stories of Women’s Lives,” presents the opportunity to integrate women’s stories – individually and collectively – into the fabric of our nation’s history.

Watch an interview with Vicki Ruiz: youtube.com/watch?v=B_EE-PH6q-0.
Neurobiologist James McGaugh, whose research has vastly contributed to knowledge of the brain’s learning and memory abilities, has won the 2015 University of Louisville Grawemeyer Award for Psychology.

A research professor in neurobiology & behavior and a founding UCI faculty member, McGaugh received the prize for discovering that stress hormones such as epinephrine and cortisol are key to why we remember some things more vividly than others.

The hormones activate the brain’s emotional center, the amygdala, which in turn regulates other brain areas that process and consolidate memories – a sequence that explains why emotional experiences are easier to recall, he found.

“He’s work has transformed the field,” said award director Woody Petry. “It has profound implications for helping us understand and treat memory disorders such as post-traumatic stress disorder.”

Felipe Hernandez ’13 has become the first UCI graduate in 18 years to win a Marshall Scholarship, which supports two years of study at a British university.

Just 40 students annually are awarded the prestigious scholarship, established by the British government as a gesture of thanks to the U.S. for aid provided after World War II under the Marshall Plan. UCI alumna Kelly Maglia was a 1996 recipient.

Hernandez, a graduate in music performance and political science, plans to earn two master’s degrees while in the United Kingdom: one in educational leadership, policy & development at the University of Bristol and one in comparative social policy at the University of Oxford. He previously won a Harry S. Truman Scholarship and a Fulbright English Teaching Assistant grant that took him to Colombia’s Universidad de Ibagué.
In memoriam: Norman Rostoker

UCI professor Norman Rostoker, the father of breakthrough clean nuclear fusion energy techniques via plasma-based accelerators, died on Christmas Day in Irvine. He was 89.

Rostoker cared deeply about using clean fusion as a source of almost unlimited, nonpolluting energy for human development. As soon as he had established the theoretical foundation for the technology, he turned his attention to its realization.

“Professor Norman Rostoker was a creative, brilliant thinker. He has created a legacy that will impact humanity far into the future,” said Kenneth Janda, UCI physical sciences dean and professor. “At UC Irvine, he positioned the Department of Physics & Astronomy at the forefront of fusion research and was an inspiration and mentor to many dozens of students who are today’s leaders in applied physics and technology.”

In addition to serving on UCI’s faculty, Rostoker co-founded Tri Alpha Energy with prominent physicists, including Nobel Prize winner Glenn Seaborg, to implement his ideas to develop a clean source of fusion-based energy.

Rostoker was married for 65 years to Helen Corinne Rostoker, who died earlier in 2014, and is survived by their four children, Stephen Rostoker, Ruth Forton, Linda Rostoker and Rachel Uchizono, as well as grandchildren Lisa Servedio, Nolan Uchizono and Kellen Uchizono, and one great-grandchild, Sofia Servedio.

More: http://bit.ly/1BF3j0o

“Professor Norman Rostoker was a creative, brilliant thinker. He has created a legacy that will impact humanity far into the future.”
50th Annual Commencement, June 12-15
UC Irvine will celebrate its 50th annual commencement with 10 ceremonies held over four days. Friday through Monday, June 12-15. Bren Events Center. (The School of Law ceremony will be Saturday, May 9, and the School of Medicine will be Saturday, May 30, in Aldrich Park.)
More: www.commencement.uci.edu

Fifty for 50 Volunteer Week, Sept. 28-Oct. 2
Fifty for 50 volunteer events will take place throughout the week, as the UCI community continues its quest to donate 50,000 hours of service throughout the campus’s 50th anniversary celebration. More: 50th.uci.edu/events/50-for-50-volunteer-week

Festival of Discovery, Oct. 3
A highlight of UCI’s two-year 50th anniversary celebration, the Festival of Discovery in Aldrich Park will feature interactive explorations of how UCI students and faculty and UC Irvine Medical Center affect the world. The event, which kicks off with an Anteater 5K & Family Fun Run through campus, will include food trucks, cover bands, family-friendly activities and more. Saturday, Oct. 3. Aldrich Park. Free. More: 50th.uci.edu/events

An aerial view of commencement 1966, held in Aldrich Park, shows a much-changed campus.

Anteaters heed the call

Fifty for 50 program honors UCI’s tradition of giving

Anteaters aren’t content with simply throwing a party to celebrate UC Irvine’s 50th anniversary. Instead, hundreds are joining together to give 50,000 service hours back into the community through the Fifty for 50 Volunteer Program.

Launched at a spirit rally in December, Fifty for 50 honors the university’s tradition of service by encouraging UCI students, faculty and staff to personally donate 50 service hours during the two-year anniversary period concluding in June 2016.

Continued on next page
“When this campus was dedicated 50 years ago, the vision was to create one of America’s great research universities,” Chancellor Howard Gillman said. “Those original founding faculty and students – they dreamed big. They combined an unshakable commitment to excellence with a spirit of innovation. They decided that they were going to do great things not by copying their way to the top, but by embracing new ways of thinking.

“We are the heirs to that great and good project, and we stand here today as stewards of a noble mission to be a force in human enlightenment and social progress,” he said.

**Students open health clinic**

Anteaters are pledging to make a difference in their communities, and a shining example is the new student-run Lestonnac Free Clinic in Garden Grove.

Under the supervision of Dr. Baotran Vo, a family medicine and primary care specialist with UC Irvine Health, first- and second-year UCI medical students staff the clinic, which is open every other Saturday from 8 a.m. to 1 p.m. at the Garden Grove United Methodist Church. Undergrads shadow the medical students and handle administrative duties, such as ordering supplies.

Students raised funds to open the clinic – which began as an undergraduate club project – partly by selling banh mi (Vietnamese sandwiches), hot dogs and hot chocolate on Ring Mall.

**Strength in numbers**

UCI’s spirit of volunteerism is also catching on around campus.

In December, after the 50th anniversary spirit rally, more than 700 Anteaters filled stockings with toys, snacks and personal care products for children who benefit from the Olive Crest organization. Presented annually by UCI Staff Assembly, the party yielded 1,000 stockings – a marked increase over last year’s total of 150 and a sign that even a small investment of time can have a big impact.

“We were overwhelmed by the support from staff, students and faculty, both in the form of donations and time,” said Dahlia Aguirre, chair of Staff Assembly. “Witnessing over 700 Anteaters happily working together in the spirit of giving was a wonderful sight to see, and knowing that UCI was able to put a smile on over 1,000 children’s faces from Olive Crest was priceless.”

About 250 UCI volunteers also joined in a “Take 15” sandwich-making event in November at the Cross-Cultural Center, working on a PB&J assembly line to help feed hungry and homeless people in Santa Ana. Created by Orange County’s Center for Living Peace, the annual event more than doubled in size, thanks to the participation of the Fifty for 50 program, Student Affairs, the Cross-Cultural Center’s Community Action Series, the UCI Dalai Lama Scholars Program, and UCI Hospitality & Dining.

**Paying it back**

As Gillman noted at the rally, each hour spent helping others draws attention to a tradition of service and thanks people in the region for their support.

“The accumulated impact of the Anteater Nation coming together … to serve other people will have an impact on girls and boys and men and women throughout the region in a truly extraordinary way,” he said. “What a wonderful way to celebrate our first 50 years.”

More: 50th.uci.edu/volunteer
Join us as the University of California, Irvine celebrates its 50th anniversary. To mark this milestone, the university has launched a two-year-long series of programs and activities that exhibit our “Bright Past, Brilliant Future.”

**2015**

**April 18**
Celebrate UCI

**May 14**
Lauds & Laurels

**June 12-15**
50th Annual Commencement

**Sept. 21**
Student Convocation & Anteater Involvement Fair

**Sept. 28-Oct. 2**
Fifty for 50 Volunteer Week

**Oct. 3**
Anteater 5K & Family Fun Run

**Oct. 3**
50th Anniversary Festival

**Oct. 8-18**
U.S. Department of Energy Solar Decathlon

**Oct. 10**
UCI Medal Awards

**Dec. 1-5**
Living Peace Series

**Fall**
Academic Symposium Series

*National Academy of Sciences*

Founders Celebration

**2016**

**Winter**
Academic Symposium Series

*National Academy of Engineering*

**Spring**
Academic Symposium Series

*Institute of Medicine*

**Summer**
Academic Symposium Series

*Arts & Humanities*

**June**
51st Annual Commencement &
50th Anniversary Closing Ceremony

Visit [50th.uci.edu/events](http://50th.uci.edu/events) for updates and more information.

*Dates and events are subject to change.*
Make your mark on UCI!

Leave your legacy and place your name on the Newkirk Alumni Center Spirit Wall. Celebrate your time at UCI with a custom engraved plaque displayed prominently in the Den.

Space is limited. Act today! For more details, visit alumni.uci.edu/give/spirit-wall.php.

The Newkirk Alumni Center is conveniently located on the west edge of the UC Irvine campus. As you enter the center, the Den serves as an intimate gathering space, exemplifying Anteater pride with UCI memorabilia and an ever-growing library of alumni publications and artifacts.

Spirit Wall contributions will complete the Newkirk Alumni Center Building Construction Campaign.