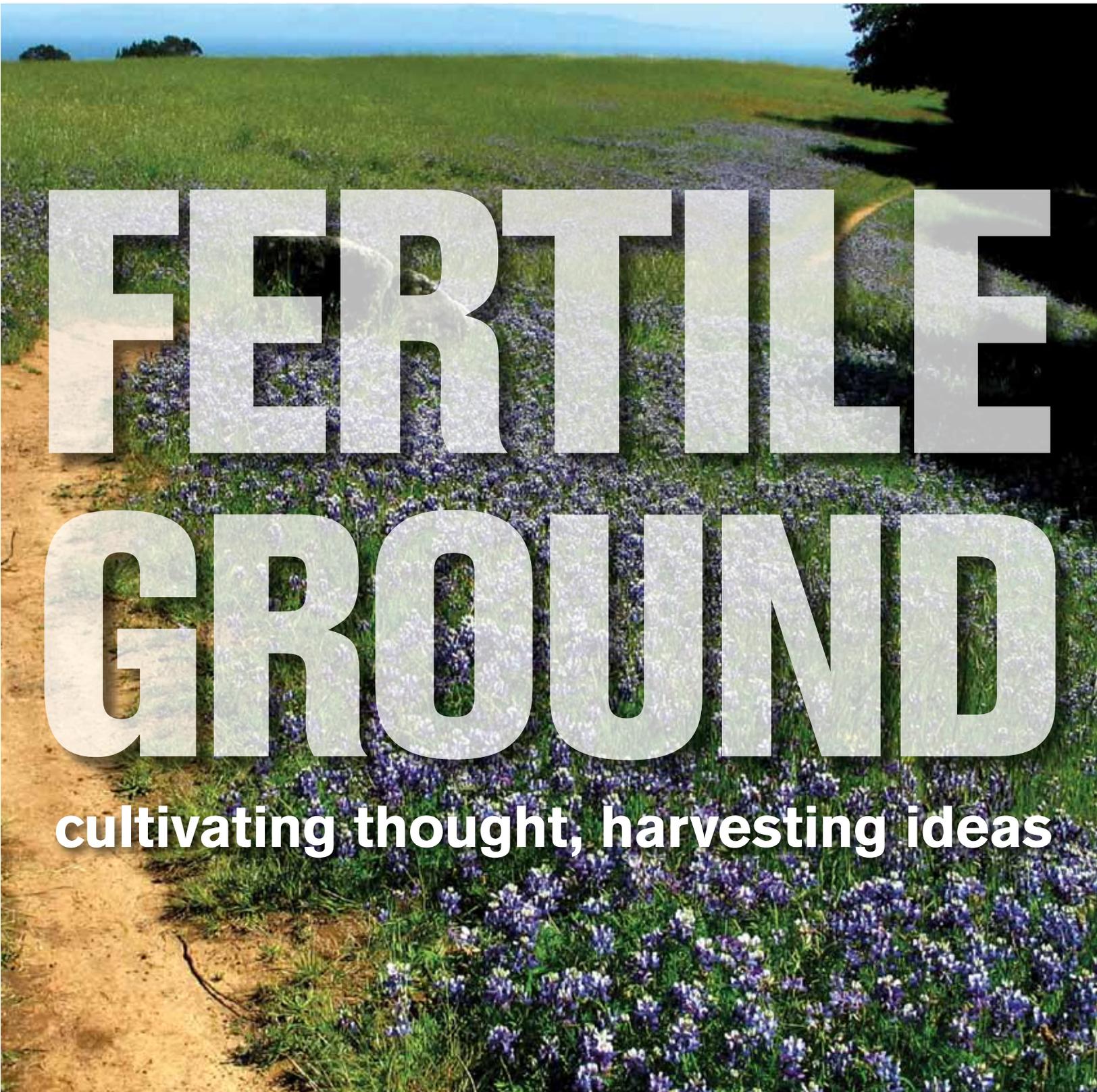


# UC SANTA CRUZ

REVIEW

Spring 2011



# FERTILE GROUND

**cultivating thought, harvesting ideas**



Dear Friends,

As you read this issue of *Review* magazine, you'll see that UC Santa Cruz remains fertile ground for innovation and creativity. The people behind our programs are thought leaders who take the initiative, ask bold questions, and change the world.

I feel great pride reading these articles and seeing every day the vibrancy of our campus. Yet I must acknowledge the budgetary challenges facing the campus this spring. I have real concerns about how we will retain our distinctive programs and nurture this unique ecosystem that encourages people to question, explore, discern, and discover.

We face threats that are unprecedented in the 50-year history of California's Master Plan for Higher Education. As you likely know, California is wrestling with a \$26 billion budget deficit. The best-case scenario for the University of California will be a \$500 million cut in the fiscal year that begins July 1; the worst-case would be a cut of \$1 billion. This will be the third major cut to the university in the past four years.

If you want to learn more, I encourage you to read our campus's coverage of a recent UC Regents meeting, during which I discussed the impacts on UC Santa Cruz of the state's ongoing disinvestment in the university (go to [www.ucsc.edu/budget-update](http://www.ucsc.edu/budget-update) and see updates from March 16).

These are serious cuts. Our challenge is to implement these budget reductions without sacrificing what matters most: the distinctive experience we offer undergraduates, the top-flight research conducted by extraordinary faculty, and our commitment to access and diversity.

Although I am hopeful that the state of California will overcome its persistent budget problems, I do not expect the state to return to previous levels of investment in the university anytime soon. I believe the only way to maintain quality and access is to take our destiny into our own hands and build a long-term vision for the future based on diminished state support. To that end, faculty and staff are joining campus leaders in an internal campus discussion beginning this spring that will chart our course for the future.

As we begin the five-year countdown to our 50th anniversary, we must work harder than ever to ensure that future generations will have access to what we offer at UC Santa Cruz. We owe it to our founders, our alumni, and our current and future students.

*George R. Blumenthal*

PHOTO THIS PAGE: PAUL SCHRAUB

# UC SANTA CRUZ

REVIEW | [review.ucsc.edu](http://review.ucsc.edu) | Spring 2011

## Fertile Ground

UCSC provides a rich environment for far more than flora and fauna. It's also a place where animated films, prize-winning novels, tomorrow's computer games—and more—grow roots, emerge, and thrive.

### Brain farm

*UCSC's fertile environment has nurtured an impressive crop of creatives and thinkers.*



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### 45 + 5

*In celebration of UCSC's 45th anniversary, we introduce 45 successful and distinguished alumni—plus five more recent "up-and-coming" graduates.*



12

### Phage hunters

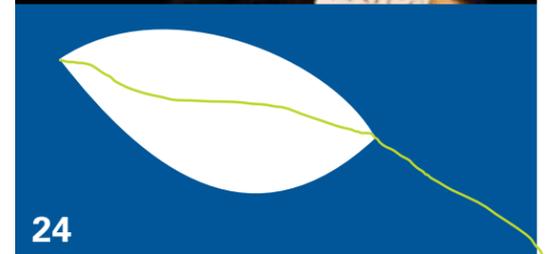
*A unique genomics class offers motivated freshmen the opportunity to do first-hand research.*



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### Sprouting entrepreneurs

*UCSC has spawned a number of innovators with the help of world-class faculty and an environment that gives students space to follow their muses.*



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# Your turn

UNIVERSITY  
OF CALIFORNIA  
SANTA CRUZ

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George R. Blumenthal

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Spring 2011

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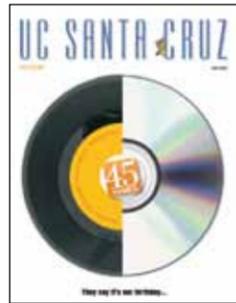
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A sampling of reader reaction to recent issues of the UC Santa Cruz *Review*.

E-mail us at [review@ucsc.edu](mailto:review@ucsc.edu).



## FEEDBACK ON 'OH BROTHER, WHERE ART THOU?'

ED. NOTE: *We received numerous letters expressing an emotional response to our story on UCSC's pioneering art professors, "Oh brother, where art thou?" in the fall 2010 Review (page 16), including the ones below.*

I especially enjoyed the fall 2010 issue of UC Santa Cruz *Review*, in particular the article about past art instructors with whom I studied—in particular Don Weygandt. I am still painting and etching, exhibiting, and teaching a kids' arts and crafts workshop at the Activities Center at Park La Brea, Calif., and I also published an illustrated children's book.

—DEBORA GILLMAN  
(Porter '74, *French literature, art minor*)

Thank you for bringing back some very fond memories of Don Weygandt and his art classes. While I did not make art a career, it has remained a very important part of my life, in part due to lessons learned from Prof. Weygandt's palette.

—TOM FRADY, *pioneer class of '69 (psychology)*

I was so happy to see the article about art at UCSC and have often wondered what had become of some of the teachers I dealt with.

I was there in 1973, when I transferred as a junior working toward a B.A., mainly in painting. At the time I was just over 40 years old, so I was close in age to the professors in the article.

Don Weygandt was my favorite of the bunch. He had a way of making you feel as though you were special and that you had promise in what you were doing.

The whole experience at UCSC was great, and it gave me the feeling that my need to express my art was a true one.

I have long since thought that UCSC has moved away from art, as I knew it then; it is good to know that it still exists there.

—GERALD AVENMARG  
(Porter '68, *art*)

The article on Don, Doug, and Jack moved me to tears on the train this morning.

—SUSAN STAUBER  
(Porter '76, *art*)

## HAS UCSC LOST ITS EDGE?

In the 45th anniversary issue of the *Review* (fall 2010), I looked in vain for celebration of the unique educational experiment that UCSC represented from its inception. You discuss the university's founding solely in terms of the local climate, and you highlight every milestone of enrollment growth. I suggest you keep a copy of *The Perpetual Dream* (1978), by

Gerald Grant and David Riesman, in your offices and make it required reading for your writers and editors.

Universities are subject to "regression toward the mean," and radical institutions like the early Santa Cruz gradually lose their distinctiveness over the years. The early Santa Cruz atmosphere cannot be recaptured, and that's probably just as well. But it should be honored. To quote Michael S. Brown's letter (fall, p. 2, "Your turn"), this is "UCSC's heritage and soul."

—WINSLOW ROGERS,  
*parent of current student, Grass Valley, Calif.*

## MAKE EVALS STUDENT OPTIONAL

Regarding "Narrative evaluations become instructor optional" (spring 2010, p. 25), I consider this an unfortunate move, and would rather see the Academic Senate make narrative evaluations *student* optional.

Even looking back after 28 years, I can read my narrative evaluations and see why graduate schools, and later medical schools, recognized that I was an optimal candidate for their programs.

My narrative evaluations would have translated into a 4.0 GPA virtually anywhere if graded, but they would say next to nothing about me other than about my academic prowess.

I urge the Academic Senate to reconsider this misguided subversion of UCSC's core mission.

—MARK GARY  
BLUMENTHAL (*College Eight '81, independent major*)

# From the Editor

What makes a place different from anywhere else?

You know the feeling when you're in one of these spots: There's a quality to the air, an energy in the atmosphere, an aesthetic, a magnetic *something* that pulls you in. Think of a novel with a sense of place so strong that the setting becomes a character in its own right.

UC Santa Cruz is one of those places. Your weakness may be the redwood groves, the rolling meadows at the base of campus, the marine layer over the hills. Perhaps it's the bustling plaza, a brilliant professor, a laboratory, a secret spot, a classroom, or some other place where youthful idealism and good ideas rise to the surface.

Maybe it's a combination of all these ingredients. Anyone who's spent time on campus knows the feeling.

It's a place that supports an exceptionally large number of flora species, from native wildflowers to Douglas firs—and, of course, an organic farm and garden. But this place also encourages a strong diversity of thought. Just being up here encourages the mind to wander outside boundaries and across disciplines. Something about the place encourages adventure and risk. It's fertile ground for the imagination.

To illustrate, we present stories about the ways UCSC has attracted and nurtured some of the most gifted creative thinkers over the years (page 8), how it's enriching bright young minds (page 20), and how it's recently cultivated a growing crop of entrepreneurs (page 24).

UCSC's founders dreamed of the campus as an experimental institution of learning—marked by progressive, cross-disciplinary undergraduate education and innovative teaching methods. Some of the fruits of their labor—evidenced in profiles of 50 of our alums—can be seen on pages 12–19.

We can't wait to see what blooms at UC Santa Cruz next.

—Gwen Mickelson,  
editor

## Eye on alumni: Celebrating 45, looking forward to 50

In celebration of the 45th anniversary of UCSC's first class, which arrived on campus in fall 1965, we've produced profiles of 45 alums who are having an impact on our world. In addition, we highlight five young up-and-coming alums in anticipation of the campus's 50th anniversary. See page 12 for the profiles. Also, longer versions are online at [45years.ucsc.edu/plus5](http://45years.ucsc.edu/plus5).

Help us commemorate this important milestone! We hope you'll feel a sense of Slug pride when you read about these outstanding individuals.

# HOT dates

## Reunion Weekend

[ucsc.edu/daybythebay](http://ucsc.edu/daybythebay)

Including *Day by the Bay*

**April 29–May 1, 2011**

[Campus](#)

## A Writer's Life

A Celebration of Writing at UCSC

[writerslife.ucsc.edu](http://writerslife.ucsc.edu)

**May 1, 2011**

[Humanities 1, campus](#)

## Founders Celebration 2011

[ucsc.edu/founders](http://ucsc.edu/founders)

**October 21, 2011**

[Founders Day Gala Dinner](#)

[Cocoanut Grove, Santa Cruz](#)

## Scholarship Benefit Dinner

[ucsc.edu/sbd](http://ucsc.edu/sbd)

**February 25, 2012**

[Fairmont Hotel, San Jose](#)



# This is UCSC

## Six small planets orbiting a Sun-like star amaze astronomers

A remarkable planetary system discovered by NASA's Kepler mission has six planets around a Sun-like star, including five small planets in tightly packed orbits.

Astronomers at UC Santa Cruz and their coauthors analyzed the orbital

dynamics of the system, determined the sizes and masses of the planets, and figured out their likely compositions—all based on Kepler's measurements of the changing brightness of the host star (called Kepler-11) as the planets passed in front of it.

"Not only is this an amazing planetary system, it also validates a powerful new method to measure the masses of planets," said Daniel Fabrycky, a Hubble postdoctoral fellow at UC Santa Cruz, who led the orbital dynamics analysis.

Above: Artist's conception of the newly discovered planetary system

## Student-run carbon fund fights waste, encourages green



It's one thing to grouse about food waste, water consumption, and inefficient energy use on campus.

It's another thing to reach into your own pocket, raise a pool of money and help UC Santa Cruz solve the problem. An enterprising group of UCSC students is doing just that with the newly instituted Carbon Fund, founded last spring to diminish the campus's carbon footprint with environmentally friendly projects undertaken by staff, faculty, and students.

So far the group has set aside \$100,000 for this purpose.

The Carbon Fund uses money raised by Measure 44, a student-approved ballot initiative that raises money through a \$3-per-quarter student fee. The fee itself is not new; it has been in place since 2006, when students imposed a previous renewable energy ballot measure. Measure 44 simply redirects that money to the Carbon Fund.

## Prof helps in major discovery, wins multiple awards



Richard E. ("Ed") Green

A 30,000-year-old finger bone found in a cave in southern Siberia came from a young girl who was neither an early modern human nor a Neanderthal, but belonged to a previously unknown group of human relatives who may have lived throughout much of Asia during the late Pleistocene epoch.

DNA extracted from the bone has yielded a draft genome sequence, enabling scientists to reach some startling conclusions about this extinct branch of the human family tree, called "Denisovans" after the cave where the fossils were found.

The findings were reported by an international team of scientists, including many of the same researchers who earlier published the Neanderthal genome. Coauthor Richard Green, assistant professor of biomolecular engineering in the Baskin School of Engineering, played a lead role in the analysis of the genome sequence data, for which a special portal was designed on the UCSC Genome Browser.

Green and his coauthors of the landmark paper describing the Neanderthal genome went on to receive the prestigious Newcomb Cleveland Prize from the American Association for the Advancement of Science in February. Also in February, Green received a Sloan Research Fellowship from the Alfred P. Sloan Foundation.

## Lit prof's novel gains notice

Karen Tei Yamashita, professor of literature and co-director of the Creative Writing Program, was nominated for a 2010 National Book Award.

Yamashita was one of five finalists in the fiction category for her novel *I Hotel*.

One of the most significant honors in American literary life, the National Book Awards are presented annually by the National Book Foundation.

For more on Yamashita, see page 10.

## A Writer's Life

As part of UCSC's 2011 Day by the Bay weekend, the Humanities Division will host a writing symposium on Sunday, May 1. The symposium will feature UCSC alumni writers—novelists, journalists, and screenwriters—coming together for a community event to focus on the joys and challenges of writing for a living, the business of writing, and trends for the future. The event is called A Writer's Life: A Celebration of Writing at UCSC.

For information and registration, visit [writerslife.ucsc.edu](http://writerslife.ucsc.edu).

## Research on thin-film solar cells heats up

Sue Carter, a UCSC professor of physics, is pursuing a variety of strategies to develop cheaper and more efficient solar cells. She was awarded five new grants last year totaling more than \$1 million to fund her research on new materials and technologies for solar energy.

Carter's research focuses on lowering the cost of solar cells and reducing the energy "payback time"—how long it takes a solar cell to generate the amount of energy that was used to manufacture it. Her lab uses thin-film technologies and printable semiconductor materials that enable the production of solar cells using less material and less energy compared to standard manufacturing processes.



Sue Carter

## Time's White House correspondent returns to campus

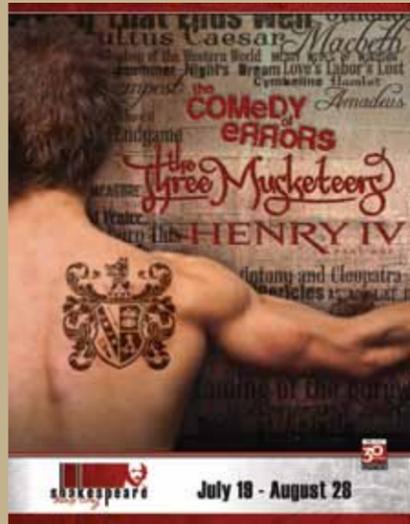
Michael Scherer, the White House correspondent for *Time* magazine and a UC Santa Cruz alumnus (Oakes '98, creative writing), returned to campus in November to describe his journey from UCSC to riding Air Force One with the president.

Scherer had good news for the creative writing majors who attended his informal talk at Kresge College. "It's not as gloomy as people tell you," he said. Opportunities are there "if you are willing to work cheap and really hard."

He worked for a small New Hampshire daily newspaper for a couple of years, then *Mother Jones* magazine in a job that didn't pay enough to live on. A masters in journalism from Columbia University followed, then another stint at *Mother Jones*, a jump to Salon.com, and finally during the 2008 presidential campaign a call to join *Time* in covering Republican candidates.

IMAGE LEFT: NASA/TIM PYLE; PHOTO, FAR RIGHT: R. R. JONES

# This is UCSC



## Shakespeare Santa Cruz announces 30th anniversary season

Shakespeare Santa Cruz is preparing to perform its 2011 lineup as the company heads into its 30th anniversary season.

The season will open with an updated version of Shakespeare's *The Comedy of Errors*.

Playing in the outdoor Festival Glen will be *The Three Musketeers*.

Also playing in the Glen will be Shakespeare's *Henry IV, Part One*. This will mark the beginning of a three-year cycle of Shakespeare's history plays known as the "Henriad," which will continue in 2012 with *Henry IV, Part Two*, and conclude in 2013 with *Henry V*.

The holiday show returns in 2011 after a two-year break with *A Year with Frog and Toad*.

For more information about the 2011 Shakespeare Santa Cruz season, go to [shakespearesantacruz.org](http://shakespearesantacruz.org), or call the UCSC Ticket Office at (831) 459-2159.

## John Laird named to key post

John Laird (Stevenson '72, politics) is the new secretary of the California Natural Resources Agency, which is charged with protecting the state's natural, historical, and cultural resources. It is a key position overseeing the state's environment. He was appointed by Gov. Jerry Brown.

Laird is a former three-term member of the state Assembly, where he served as chair of the Budget Committee. The Alumni Associations of UC named him Legislator of the Year in the Assembly



Above: John Laird  
Below: Cynthia Thickpenny



for 2008. He is also a former Santa Cruz mayor, city councilmember, and member of the Cabrillo College board of trustees.

## Distinguished history graduate wins prestigious scholarship

Recent graduate Cynthia Thickpenny won a Marshall Scholarship—one of the most prestigious awards that American undergraduates can receive—to study at the University of Glasgow in Scotland.

"I pretty much had to pick myself up off the floor when the phone call came from the British Consulate," recalled Thickpenny, who studied history.

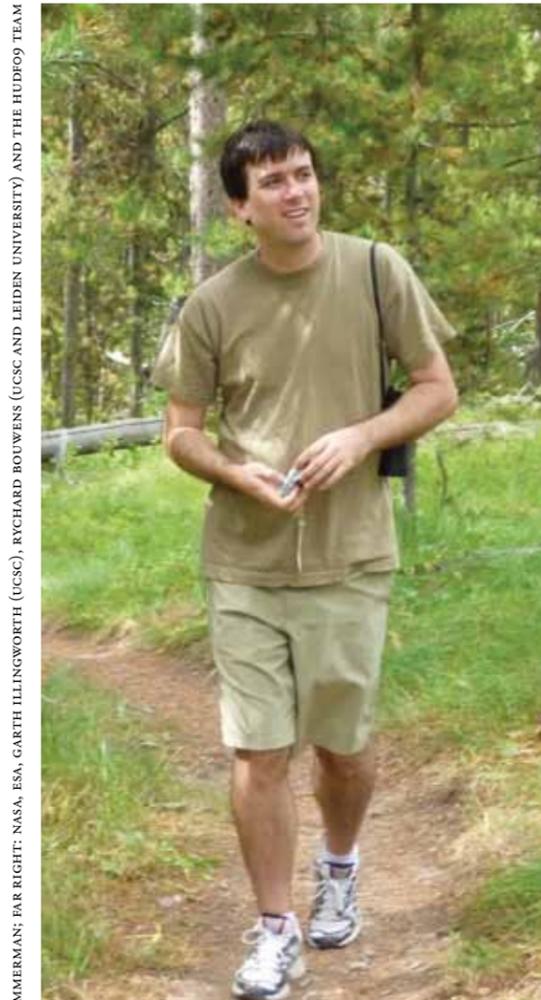
Thickpenny is only the second student in the 45-year history of UC Santa Cruz to be honored with a Marshall; the first was in 1969. The two-year award covers living expenses, tuition, and research travel expenses that come to about \$36,000 per year. She plans to specialize in early medieval Scottish history.

## Kent Nagano wins Best Opera Grammy

Renowned conductor and UC Santa Cruz alumnus Kent Nagano received a Grammy Award for Best Opera Recording: "Saariaho: L'Amour De Loin" at the 53rd Grammy Awards.

The recording with the Deutsches Symphonie-Orchester Berlin and the Rundfunkchor Berlin features singers Ekaterina Lekhina, Marie-Ange Todorovitch, and Daniel Belcher.

Nagano graduated with degrees in music and sociology in 1974. This is his third Grammy Award.



Above: Gabriel Zimmerman, enjoying a walk in Grand Teton National Park in 2009.

## Alum who died in Tucson rampage honored with scholarship

Gabriel Zimmerman, community outreach director for Rep. Gabrielle Giffords, D-Ariz., was one of six people fatally wounded in January in Tucson, Ariz., in the shooting rampage that left Giffords critically wounded.

Zimmerman, 30, graduated from UC Santa Cruz in 2002 with a degree in sociology.

Friends and colleagues remembered Zimmerman as a seasoned community organizer with a strong sense of social justice and conflict resolution.

"People have to engage," said sociology professor Paul Lubeck, who vividly remembers Zimmerman's eager presence in three of his classes. "They have to get out there on the ground, get out into the community, go out and get their hands dirty. He exemplified that."

### The Gabriel Zimmerman Scholarship Fund

Moved by Zimmerman's death, UCSC alumnus Jonathan Klein established a scholarship fund in the young congressional aide's honor and offered an initial gift.

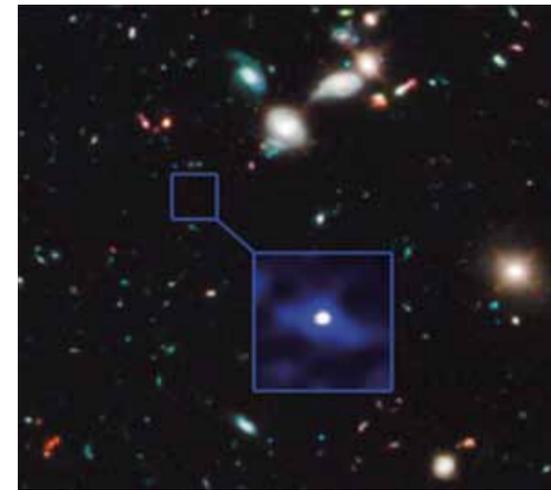
In March, the fund exceeded the \$50,000 level needed to endow it.

The Gabe Zimmerman Scholarship will provide funds for outstanding students in the Division of Social Sciences who wish to pursue public service.

For information on contributing, contact Marcus Frost at [jmfrost@ucsc.edu](mailto:jmfrost@ucsc.edu) or (831) 502-7274. You may also donate online; visit [giving.ucsc.edu](http://giving.ucsc.edu) and designate Gabriel Zimmerman Scholarship Fund.

## Rod Ogawa wins lifetime achievement award

Rodney Ogawa, professor of education, was named winner of one of the most prestigious awards in the field of education research. Ogawa is the 2010 winner of the Roald F. Campbell award for lifetime achievement by the University Council for Educational Administration. It is "probably the most prestigious award we give in our field," said Alan Shoho, UCEA president. Ogawa is a former secondary teacher who taught at UC Riverside before joining UC Santa Cruz in 2002. He is a previous chair of UCSC's education department.



Possibly the most distant galaxy ever seen

## Astronomers find most distant galaxy candidate yet seen

Astronomers studying ultra-deep imaging data from the Hubble Space Telescope have found what may be the most distant galaxy ever seen, about 13.2 billion light-years away. The study pushed the limits of Hubble's capabilities, extending its reach back to about 480 million years after the Big Bang, when the universe was just 4 percent of its current age.

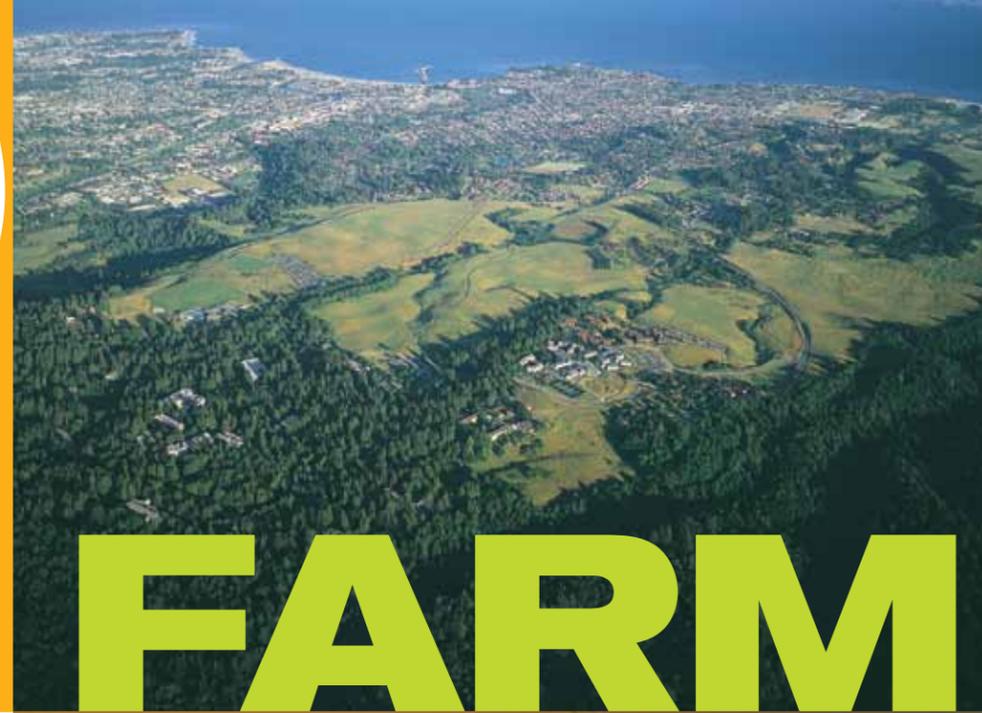
"We're getting back very close to the first galaxies, which we think formed around 200 to 300 million years after the Big Bang," said Garth Illingworth, UCSC professor of astronomy and astrophysics.

Illingworth and UCSC astronomer Rychard Bouwens (now at Leiden University in the Netherlands) led the study. Using infrared data gathered by Hubble's Wide Field and Planetary Camera 3 (WFC3), they were able to see dramatic changes in galaxies over a period from about 480 to 650 million years after the Big Bang.



by Dan White

# BRAIN



# FARM

## UCSC's fertile environment has nurtured an impressive crop of creative projects and thinkers

UC Santa Cruz is a rich environment for growing things. Coastal live oak, giant slugs, raccoons, and redwoods flourish. The campus is home to deer so tame, they might come up and nip a tortilla chip from your fingers. Organic vegetables do well up here, too.

But UCSC is fertile ground for far more than flora and fauna. It's also a place where animated films, prize-winning novels, and tomorrow's computer games germinate and thrive. Sometimes, the projects begin on campus. Other times, the university inspires projects that flourish elsewhere.

These people and projects may not seem to have much in common. But all of them are connected in one important way:

Each flourished because the UCSC campus gave them the necessary nutrients to thrive.

Perhaps it was the presence of other colleagues offering inspiration and critical insight. It might have been the way the campus encourages people to question assumptions, recognize a rising talent, and draw outside disciplinary lines.

Or it could be the sheer beauty of the campus, and the way the setting inspires creativity.

Here's a quick look at some of the talents, projects, and creative expression that have prospered at UCSC. But first, a disclaimer:

This is by no means an exhaustive list; consider it a crop sampler.

### Growing games

UCSC is known for an atmosphere that allows creative work to happen and prosper. That's what lured innovative game designer Michael Mateas to campus.

Now the director for UCSC's Center for Games and Playable Media, he is planting seeds for a new generation of games. Instead of just preparing students for today's gaming, he wants them to look beyond the realm of zombie shooters and rescue missions.

"I want innovation and new experiences," Mateas says. "And I want to get those experiences into the hands of as many people as possible."

But what does that future look like? Mateas believes it will be a time for "interactive dramas," self-contained, social network-driven projects featuring fully conversational characters,

who will work with players to shape the storyline. Perhaps we'll get closer to the "holodeck," the interactive room that sent Captain Jean-Luc Picard and his crew into the Wild West in *Star Trek: The Next Generation*.

In 2005, a year before his arrival at UCSC, Mateas—along with co-creator Andrew Stern—solidified his reputation with a quirky interactive drama called *Façade*. Challenging design clichés, it rebelled against the idea of an "open world" game in which characters range across vast spaces. Instead, the action unfolds at an awkward party hosted by the unhappily married Grace and Trip. The player is the third wheel in their nasty disputes.

The *New York Times* and *Atlantic Monthly* hailed the game's innovation, including the unusual depth of its artificial intelligence and the fluent language of its characters. It has much more in common with an Edward Albee play than a Sylvester Stallone movie.

"The game was a contrarian stance," Mateas says.

Mateas was drawn to UCSC because it was creating an innovative undergraduate degree program—the first of its kind in the UC system—and he saw



PHOTO, TOP: AIRPHOTO/DAVID SIEVERT; RIGHT: ROBINSON KUNTZ/SANTA CRUZ SENTINEL

Above: Michael Mateas (center), associate professor of computer science, with graduate students studying computer game design in the Expressive Intelligence Studio.

the campus as a place that was flexible enough to put itself at the forefront of a new field of study. In return, UCSC gave him the resources to recruit strong faculty and establish the Center for Games and Playable Media—one of the largest technical game research groups in the world. The campus also has fostered collaborations with the Art and Digital Arts and New Media departments.

Now Mateas is creating rich soil for students and colleagues to grow ideas of their own, including a soon-to-be-released game called *Prom Week*, which was designed entirely by UCSC game design graduate students. Mateas and Noah Wardrip-Fruin are the design team's advisors.

In *Prom Week*, players try to manipulate characters including the nerdy Zack, who wants to

be Prom King. In one scenario, he impresses a classmate, Naomi, by flexing his biceps, only to blow his chances by showing off an ill-timed light saber trick. "Yer weird!" Naomi declares.

In doing so, the player changes the social dynamic of the school, but only to a point.

"You can't make these characters do anything they don't want to do," Mateas says.

Like *Façade*, *Prom Week* will be released free of charge.

### Roots of greatness

American short story writer and poet Raymond Carver (May 25, 1938–August 2, 1988) is considered a major American writer of the late 20th century and a force in the revitalization of the short story in the 1980s.

When Carver arrived as a lecturer in 1971, the writing scene was thriving. George Hitchcock, influential editor and founder of the literary magazine *Kayak*, was here. So were authors Jim Houston and Page Stegner.

A master of dialogue, Carver turned conversations into games of misdirection. Dialogue should be "non-sequiturs," he told his students.

Many early stories of this celebrated writer are sad and bruising, but his brief period at UCSC was productive and enjoyable for him, bolstering his confidence, starting lifelong friendships, and inspiring some of his early works. His friend and colleague, David Swanger, says Carver's outgoing, low-key personality melded with the writing scene on campus.

# BRAIN FARM



"Working relationships were not bureaucratic, official, or competitive," says Swanger, now a UCSC professor emeritus of education and creative writing. "We were all starting out and we were all in it together, and he was a man whose friendships counted."

Carver and Swanger frequented a Santa Cruz restaurant that provided free dinners to poets who read their work out loud.

"It was big deal for Ray and me," Swanger recalls. "Reading was not something we took for granted. It was celebratory."

"Life spread before Ray like a buffet in Santa Cruz," writes Carol Sklenicka in her Carver biography. "His letters, typed on university letterhead ... convey the excitement of a kid in a candy shop."

This excitement included *Quarry West*, the literary magazine Carver launched here.

"This guy who became the American Chekhov was so thrilled about this small university literary magazine that he ran into the cafeteria during lunchtime to show me a review that had been written about it," Swanger recalls.

Soon after his UCSC stint, Carver became a much-lauded writer, but he stayed in contact with Swanger. Artifacts from that friendship—26 letters, notes, and cards that Carver penned to Swanger—now have a permanent home in UCSC's Special Collections.

## Cross-disciplinary currents

Acclaimed writer and UCSC literature professor Karen Tei Yamashita refuses to squirrel herself away when creating fiction. She puts herself in the world, allowing life and learning to inform her work.

This campus turned out to be the ideal place for her creative expression to thrive; UCSC's world of ideas, and its thinkers from various disciplines on campus, helped inform and grow her work.

In 1997, the year she was hired to teach at UCSC, she began work on her book *Hotel*, which was shortlisted last year for the National Book Award.

"It is a small miracle that the long work of this book and the stories of these people and this history were honored by the NBA," says Yamashita, who believes the book "would not have happened" without her UCSC job.

UCSC gave her access to the Bay Area and the diverse Asian American community that populates her book, which concerns a standoff over evictions at San Francisco's International Hotel.

Wisdom gleaned from UCSC lectures, conferences, and graduate seminars made its way into her work. So did the scholarship of colleagues like Daniel Linger in anthropology, who shared research about Brazilian migrant workers in Japan, and professor emerita of American studies Judy Yung, who helped her re-create the culture of San Francisco's Chinatown in the 1960s.

Yamashita found it striking that the book covers the same time period when UCSC began to take shape in the 1960s.

The time correlation is perhaps "not a coincidence," she speculates now. Some of the

ideals that informed the creation of the campus can also be found in her work.

"The founding history of UCSC is embedded in this time period. Those ghosts of change must also be present."

## Incubating Freedom

Some plants require agitated soil. Others grow best with little disturbance. Put best-selling author Jonathan Franzen in the latter category. He famously wore noise-blocking headphones while creating his 2001 National Book Award-winning novel *The Corrections*.

Franzen craves quiet while at work, and he found that space at UCSC, where he frequently used offices at Cowell College during the years he was working on his critically acclaimed 2010 best-seller, *Freedom*. The secluded, forested campus turned out to be an ideal spot for him to create. (Franzen does not teach at UCSC, but he lives in Santa Cruz part-time.)

"UCSC is a great place to write fiction, especially in the summer months, when the campus is very quiet and the days often start out very foggy," writes Franzen via e-mail. "I can go from the fog of sleep and up the foggy drives to a dark office, put in a good morning in the dream state of fiction-writing, and then emerge to a beautiful blue sky in the early afternoon."

Franzen is not the only creative mind to find safe haven at UCSC. For example, Tom Lehrer—the fearless musical satirist of the

Cold War era—turned his back on his career and later became a UCSC math lecturer while collaborating on campus musical productions. The late Spalding Gray, actor and comic monologist, took part in a performance group workshop on the UCSC campus in 1978 and performed here well into the '90s.

## Seeds of magic

Pixar animator Mark Henne adds weight, impact, and movement to digital characters—and his years at UCSC led to a creative partnership that continues to inspire his work more than 20 years later.

Consider the robots swarming through the *Axiom* starliner, and the overweight human "guests" zipping around in self-propelled lounge chairs in the computer-animated movie *Wall-E*.

In 1990, Henne graduated from UCSC's computer science masters program, where the seedlings of his Pixar career were planted. Much of his current work grows out of his mentorship with Jane Wilhelms, the UCSC professor who stretched his understanding of animation's potential.

He remembers Wilhelms investigating the possibilities of movement during a summer conference he attended. She had animated gymnast characters twirling on parallel bars, and boxy, bug-like beings swarming through an environment.

"She wasn't directing their path," Henne says. "It was kind of an AI (artificial intelligence) approach where they somehow

could reason about where they were and the obstacles in front of them."

Her ideas influenced Henne, who still thinks about crowd dynamics when animating groups of characters. To show crowd movement, he says, you must start with the individual and build outward.

The classic example is a flock of birds. The flock doesn't have a thought process, he says. The amalgamation of individual behaviors creates the crowd's behavior: "Follow my neighbor but don't let them get too close." "If a gull has a fish, let's try to take it."

Henne, who wrote his UCSC master's thesis about flexible digital skin for human characters, does not believe in technology for its own sake. But by showing him the possibilities of animation, UCSC taught him how to captivate a movie audience.

## Sound of silents

The UCSC campus helped film and digital media professor Shelley Stamp—an expert on silent movies and early women filmmakers—start a small project that grew into an international franchise.

Along with her former colleague Amelie Hastie, now an associate professor at Amherst College, she coordinated a conference that would draw 60 film scholars to explore and celebrate the remarkable—but often overlooked—contributions of women to the silent films of the early 20th century.

The conference was the first of its kind. For years, women's early contributions to film

were neglected in film studies, in spite of the astonishing amount of influence and creative control they had in the industry.

But the idea took off. Since then the conference, designed as an open and friendly place to share research and ideas, spread from Santa Cruz to Montreal, Guadalajara, Stockholm, and Bologna. Another Women and the

Silent Screen conference is already planned for Melbourne, Australia, in 2013.

UCSC's long-standing, pioneering support for feminist scholarship made it a logical launching pad for the series of conferences, said Stamp.

"And although my current research takes me to archives in New York, D.C., and Los Angeles, the community of feminist scholars here provides me with a sustaining and inspiring home base," she says.

Aside from helping to grow a conference, Stamp helps her young UCSC students grow future careers by encouraging them to look into filmmaking's distant past.

"Students come into the program with an incredible level of media literacy," Stamp continues. "But several of them confessed to me that they'd never seen a black-and-white film, and some have never seen a film more than 10 years old. It is my job and also my great pleasure to get them excited about the older films. Their socks are blown off by the rich cinema culture that existed before 1928."

Clearly, the students are paying attention.

One former student is the archivist at Francis Ford Coppola's American Zoetrope Films. Another is vice president for development at Warner Bros. Pictures.

"The best students recognize that you can't move forward without seeing what came before you," Stamp says.

Contact Dan White at [dwhite1@ucsc.edu](mailto:dwhite1@ucsc.edu)

PHOTOS: MATEAS, KNIGHT FOUNDATION; CARVER, MARION ETLINGER/VINTAGE CONTEMPORARIES; YAMASHITA, C. LAGATTUTA; FRANZEN, GREG MARTIN; HENNE, PIXAR

In celebration of UCSC's 45th anniversary, we are pleased to introduce you to 45 successful and distinguished alumni—plus 5 more recent “up-and-coming” graduates in anticipation of our 50th.



# 45+5

These 50 alumni are leaders in public service, the arts, scientific research, literature, journalism, innovation, and much more. Says UCSC Chancellor George Blumenthal: “Across the spectrum, they credit UCSC with offering them the tools to get where they are today. And their success is one of the strongest measures of our success.”

View longer versions—as well as selection criteria—online at [45years.ucsc.edu/plus5](http://45years.ucsc.edu/plus5)



**LEADERS**

**1. William D. "Bro" Adams**

1982—Ph.D. history of consciousness

President, Colby College (Waterville, Maine); previously president of Bucknell University.

**2. William T Fujioka**

Crown College  
1974—B.A. sociology

CEO of Los Angeles County, the largest county in the nation, managing a \$23 billion budget that includes more than 100,000 employees.

**3. Ronald R. Gonzales**

Kresge College  
1973—B.A. community studies

Leader in business, philanthropy, and public service for more than 35 years, including mayor of San José, Calif., from 1999–2006. Currently president and CEO, Hispanic Foundation of Silicon Valley (HFSV).



5.

**4. John Laird**

Stevenson College  
1972—B.A. politics

California Secretary for Natural Resources. A state assemblymember from 2002 to 2008 (27th District); one of the first openly gay mayors in the U.S. (Santa Cruz, Calif.), and also one of the first openly gay state legislators.

**5. Julie Packard**

Crown College  
1974—B.A. biology  
1978—M.A. biology

Helped found the Monterey Bay Aquarium; executive director of the aquarium since it opened in 1984 and vice chair of its Board of Trustees.

**6. Francisco J. Rosado-May**

1991—Ph.D. biology

President and founder of the Intercultural Maya University of Quintana Roo, Mexico; previously president of the University of Quintana Roo, the first university in his native state.

**7. Art Torres**

Stevenson College  
1968—B.A. politics

Prominent California politician who served in the state senate from 1982 to 1994; in the assembly from 1974 to 1982; and as California Democratic Party chair from 1996 to 2009. Currently vice chair, California Institute for Regenerative Medicine.

**HEALERS**

**8. Gary Heit**

Oakes College  
1977—B.A. individual major (psychology)

Neurosurgeon and researcher who helped develop Deep Brain Stimulation as a treatment for chronic pain, movement disorders, and epilepsy. Currently a physician (neurological surgery) with Kaiser Permanente.

**9. Kenneth S. Kendler**

Cowell College  
1972—B.A. biology and religious studies

Psychiatrist and researcher who has been called "the most influential psychiatrist of his generation." Currently Rachel Brown Banks Distinguished Professor of Psychiatry and Human and Molecular Genetics at Virginia Commonwealth University.

**10. Deborah Madison**

Cowell College  
1968—B.A. sociology

Founding chef of the legendary Greens Restaurant in San Francisco and award-winning author of nine cookbooks, including *The Greens Cookbook* and *Vegetarian Cooking for Everyone*.

**11. Cheryl Scott**

Oakes College  
1974—B.A. biology

Award-winning medical epidemiologist who has developed programs



to fight HIV/AIDS and tuberculosis internationally and in the U.S.

**12. Michael Wilson**

Stevenson College  
1984—B.A. biology

Leader in green chemistry and environmental policy development. Currently a research scientist at the Center for Occupational and Environmental Health, School of Public Health, UC Berkeley, and associate director for Integrative Sciences and Systems Studies of the newly formed Berkeley Center for Green Chemistry.

**14. bell hooks**

1983—Ph.D. literature

Internationally recognized author, activist, and cultural critic addressing (among other topics) the politics of race, class, and gender. She has published more than 20 books, including *Ain't I a Woman: Black Women and Feminism*.

**15. Kent Nagano**

Porter College  
1974—B.A. music, sociology

Acclaimed opera and symphony conductor; currently music director of the Orchestre Symphonique de Montréal; general music director of the Bavarian State Opera in Munich; and conductor laureate, Berkeley Symphony.

**16. Jock Reynolds**

Stevenson College  
1969—B.A. psychology

Noted visual artist and a national leader in the arts; currently the Henry J. Heinz II Director of the Yale Art Gallery, America's oldest university teaching museum.

**17. Lawrence Weschler**

Cowell College  
1974—B.A. philosophy, Western civilization

Acclaimed writer who has published numerous books and worked for 20 years (1981–2002) on the staff of *The New Yorker*. Currently director of the New York Institute for the Humanities at NYU and distinguished writer in residence at the Carter Journalism Institute.

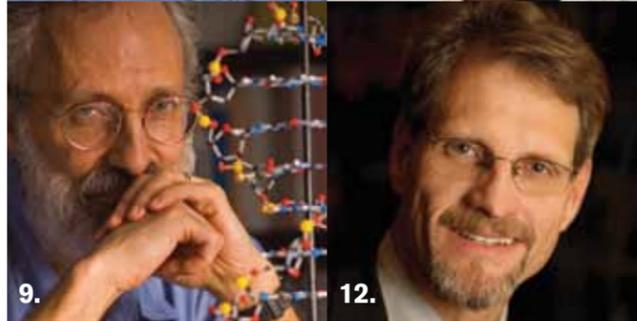


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**45+5**



INNOVATORS

**18. Malcolm Blanchard**

Crown College 1972—B.A. information and computer science

Pioneer in computer graphics; currently chief software engineer, Pixar Animation Studios.

**19. Brent R. Constantz**

1984—M.S. Earth sciences 1986—Ph.D. Earth sciences

Developer of high-performance medical cements and devices with more than 70 U.S. patents. Founder and currently chairman of Calera Corporation (capturing power plant emissions to make “green cement”), and consulting professor, Stanford University.

**20. Drew D. Goodman**

College Eight 1983—B.A. environmental studies/environmental design

Innovator in organic farming; co-owner of Earthbound Farm, the largest grower of organic produce in the world.

**21. Randall P. Grahm**

Porter College 1974—studied philosophy, literature, and pre-med

Founder and “president for life” of Bonny Doon Vineyard; a legend in the U.S. wine industry for his adventurous, biodynamically produced wines and irreverent marketing.

**22. Drummond Pike**

Stevenson College 1970—B.A. politics

Founder (in 1976) and CEO of Tides, which has administered well over \$1 billion in grants and programmatic activity over the past decade. He retired as Tides CEO in 2010 and is pursuing other projects.

**23. Daniel Roam**

Merrill College 1988—B.A. art/biology

Author of the international bestseller *The Back of the Napkin: Solving Problems and Selling Ideas with Pictures*. He is a management consultant and president of Digital Roam, Inc.

EXPLORERS

**24. Joseph Lyman DeRisi**

Crown College 1992—B.A. biochemistry & molecular biology

Pioneering medical researcher and a 2004 MacArthur Fellow. Currently professor (and Gordon Tomkins Chair) of Biochemistry & Biophysics at UC San Francisco and a Howard Hughes Medical Institute Investigator.

**25. Victor Davis Hanson**

Cowell College 1975—B.A. literature

Noted historian, scholar, and best-selling author. Currently Martin and Illie Anderson Senior Fellow in Residence in Classics and Military History, Hoover Institution, Stanford University.

**26. Steven A. Hawley**

1977—Ph.D. astronomy and astrophysics

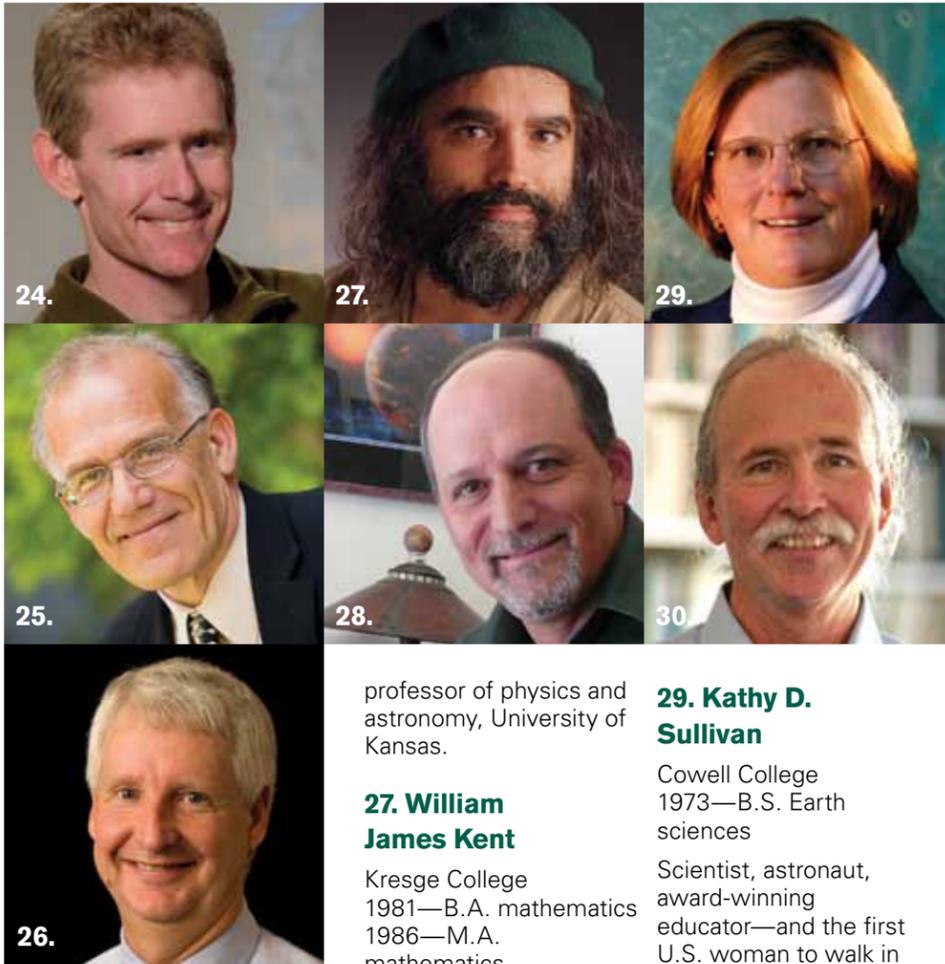
Leading U.S. astronaut who logged a total of more than 770 hours in space. Currently a

crucial role in sequencing the human genome, creating the UCSC Genome Browser. Currently a research scientist at UCSC.

**28. Geoffrey W. Marcy**

1982—Ph.D. astronomy and astrophysics

An internationally respected astronomer, Marcy and his team have discovered more extrasolar planets than anyone else. Currently professor of astronomy, UC Berkeley, and adjunct professor, San Francisco State University.



EXPLORERS  
MAPPING THE NEW FRONTIER

professor of physics and astronomy, University of Kansas.

**27. William James Kent**

Kresge College 1981—B.A. mathematics 1986—M.A. mathematics 2002—Ph.D. biology

As a UCSC graduate student, he played a

**29. Kathy D. Sullivan**

Cowell College 1973—B.S. Earth sciences

Scientist, astronaut, award-winning educator—and the first U.S. woman to walk in space. Currently founding director of the Battelle Center for Mathematics and Science Education



Policy at the University of Ohio’s John Glenn School of Public Affairs.

**30. Richard White**

Cowell College 1969—B.A. history

Leading scholar in three related fields: the American West, Native American history, and environmental history. A MacArthur Fellow (1995) and currently Margaret Byrne Professor of American History, Stanford University.

JUSTICE SEEKERS

**31. Laurie Garrett**

Merrill College 1975—B.A. biology

Best-selling author of *The Coming Plague: Emerging Diseases in a World Out of Balance*. The only writer to receive all three “Big P’s” of journalism—the Peabody, Polk (twice), and Pulitzer prizes. Currently senior fellow for Global Health, Council on Foreign Relations.

**32. Teri L. Jackson**

Stevenson College 1977—B.A. politics

Prominent attorney and the first African American woman appointed to the Superior Court bench in San Francisco, a position she still holds. She is also on the faculty of the UC Hastings School of Law.

**33. Roberto Nájera**

Merrill College 1979—B.A. sociology

Precedent-setting public defender and 2004 recipient of the Kutak-Dodds Prize (2004) from the National Legal Aid and Defenders Association. Recently retired as deputy public defender, Contra Costa County.

**34. George Robert Perkovich**

Cowell College 1981—B.A. politics

Leading expert in nuclear arms strategy and nonproliferation; currently vice president for studies/director of the Nuclear Policy Program, Carnegie Endowment for International Peace.



35.



36.

**JUSTICE SEEKERS**

**35. Jason Rao**

Porter College  
1993—B.A. chemistry  
Has pioneered new programs in international science diplomacy, bringing thousands of scientists together to meet challenges in health, energy, security, and the environment. Currently senior policy advisor for global science engagement in the White House Office of Science and Technology Policy.

**36. M. Sanjayan**

1997—Ph.D. biology  
Lead scientist for The Nature Conservancy, specializing in human well-being, conservation, Africa, and wildlife ecology. He also holds a research faculty appointment with the Wildlife Program at the University of Montana.



37.

**37. Julia E. Sweig**

Porter College  
1986—B.A. Latin American studies  
Leading expert on U.S. policy relating to Latin America, especially Cuba; currently Nelson and David Rockefeller Senior Fellow for Latin America Studies, Council on Foreign Relations.

**STORYTELLERS**

**38. Shannon M. Brownlee**

College Eight  
1979—B.S. biology  
1983—M.S. marine sciences  
Prominent writer and essayist; currently senior research fellow, New America Foundation and instructor, Dartmouth Institute for Health Policy and Clinical Practice.

**39. Richard Harris**

Crown College  
1980—B.A. biology

Award-winning National Public Radio science correspondent and past president of the National Association of Science Writers.

**40. Laurie R. King**

Kresge College  
1977—B.A. religious studies  
Best-selling mystery novelist known for her historical series about Mary Russell and Sherlock Holmes. Her books have won the Edgar, Creasey, Wolfe, Lambda, and Macavity awards.

**41. Jayne Ann Krentz**

Stevenson College  
1970—B.A. history  
Prolific author of an impressive string of *New York Times* fiction best sellers, Jayne Ann Krentz also writes under the pen names Amanda Quick and Jayne Castle.

**42. Steven P. Martini**

Cowell College  
1968—B.A. politics  
Best-selling mystery novelist who brings his experience as a journalist and attorney to his popular series featuring fictional attorney Paul Madriani.



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**44. Dana Priest**

Merrill College  
1981—B.A. politics  
Author and Pulitzer Prize-winning investigative journalist. She has worked over 20 years for the *Washington Post*.

**45. Katy Roberts**

Kresge College  
1974—B.A. politics  
A top editor at the *New York Times*, where she has worked since 1982. Currently commentary editor for nytimes.com.

**47. Marla C. Geha**

2003—Ph.D. astronomy and astrophysics  
Dubbed “The Star Chaser” by *Popular Science* magazine, she explores the formation, evolution, and destruction of dwarf galaxies. Currently assistant professor of astronomy and astrophysics, Yale University.

**48. Azadeh Moaveni**

Oakes College  
1998—B.A. politics  
Author of *Lipstick Jihad* and *Honeymoon in Tehran*, and co-author, with Nobel Peace Prize winner Shirin Ebadi, of *Iran Awakening*. Currently a *Time* magazine contributing writer on Iran and the Middle East.

**49. Maya K. Rudolph**

Porter College  
1995—B.A. art  
Actor, singer, and comedian known for her work on *Saturday Night Live* (2000–2007). Recent films include *Grown Ups* and *MacGruber* (both 2010).

**50. Danielle L. Soto**

College Ten  
2008—B.A. environmental studies  
In 2008 (while still a UCSC undergraduate), she ran for and won a seat on the City Council of Pomona, Calif., her hometown.

Edited by Vicki Bolam



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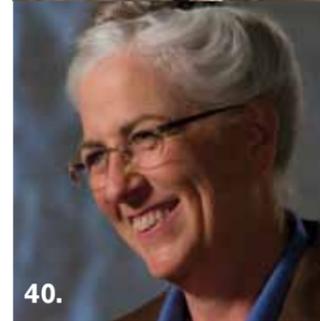
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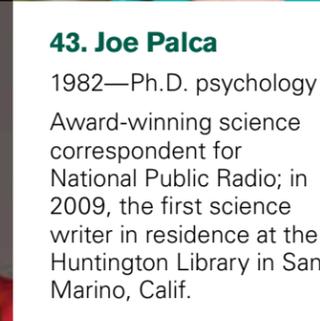
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**STORYTELLERS**  
SCULPTING WITH WORDS

View longer versions—as well as selection criteria—online at [45years.ucsc.edu/plus5](http://45years.ucsc.edu/plus5)  
For photo credits, see page 34.

**UP AND COMING**

**46. Cary Joji Fukunaga**

College Eight  
1999—B.A. history  
Award-winning film director; awards for his recent film *Sin Nombre* included best director at the 2009 Sundance Film Festival.

# Phage hunters

A unique genomics class offers motivated freshmen the opportunity to do first-hand research



After shaking out small strips of paper from test tubes, the phage hunters bend over the table in concentration, moving pieces around until the strings of A's, C's, G's, and T's that form DNA start matching and overlapping. Under the fluorescent lights of the laboratory, the phage hunters are solving this puzzle on their path to tackling greater mysteries in the biomedical world.

This is the *Phage Genomics* class, and the phage hunters—freshmen just beginning their college careers—are already conducting original investigations. “Phage hunting” is the art, science, and adventure of finding phages (viruses that infect bacteria) in the wild, breaking down and studying their DNA, and figuring out what genes they hold.

Along with 11 other universities, UC Santa Cruz has offered the three-quarter *Phage Genomics* course for three years as part of the Science Education Alliance, developed and funded by the Howard Hughes Medical Institute (HHMI). Molecular, cell and developmental (MCD) biology professors Grant Hartzog and Manuel Ares lead the lab, where freshmen learn laboratory skills, independence, and critical thinking, but most of all, a love of meaningful research.

“It’s hard for motivated undergrads to find research opportunities,” Hartzog says. Phage genomics is a good entry into research because the technical manipulations at the beginning are quite simple, he says, but as students get deeper into the project, the techniques and questions grow in sophistication.

On this day in mid-February, the students have just received data from a DNA sequencing center and are about to start analyzing their phage DNA sequence. The exercise using paper strips with letter strings—representing bases, the building blocks of DNA—gives them a chance to work through the process computers undertake to combine the many DNA fragments obtained by the sequencing center into an entire phage genome sequence. The class is studying mycobacteriophages, viruses that infect mycobacteria. An infecting phage can kill the bacteria or it can integrate its DNA into the host chromosome. Once integrated, the phage can stay inside the bacteria without causing harm; in this way, phages can be used to manipulate bacteria. Although the students are studying a harmless mycobacterium that lives in soil, it is related to a mycobacterium that causes tuberculosis; understanding mycobacteriophages has been a key to understanding tuberculosis genetics. Phages are abundant in nature, but their genetic diversity and complexity have only recently been recognized. The contributions of this class of phage hunters will add to the growing bank of phage, mycobacteria, and possibly tuberculosis knowledge.

“This helps people understand the genome of the bacteria, and has applications in bacterial infections,” says student Julia Froud, 19, of Cowell College. “I like the idea of finding out something no one in the scientific community has ever seen.”

Left: Professor Manuel Ares works with students Georgia Pollard (on his left), and Hilary Hoffman (to his right), during a class. Class size for the course is kept small, with only fourteen students. Inset: Students analyze their phage DNA sequence.

## Gene finding

*Phage Genomics* gives freshmen the chance to go out into the field and collect soil samples, use powerful lab tools such as electron microscopes to view their samples magnified many thousands of times, and analyze phage DNA to find genes and their possible functions.

“Gene finding is a bit of an art,” says Hartzog. “Just because a student sees their gene prediction matches that for a related gene in a database doesn’t mean either prediction is necessarily valid. They need to critically evaluate the data, and not just trust [the database].”



Student Adrian Ruiz works on his DNA sequence.



The students and professors from the inaugural class of the 12 participating schools co-authored a paper published this January in academic journal *PLoS ONE*, presenting the 18 new mycobacteriophages isolated by freshmen. Their work indicated that, among

other things, mycobacteriophages are still under-sampled, since the students had found phages with genomes completely unrelated to known phages.

Every year, Hartzog and Ares invite incoming freshmen who have done well in high school biology to apply for the class. There is a written application, then an interview, during which the professors look out for the spark that tells them that student will succeed.

“All the applicants are smart, but the interviews help us see who’s motivated, who’s interested in the world,” Hartzog says.

Ares believes research universities provide a different flavor of education than schools focused solely on teaching: professors at research universities are practitioners of their field, and can expose students to the roots of how we know what we know.

“If we produce students who know fixed facts, their knowledge is static and stagnant. But if we incorporate an experimental basis of understanding, now we’ve produced students who can continue to learn and teach themselves,” Ares says.

Such self-directed learning can be challenging. For enterprising phage hunters, when the going gets tough, the tough use the Phage Hat. A wearable talisman Hartzog made to inspire stymied students, the Phage Hat is an impressive contraption of foil, cardboard, and good vibes. No one has failed to isolate a phage yet, so the Phage Hat must be working. On the other hand, perhaps it is simply dedication and hard work at play.

## Draw for the science-minded freshman

Victoria McElroy collected more than 45 soil samples before finding success, even driving off campus with her mother on her search. At the beginning of the course, she hadn’t known what to expect and found it rather nerve-racking. She jumped on the learning curve from day one, picking up basic lab techniques such as pipetting. Now such skills are second nature, and she’s found herself in the lab at midnight, putting in hours for her favorite class.

“I can’t wait for Tuesdays and Thursdays,” says McElroy, 19, a Crown College MCD biology major.

Courses like *Phage Genomics* are a draw for future UCSC science-minded applicants. “Most other colleges don’t have the opportunity for freshmen to do research,” says Froud. The chance to conduct undergraduate research was a large factor in Froud’s decision to come to UCSC.

The UCSC course has been so successful that, although the three-year HHMI grant is ending, it will continue under UCSC (and possibly National Science

Foundation) funding. From next year, it will be a two-quarter class offered to sophomores, reaching out to students early in their college education, but after they have taken basic biology and writing courses. *Phage Genomics* will add a scientific writing component, a must-have skill in the research world.

Phage expert William Jacobs of HHMI developed the original phage class for young students (“Phage Phinders”) when he worked with his local high school. Phage hunting, he says, is “a life-changing experience even if you don’t go into research. You learn that you, a high school kid, can discover something new and unique.”

In his pioneering research, Jacobs used phages as tools to genetically manipulate mycobacteria, a technique that enabled a greater understanding of tuberculosis and other bacterial diseases.

Of the UCSC phage hunters, Jacobs says, “Anybody sequencing a phage is fine in my book. Just by using phages, we’re developing all the tools we need to manipulate TB. The trick to overcoming every obstacle, I found in a phage.”

Two years after taking *Phage Genomics*, junior Kimberly Davis, 20 (Cowell, biochemistry and molecular biology), looks back on the experience as giving her a leg up in her science education. “For once I felt that what I was learning was important,” she says. Without the class, “I wouldn’t be where I am now, doing my second year of research.”

Hartzog and Ares guide their students even after the course has ended, helping them find research opportunities on campus and hoping they go on to productive scientific careers.

“It’s fun to do science!” Ares says. “We do it because we like it. And we want to give them the same feeling.”

*Jane Liaw is a freelance writer and UC Berkeley research scientist. She graduated from the UCSC science communication program in 2008 and is now based in San Francisco.*



Professor Grant Hartzog lectures a class; at right is the “Phage Hat,” an inspirational charm constructed of foil, cardboard, and good vibes.

## Helping minority students pursue research

Two programs that support minority students pursuing biomedical research careers are active and thriving on the UCSC campus.

Launched nationally by the National Institutes of Health, the Minority Access to Research Careers (MARC) and Initiative for Maximizing Student Diversity (IMSD) programs have been a part of campus life for several decades. Molecular, cell and developmental professors Alan Zahler and Barry Bowman helm MARC and IMSD, respectively.

MARC is exclusively an undergraduate honors program, focusing on students who have an early commitment to graduate research. IMSD accepts undergrad and graduate students. Though separate, the programs share many resources, and a few students transfer from IMSD to

MARC every year. MARC awardees receive a monthly stipend, while IMSD students are given an hourly salary.

MARC and IMSD are not simply financial aid. Programs staff director Malika Bell and assistant Yulianna Ortega offer both academic and personal support. The programs provide everything from equipment for printing conference posters to tutoring. The program staff know each student personally, and have even had students stay with them on occasion.

Shewit Tekeste (Oakes ’08, MCD biology), now a third-year doctoral student at UCLA studying HIV proteins, credits her love of research to the program. The friendly environment, regular seminars, opportunities to attend national conferences, tutoring, and private meetings with Bell helped build her confidence as a young scientist, she says.

The success of these programs is reflected in the impressive achievements of their

alumni. In the last five years, for example, 50 percent of MARC students have gone on to Ph.D. programs. Together, the programs are about to celebrate their 100th Ph.D. awarded.

Juan Noveron (Ph.D. ’00, bioinorganic chemistry) benefited from both programs as a student, and calls them critical to his success. “As an undergraduate student, it allowed me to network with people in research careers and inspired me to pursue a college-level teaching career. As a graduate student, the MARC-IMSD program provided the financial support to focus on my research projects.”

Now, as associate professor of chemistry at University of Texas at El Paso, Noveron works with his local MARC-IMSD program and young students just starting their scientific careers, paying forward the support he received at UCSC.



From farming to  
pharmaceuticals,  
entrepreneurs  
**sprout**

# at UCSC

Over the decades, UCSC has spawned a number of innovators with the help of a world-class faculty and an emphasis on an interdisciplinary education that gives students space to follow their muses.

And eight years after the university created Silicon Valley Initiatives, a true culture of entrepreneurial spirit has gripped the campus—thanks to an intentional focus on innovation, a growing crop of young entrepreneurs, and the stewardship of Silicon Valley veterans.

“It’s an opportune time to build our network and form the alliances that will really help boost our reputation and presence in the Valley,” said Gordon Ringold, head of Silicon Valley Initiatives, a set of educational and research activities that increase the presence of UC in Silicon Valley. “There’s a lot of intellectual capital we can tap into to bolster our resources in a challenged economic environment.”

Ringold, who earned his bachelor’s in biology from UCSC in 1972, became director last summer. A former professor at Stanford University, he has started a handful of companies in genetics and biofuels, including Codexis, which manipulates enzymes to improve the conversion of sugar cane into fuel. It’s based on technology—also created by a Ringold company—used to heighten drug performance.

For Silicon Valley Initiatives, Ringold is focused on the big industries on the peninsula and the South Bay: computer science, computer engineering, and material sciences. Of course, if Silicon Valley Initiatives is to be a nexus of innovation between the Valley and the campus, there has to be something to connect.

Enter the Center for Entrepreneurship, a campus outfit born last fall (see page 28) and, just as important, a growing cadre of UCSC grads gaining influence in Silicon Valley, the Bay Area, and beyond.

“The cohort of UC Santa Cruz alums who are entrepreneurs in the Valley has really started to grow,” Ringold said. “Because of that, we can tap into a network that even five or 10 years ago would have been harder to accomplish. There aren’t many of us who have been around for a long time.”

But alumni with fewer gray hairs than Ringold are making names for themselves in a broad array of fields, everything from farming to pharmaceutical to bikes and Internet mapping.

We feature four of them:

**Brandon Allgood and Nigel Duffy, Numerate**

Brandon Allgood and Nigel Duffy radiate confidence. According to Allgood, who earned a master's degree in physics from UCSC in 2001 and a Ph.D. in 2005, their use of the cloud—a network of computers linked in cyberspace—is “a fundamental paradigm shift” in pharmaceutical design.

In traditional drug development, researchers make incremental changes to chemical compounds and wait to see if the effects are good, bad, or indifferent.

Numerate ([www.numerate.com](http://www.numerate.com)), based in San Mateo, uses a network of up to 2,000 computers to conduct simultaneous virtual screenings of chemical combinations to find what works, much faster and cheaper than the old ways, the company says.

“We’ve solved the problem of getting a computer to design a small molecule,” said Duffy, who obtained his doctorate in computer

Brandon Allgood



Bernt Wahl

**Bernt Wahl, Factle**

Anyone who’s ever obsessed over ZIP code prestige has a friend in Bernt Wahl. So do real estate agents.

Wahl (Crown ’86, mathematics and physics) lives in Berkeley and teaches entrepreneurship to engineers at UC Berkeley. He’s also CEO of Factle ([factle.com](http://factle.com)), which specializes in hyperlocal mapping and location intelligence.

“I was involved in search engines,” Wahl said by way of explaining the germination of Factle and his failed attempt to take over the former search engine Infoseek. “I noticed that things were getting more hyperlocal. I consulted with a real estate company, breaking down regions into smaller units.

“The cities were fine, but nobody had aggregated the neighborhood boundary data. We pioneered it.”

Factle’s technology allows searches so granular they take a lot of guesswork, and legwork, out of the home-buying process. For example, a house hunter who loses out on a home in a particular San Francisco neighborhood can get an e-mail alert the moment another house in the same area goes on the market.

The technology is malleable enough to do foreclosure or public health analysis, and track damages and repairs house by house after a catastrophe like last summer’s San Bruno pipeline explosion or the March earthquake and tsunami in Japan.

science in 2001 at UCSC. “We partner with people with insight into what a therapeutic should do to treat a disease, and we deliver to them molecules that implement their biological insight.”

Allgood and Duffy work with some big pharmaceutical companies they can’t name publicly and universities including Stanford and Cornell. They’re excited at the prospect of more technology licensing and development at UCSC, and Allgood will use his new position on the UC Santa Cruz Foundation board to fan the entrepreneurial flames.

“There’s an overall creativity you find at UCSC you don’t find at other places,” he said. “It lends itself to thinking outside the box, which is an absolute necessity for an innovator.”



Rob Forbes

How valuable can Wahl be to UCSC’s efforts to promote innovation on campus? Well, earlier this year he was one of 350 entrepreneurs from around the world invited to an event at the United Nations in New York, and he scored an invite to dinner with the Rockefellers along with his college buddies, one of whom created a search algorithm Microsoft bought and named Bing.

“It was pretty interesting,” he said of the dinner. “I learned that the pool room isn’t the billiards room. It actually has a pool in it.”

**Rob Forbes, PUBLIC**

Already known for starting Design Within Reach, the avant-garde-gone-mainstream furniture store launched as a web-direct business in 1999, Rob

Forbes now has “a mission to bring the same level of intensity, education, and value to our public spaces and cities as DWR has brought to our personal and private environments.”

As the web site for his urban bike design company PUBLIC ([publicbikes.com](http://publicbikes.com)) makes clear, the people at the company don’t hate cars—they just want bikes to overtake cars as the preferred American way of getting around.

They aim to take back public spaces with bikes affordable enough to fit middle-class budgets and cool enough to be used on the Google and Apple campuses. It’s exactly the kind of company that would be operated by someone who graduated with a degree in aesthetic studies from Porter College (1974). And to hear Forbes tell it, every bike he sells is a consumer good and a purchase for the public good.

“We believe the quality and usage of our public spaces is the measure of the success of our democracy,” he said.

**Drew Goodman, Earthbound Farm**

Drew Goodman and his wife Myra didn’t start Earthbound Farm ([www.ebfarm.com](http://www.ebfarm.com)) in Carmel Valley on a whim, but it was close.

“We started the farm based on the romantic notion of living on a farm,” the New York City native said. “That it would be fun before we got on with our career thing. We ended up staying and pursuing it.”

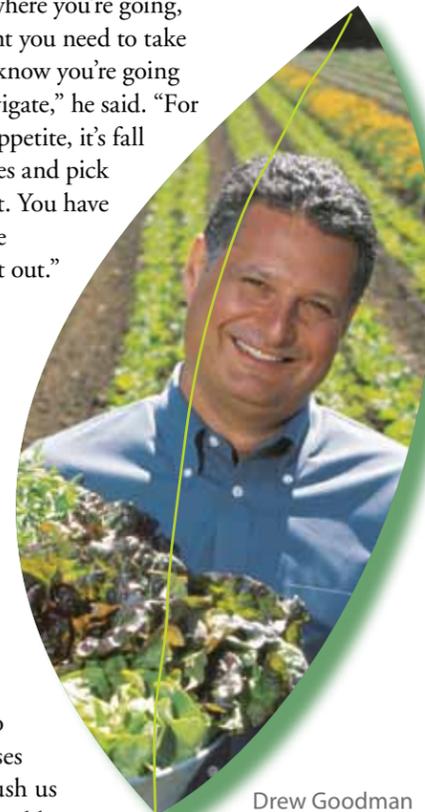
And a little raspberry patch they tended in exchange for free rent is now the second-biggest organic vegetable brand in the country. It’s a development Goodman

(College Eight ’83, environmental studies and environmental design) attributes to their innate tenacity and the values he absorbed on the UCSC campus.

“As an entrepreneur, you need to think through where you’re going, but at some point you need to take the plunge and know you’re going to be able to navigate,” he said. “For those with the appetite, it’s fall down seven times and pick yourself up eight. You have to feel like you’re going to figure it out.”

And as UCSC evolves into an entrepreneur-minded institution, Goodman thinks it’s the logical leader of “do good and do well” business.

“There’s a great opportunity for entrepreneurs to finance businesses that can help push us to a more sustainable way of doing things and making money in the process,” Goodman said. “It would be nice to see UCSC take the lead in that.”



Drew Goodman

PHOTOS: GOODMAN, R.R. JONES



Dan Heller and Rebecca Braslau hope the Center for Entrepreneurship at the Baskin School of Engineering will help bring novel ideas to the market.

### Center cultivates innovation to propagate home-grown businesses

Dan Heller looks into the future and sees creativity, innovation, and enough money to stop fretting about state budget cuts.

"If we start building companies, we can replenish some of that lost revenue," he said. "If the school can rewrite its perception in the world as a place of innovation and entrepreneurship, we will attract even better students and even better faculty."

Heller (College Eight '85, computer and information sciences) was a member of the e-mail vanguard (remember Zmail?) and is the executive director of the Center for Entrepreneurship at the Baskin School of Engineering. His job and the program are less than a year old, but he's aiming high: A focused academic program to incubate business and technology development, and technology licensing to attract cash and prestige to the campus.

The City of Santa Cruz is watching the center's activities with interest.

"It's essential to the local economy for us to support the commercialization of research as well as empower the entrepreneurial potential of the UCSC faculty," said Peter Koht (Stevenson '05, music and history), economic development coordinator for the City of Santa Cruz. "By creating the space for entrepreneurship, you create opportunity for resilience and innovation in an economy undergoing rapid transformation."

The center is so young there's not yet any tie between it and the school's Silicon Valley Initiatives.

In the early stages, Heller is focused on professionalizing the school's business plan design contest and working with faculty with innovative ideas.

One idea that's already been patented is the brainchild of chemistry professor

Rebecca Braslau, who invented a spray that, in conjunction with a basic fluorescent light, will detect the presence of poison oak and ivy oils on tools or clothing.

"The methodology is patented to UCSC, but the development of the product to a level that it can be licensed or produced by a start-up company has not been pursued due to lack of funding, and lack of connections by the inventor—me," Braslau said.

There are many researchers at UCSC with great ideas who are not interested or experienced in the business world, Braslau continued.

With the center's help, Braslau hopes the many novel ideas germinating on campus will lead to great innovations in the market.

*Matt King is a freelance writer based in San Jose.*

PHOTOS: JIM MACKENZIE

### Alan Richards | Edmund Burke: A revolt against humiliation

Two UCSC faculty members provide a perspective on the generational revolution sweeping the Arab world.

**He finally had** had enough.

Like millions of other young Arabs, Mohammad Bouazizi, age 26, had been repeatedly humiliated.

He could not find a decent job.

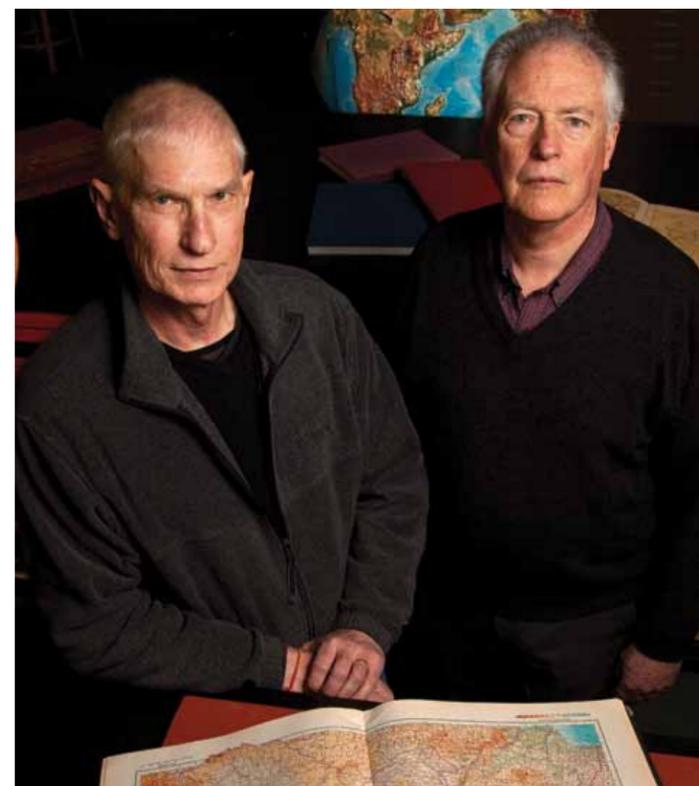
To survive, he sold vegetables on the street of the Tunisian town of Sidi Bouzid.

The authorities repeatedly harassed and abused him. Finally, he immolated himself in protest on December 17, 2010.

And thus the match was lit and touched to the tinder of a young, savvy, and enraged generation. The fire spread, as other youth in the town protested against penury and oppression, corruption and humiliation. The regime resorted to violence—but the rebels were undeterred. The revolt spread to the capital, Tunis, and after weeks of demonstrations, the dictator Ben Ali fled to Saudi Arabia in February.

Critically, this generational revolt spread next to Egypt, home of one-third of all Arabs. Years of struggle and organizing by opposition movements, liberal, socialist, and Islamist, culminated in the dramatic 18 days in which the corrupt, brutal regime of Hosni Mubarak was toppled. Similar revolts have spread (as of this writing) to Bahrain, Oman, Yemen, and Libya, as well as to Morocco, Algeria, Jordan, Iraq, and Iran.

Why did this happen? What are its implications for Americans? Two kinds of causes may be identified—immediate ("sparks") and structural ("tinder"). The sparks are sketched above—and a key component, in each case, is the triumph



Alan Richards, left and Edmund Burke

over fear—when an illegitimate, widely despised regime resorts to violence, and the protestors refuse to back down, the regime is doomed.

Structural causes are numerous. They include the fact that some 60 percent of Arabs today are younger than 30. They are by far the most educated generation in the region's history. Millions are unemployed, and food prices are rising. In both Tunisia and Egypt, the revolutions of 2011 were preceded—and accompanied by—widespread labor protests.

Most fundamentally, however, most Arabs despise their regimes—for their corruption, nepotism, violence, and complicity in American and Israeli abuses of power. Arab dictators have humiliated their peoples for decades. Finally, when the spark was struck, the tinder ignited. Modern social media facilitated the spread of revolt.

In today's world, everyone knows what is going on, everywhere.

Some say that today's Arab revolution confronts Americans with a choice between our values and our interests. Our values are, of course, democratic. But Arab democracy does *not* threaten our "interests," *if* "our interests" are the interests of the vast majority of Americans, rather than those of the (very well-heeled) minorities that profit from an Empire of foreign bases, pretensions to "control oil," and mindless support of unsustainable Israeli occupation policies.

From conflating Arab nationalists with friends of the USSR during the Cold War to positing non-existent WMD in Iraq, the U.S. record of interventions in the region is one of countering threats that did not *in fact* exist. Arab democracy is no threat. On the contrary, the revolt of Arab youth

against humiliation should make anyone pledging allegiance to the principles of 1776 very proud, indeed.

Moments such as the present where many vectors of change come together in unpredictable ways are fraught with peril. This is no time for ill-conceived U.S. interventions, which can seriously harm our long-term interests. In the face of this massive uncertainty and unpredictability, we should recall the Hippocratic Oath: "First do no harm."

*Alan Richards, professor emeritus of environmental studies, is an economist and an expert on energy politics. In 1989–91, he was an Education Abroad Program director in Cairo.*

*Edmund Burke III is research professor of history, emeritus, and director of the Center for World History.*

## Steve Gliessman: Planting the roots of agroecology deep in Santa Cruz

**The term dates** back to the late 1920s, but when Steve Gliessman and two Mexican colleagues began using “agroecology” nearly 35 years ago they pronounced it in Spanish: “agroecología.”

Gliessman was teaching at the Colegio Superior de Agricultura Tropical in Tabasco, Mexico, and studying the traditional Mayan techniques that form the foundation of sustainable small-scale farming that respects the land, farmers, and their culture.

Three years later, in 1980, Gliessman joined the UC Santa Cruz environmental studies faculty and founded the UCSC Agroecology Program. In 1997, he wrote the textbook *Agroecology: The Ecology of Sustainable Food Systems* and published a second edition 10 years later. Today, agroecology is an interdisciplinary concept that extends beyond organic farming, and is widely known and taught in universities (often using Gliessman’s textbook) across the nation and around the world.

“Steve is one of the pioneers and founders of agroecology worldwide,” said professor Miguel Altieri at UC Berkeley’s Department of Environmental Science, Policy and Management. “His influence has been enormous.”

Said another colleague, Professor Charles A. Francis, director of the Center for Sustainable Agricultural Systems at the University of Nebraska-Lincoln: “Three decades ago, agroecology was a little known idea in the minds of a few academics in Latin America, the U.S., and Germany. Through his writing and teaching, Steve became one of the most prolific and articulate advocates of this confluence of agriculture and ecology.”



**“Social change doesn’t happen overnight. The goal is to create transformative action and a whole new way of thinking about the entire food system.”**

Today, Gliessman, holder of the first endowed chair at UC Santa Cruz, the Ruth and Alfred E. Heller Chair in Agroecology, is scaling back ever so slightly. After all, he is supposed to be retired as of last July. But that hasn’t seemed to slow him down.

He spent two weeks teaching in Spain this winter. He’s organizing the 12th annual International Agroecology Shortcourse that will bring 35 to 40 participants from around the world to UCSC in July for two weeks of intensive instruction and practice in transforming food systems from field to table.

He continues to be editor-in-chief of the *Journal of Sustainable Agriculture*, and his *Agroecology* publisher is lobbying hard for a third edition because the book is selling better than ever.

Gliessman’s dream of establishing a “green kitchen” at the Program in Community and Agroecology (PICA), where he has focused his attention since 2002, is nearing fruition. Located at the Sustainable Living Center in UCSC’s lower quarry, PICA brings students from diverse disciplines to live in a community where they learn firsthand the principles of sustainable agriculture through classroom learning and community gardens.

The modular kitchen building will demonstrate the latest in green building, alternative energy, and reducing the carbon footprint, Gliessman says. He envisions it as a sustainable living laboratory for students from multiple majors to experience, learn about, and even research sustainable technologies.

Sustainability, as Gliessman defines it, is an approach to life based on treating the land in an ecologically sound way. It must also encompass a just system socially and economically that treats people, land, animals, and water in “a way that lasts forever.”

“It’s about healthy food, healthy land, and healthy people,” he says, “and it’s going to require some social changes.

“Social change doesn’t happen overnight,” Gliessman notes. The goal, he says, “is to create transformative action and a whole new way of thinking about the entire food system.”

—By Guy Lasnier (Merrill ’78)

PHOTOS: GLIESSMAN, JIM MACKENZIE; MOAVENI, MEHRDAD DAFTARI

## Azadeh Moaveni: The seeds of a writer were sown at UCSC



**When I enrolled** at UC Santa Cruz as an ambitious 18-year-old from Cupertino, I imagined many career paths for myself, all of them deeply glamorous to my adolescent, suburban mind: human rights law, public policy, diplomacy at the United Nations. I was intensely ambitious and had some lofty ideas about changing the world, and yet, becoming a writer never occurred to me. This is partly because I grew up in an Iranian family, and Iranians, generally, don’t believe in “just writing,” unless the kind of writing in question is poetry, and you happen to have the talent of Rumi. Ordinary mortals who wished to write should become something else first—perhaps a nuclear physicist or a heart surgeon—and then do their writing on the side.

This rather stern view rested on the belief, not altogether mistaken, that society needed us to contribute much more than our thoughts on paper, and that in the process of learning and practicing a craft, we would be accumulating the insight and experience that would enrich our writing.

I chafed at that cultural logic at the time, but it turned out to be not so particularly or tediously Iranian as I thought. The literature I encountered for the first time at UCSC, in the core course of Oakes College, reflected a similarly demanding and activist view of the writer’s place in the world. It was first at Oakes, and later in other classes, that I recognized and began to understand all the inchoate feelings that had underpinned my growing up Iranian in America. The fashionable shorthand for this process was “consciousness raising” and its effect on me was profound and electric.

**“Iranians, generally, don’t believe in ‘just writing,’ unless the kind of writing in question is poetry, and you happen to have the talent of Rumi.”**

I suddenly had an intellectual language to consider all that had befallen my family and my country; I was able to articulate in a terse, 200-word paragraph why I grew up despising Sally Field (she had starred in the crudely anti-Iranian film *Not Without My Daughter*). My core course instructor, Dave Dodson, was the mentor whose approach helped ground me as I took this new awareness out into the disciplines that had always attracted

me. In his classroom I learned what a potent tool writing could be in narrating, and thus owning, my experience in America. I also learned to value humility, and in the process, how to avoid the navel-gazing and self-righteousness that would get in the way of people wanting to hear my story.

If at Oakes I was inspired with the political power of a tale, then it was at *City on a Hill Press*, under the tutelage of writing instructor Conn “Ringo” Hallinan, my adviser at the paper, where I learned how to craft a story. By the time I arrived at the newspaper, I had already endured the kind of rigorous editing in literature classes that had beaten out all the high-school laziness in my writing. I learned in those literature classes the painstaking, sentence-by-sentence crafting of a polished piece of a work. It was under Ringo that I learned to love the genre that would become my life’s work: literary journalism. A news story, Ringo taught us, is a formula anyone can learn. It’s the long form journalism that is intellectually vibrant, that makes a contribution to history, that elevates reporters to writers. This belief inspired me to become a journalist and to write books “on the side,” a career that has managed to fulfill both me and that pesky Iranian dictum.

—By Azadeh Moaveni

*Azadeh Moaveni (Oakes ’98) is author of Lipstick Jihad and Honeymoon in Tehran and co-author, with Shirin Ebadi, of Iran Awakening. She has reported from throughout the Middle East for Time, the New York Times Book Review, the Washington Post, and the Los Angeles Times. She is currently a Time magazine contributing writer on Iran and the Middle East and lives in Cambridge.*

# Alumni Notes

To receive invitations and e-newsletters about alumni activities, send your e-mail address to [review@ucsc.edu](mailto:review@ucsc.edu).

**We'd like to hear from you.** ▶ Send an e-mail to [review@ucsc.edu](mailto:review@ucsc.edu)

▶ submit a note via the web at [alumni.ucsc.edu](http://alumni.ucsc.edu) (go to Online Community/Class Notes)

▶ or get social on Facebook: [facebook.com/ucsantacruz](http://facebook.com/ucsantacruz)

## COWELL COLLEGE

'75 **Susan MORGENSTERN** directed *The Psychic* at the Falcon Theatre in Toluca Lake, *The Socialization of Ruthie Shapiro* at the Theatre West in Los Angeles, and *Happy Days, A New Musical* at the Cabrillo Music Theater in Thousand Oaks.

'91 **Susan SILBER** has worked for 20 years as an environmental educator, introducing children to the importance of caring for the environment; she operates a consulting business for environmental and educational nonprofit organizations.

'09 **Teague TUBACH** is pursuing a master's in education and a multiple-subject teaching credential at the University of Phoenix; he currently teaches second-grade reading and writing.

## STEVENSON COLLEGE

'68 **Raymond STEINER** is teaching philosophy online at a community college after being semiretired for a few years.

'69 **Joan FITTING Scott** published *Skinning the Cat: A Baby Boomer's Guide to the New Retiree Lifestyles*, and then took her own advice and retired. She divides her time between Fort Worth, Tex., and the San Francisco Bay Area.

'70 **Jonathan GREEN** attended a course on

global health at the College of Public Health of the University of Chile, Santiago, in January 2010 and later participated in a medical mission in Constitución, the epicenter of the earthquake and tsunami.

'73 **Carol-Joy HARRIS** graduated from court-reporting school in 2007 and provides one-on-one captioning for deaf and hard-of-hearing students at UC Berkeley, Sonoma State University, and other colleges—a "perfect job for a life-long learner." **Charles A. PERRONE** was a visiting professor at Stanford University in 2004. His latest book is *Brazil, Lyric and the Americas*, which was published last year; he is a professor of Spanish and Portuguese Studies at the University of Florida.

'79 **Pamela REVLING** is about to receive a master's degree in public health from San Diego State University. Her daughter, Emily, graduated from San Francisco State last year and her son is transferring to San Marcos State this fall to study history.

'81 **Donna GRAVES** moved to Berkeley last summer after a year at Harvard's Graduate School of Design as a Loeb Fellow; she works as a consultant in public history and community planning, is married, and has two children.

'83 **Maggie KRAFT** left for Botswana in early April for two years as a Peace Corps volunteer; she is working at the community level there to help address the HIV/AIDS epidemic.

'89 **Kay WOLVERTON** Ito works both as the administrative director of the California Literary Arts Society and as a substitute teacher. She organizes an annual toy drive for homeless shelters and foster agencies. She and her family live in Ventura County.

'97 **Katy BIGELOW** is the second woman in the state of Washington to become a registered consulting arborist through the American Society of Consulting Arborists; she lives on Bainbridge Island.

'10 **Harmony LAMBERT** works for the Washington, D.C., headquarters of Greenpeace as a grassroots-organizing fellow in major East Coast cities. She credits her UCSC education with making her career possible.

## CROWN COLLEGE

'72 **Bob LORENTZEN** owns and operates Bored Feet Press, which has published more than 200 books and 150 recreation maps, including a dozen trail guides for regions within California, six of which he has written.

'73 **Bill ALLAYAUD** is employed by the Environmental Working

Group, a nonprofit organization focused on chemical-human health policy, as its director of governmental affairs for California. He reports that his five-year-old daughter is learning to ski.

'78 **Peter HILSENTRATH** is the Joseph M. Long chair in Health Care Management and professor of economics at the University of the Pacific in Stockton; he is married and has two children.

'82 **James BATEK** ran unsuccessfully for the Illinois General Assembly in 2006; in July 2009, he began selling art based on his code system, Batek Binary.

'84 **David CRAGO** has completed 20 years of active commissioned service with the U.S. Public Health Service, where he holds the rank of captain; he and his wife, Ann, adopted a 2-year-old girl and are the biological parents of four additional children.

'89 **Dije NDREU** and her husband, James Dulla, welcomed their first child, daughter Dëshira, on December 16, 2010.

'96 **Jeremy MARLEY** was named Environmental Educator of the Year for 2010 by the Environmental Education Association of New Mexico.

'99 **Cory NAKAJI** works for Xilinx as a product applications engineer in

technical support. His UCSC education has given him the tools necessary "to live a wonderful life." He lives in Longmont, Colo., with his wife and two children.

## MERRILL COLLEGE

'92 **Wendy FLAPPAN** is a board-certified physical medicine and rehabilitation specialist with the Department of Neurosurgery at Stanford Hospital and Clinics in Los Gatos; she is a graduate of UC Davis Medical Center. **Michelle GOLDEN** and Alex Jay Hoyden were married in Tuscon last October; although Arizona does not recognize the union because both are women, it "is a marriage in the deepest sense."

'00 **Jennifer SMYTHE** works as an immigration attorney with Gali, Schaham, Gordon in San Francisco. She focuses on U.S. employment and family-based immigration, and represents individuals who want to become naturalized citizens.

## PORTER COLLEGE

'74 **Debra GILLMAN** published an illustrated children's book, *The Painter's Dream*; she teaches a children's arts-and-crafts workshop and continues to exhibit her paintings and etchings. **Stephen GREENBERG** has been digitizing the past, including his psychedelic/satirical graduation speech. **Jim HAIR** moved to Richmond, Ind.—"the cradle of recorded jazz"—four years ago and is now running for mayor.

'79 **Deanna Jay Chu NIM** took first, second, and

third place and received two other awards for five pieces of calligraphic art that she entered at the Orange County Fair last summer. **Judy SILK** married fellow alumnus **Dan COGAN** (Porter '83); they each have a daughter who is beginning college—sadly not at UCSC. Judy is a writer and Dan's an attorney; they live in Pacific Palisades.

'91 **Lynn POTTER Stapleton** currently is assigned to the Refugee and Migration Affairs section of the U.S. Mission to the United Nations in Geneva, Switzerland; prior to this assignment, she served two years in Stockholm, Sweden.

'94 **Robin LOW's** restaurant, Post Meridian in Kensington, Calif., is celebrating its fourth autumn; farmer's market produce shapes its seasonal menu; the business supports local artists, cultural organizations, and schools through in-kind donations.

'07 **Matthew JOHNSTONE** published his first book of poems, *Let's be close / Rope to mast, you / Old light*, with Blue and Yellow Dog Press in 2010; while at UCSC, he studied with Rob Wilson and Nathaniel Mackey, among others.

'08 **Perry RADFORD** works in the Office of Annual Giving at Harvey Mudd College. For two years, she served as a volunteer in the campaign of Kamala Harris, California's attorney general.

## KRESGE COLLEGE

'79 **Art HENRIQUES** recently retired after 31 years in urban planning. He received a master's degree in urban and regional planning from

San Jose State University, where he helped plan the 40th anniversary celebration of the Planning Program in November.

'80 **Tom RIBE** has published *Inferno by Committee*, the natural and human history of the Cerro Grande (Los Alamos) fire, the worst prescribed fire disaster in U.S. history; he received a UCSC graduate certificate in science writing in 1983.

'81 **Kevin VOLKAN** appeared three times on *Animal Planet's* "Lost Tapes" as an expert on cryptozoology and testified before the Senate Judiciary Committee on animal abuse. Kevin's wife, **Panda KROLL** (Kresge '82), made a presentation on medical marijuana to lawyers and judges in Ventura County.

'84 **Hilary CLAGGETT** is a senior acquisitions editor at Potomac Books where she specializes in topics such as war and peace, environmental security, human rights, and domestic politics; she practices yoga, reads, and runs marathons in her spare time.

## OAKES COLLEGE

'87 **Larry O'HANLON** (Graduate Studies '93) began work in February as communications and public programs officer at the W. M. Keck Observatory in Kamuela, Hawaii, after 12 years as science correspondent and online producer for *Discovery News*.

'94 **Ernie BRAY** and his wife Peggy, cofounders of Auto Claims Direct, were honored by Deloitte's Fast-500, which ranked the firm as the 215th fastest-growing technology

company in North America. **Amrit KULKARNI** was named one of California's top 20 lawyers of 2010 by the *Daily Journal* in recognition of his many successful land-use litigations.

'98 **Andres MARTIN**, a counselor at Ramona High School in California, received the Cesar Chavez "Si Se Puede" Human Rights Award from the California Teachers Association; he was recognized for helping create equal opportunity within the Hispanic community. Andes also is active in the San Diego Chapter of the UCSC Alumni Association. **Mica VALDEZ** received an M.F.A. in English and creative writing from Mills College in Oakland; she is teaching English and indigenous studies at the College of Alameda and editing a book of poetry by women of Native and Latin American descent.

## COLLEGE EIGHT

'78 **Donna MAURILLO** is director of ITT and communications for the Mineta Transportation Institute and is writing a research paper on security policies for high-speed rail.

'79 **George P. BROWN** is a professor of political science at Slippery Rock University of Pennsylvania, where he chairs the Political Science department and serves as director of Asian studies. He and his wife, Naomi, have a 15-year-old daughter.

'81 **Karen FRIETSCH Cornelius** recently joined the Gulf Coast Bird Observatory as a development associate; she lives in Houston, Tex.

'87 **Nina HANSEN Machotka** lives in Italy with her husband, Pavel Machotka, UCSC professor emeritus. She has written two books, *The Field Stones of Umbria* and *How NOT to Kill the Woman You Love: Your Guide to Surviving Her Menopause*.

#### GRADUATE STUDIES

'69 **Stephen KESSLER** (M.A. literature) is the editor and principal translator of *The Sonnets* by Jorge Luis Borges, which has received critical praise in *The Nation*, the *London Review of Books*, and the *Times Literary Supplement*.

'84 **Edward O. KEITH** (Ph.D. biology) is an associate professor of biology at Nova Southeastern University

in Fort Lauderdale, Fla. He conducts research in marine-mammal biology, ecology, and management, and has projects under way in Mexico and Ecuador.

'03 **Roopali PHADKE** (Ph.D.) has received tenure as an associate professor in the Environmental Studies Department at Macalester College in St. Paul, Minn.; her current research focuses on water- and energy-resources development.

'10 **Monica LYNN** (Ph.D. musical arts) received a Porter Graduate Arts Research Grant, did fieldwork in Zimbabwe, and was a finalist for the International Music Prize for Excellence in Composition (National Academy of Music, 2011).

#### CERTIFICATE IN SCIENCE ILLUSTRATION

'86 **Val KELLS** works as a marine-science illustrator and has published *A Field Guide to Coastal Fishes—from Maine to Texas* with Johns Hopkins University Press; the book includes her 1,079 full-color illustrations.

#### IN MEMORIAM

'76 **John Leighton CHASE** (Stevenson) died unexpectedly at his home on August 13, 2010. He held a master's in architecture from UCLA and worked as an urban designer for the city of West Hollywood; he was 57.

By Gwen Mickelson

## UCSC Alumni Regent sought

If you'd like to help shape the future of the University of California, now is your chance.

UC Santa Cruz alumni are being sought to fill a spot as a voting member of the UC Board of Regents.

These alumni regents are selected for two-year terms on a rotating basis from the system's 10 campuses. The successful applicant will be the fourth

UCSC alum to represent the campus on the Board of Regents.

The first year, the appointee will serve as an alumni regent designate and secretary of the Alumni Association of the University of California (AAUC).

The second year, the regent will serve as president of the AAUC and become a full voting

member of the Board of Regents.

Deadline to apply is July 1, 2011.

For information or to get an application, email Carolyn Christopherson, executive director of UCSC Alumni Association, at [carolync@ucsc.edu](mailto:carolync@ucsc.edu) or visit [ucsc.edu/alumni-regents](http://ucsc.edu/alumni-regents).

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Images this page and opposite by Steve Kurtz.

**ANOTHER SUCCESSFUL SCHOLARSHIP BENEFIT DINNER**

More than 350 people turned out for the eighth annual UC Santa Cruz Scholarship Benefit Dinner that took place in February at the Fairmont Hotel in San Jose.

For the second year in a row, the gala was held in Silicon Valley, where UCSC faculty and alumni continue to contribute to the innovative research, educational programs, and cutting-edge technologies that define the Valley.

Attendees and sponsors raised over \$160,000 for undergraduate scholarships at the dinner—one of UCSC's premier fundraising events—which sold out several weeks in advance.

1. UC Santa Cruz Campus Provost/Executive Vice Chancellor Alison Galloway (right) and sister Isobel Belvoir; 2. UC Santa Cruz Foundation member Michael Graydon (center), spouse Sally Graydon, and Smith Renaissance Society founder Bill Dickinson; 3. California Secretary for Natural Resources John Laird (Stevenson '72) and major campus philanthropist Jack Baskin; 4. Alumni Councilor and Volunteer Committee member Jerry Ruiz (Crown '77) and UC Santa Cruz Foundation President Gary Novack (Kresge '73); 5. Student singers Natalie Erskine (Porter '12) and Allie Jessing (Stevenson '12), performing the "Flower Duet" from the opera *Lakmé*; 6. Former San Jose mayor and event co-chair Susan Hammer, UC Santa Cruz Chancellor George Blumenthal, and co-chair Mary Doyle; 7. Volunteer Committee member Paul Simpson (Kresge '02) with mother Rosalind Simpson (left), UC Santa Cruz Vice Chancellor for Student Affairs Felicia McGinty, and evening emcee Stephen Abreu (Kresge '99); 8. Assistant Secretary of Commerce nominee and event keynote speaker Kathryn Sullivan (Cowell '73) and campus supporter Nancy Austin; 9. World-renowned nature photographer and UC Santa Cruz Foundation Trustee Frans Lanting (right) with partner Chris Eckstrom; at left, Larry Minden (Crown '79) and Linda Ponzini

**Scholarships matter now more than ever. To contribute, go to [giving.ucsc.edu](http://giving.ucsc.edu)**

# Philanthropy Focus

## Stephen Bruce gives back by looking to the future



PHOTO: CAROLYN LAGATUTTA

In the 1970s, Stephen Bruce was studying economics at UC Santa Cruz, and he was pondering some financial riddles even then that now seem prophetic:

How can a robust global economy fail? And what are the factors that can bring it crashing down?

Three decades later, the political and economic landscape of the world had changed dramatically. The global economy had expanded beyond Bruce's wildest imagination. Meanwhile, intangible securities known as derivatives were playing a much more decisive role in economic expansion. The excesses of communism had been dealt with, and Bruce realized it was time to deal with the excesses of capitalism and the challenges of fairness and justice.

With these factors in mind, Bruce posed his most ambitious question to date: How can the latest economic crisis challenge our assumptions about capitalism?

For the past two years, Bruce (Cowell '79, economics) has brought international scholars to UCSC to discuss the global economic crisis as part of the Bruce Initiative on Rethinking Capitalism. The conference returned to campus April 7–9.

It makes perfect sense that the campus that inspired him is now "neutral territory" where professors from different universities are happy to put aside rivalries, shake hands, and talk. The multidisciplinary approach of the campus's curriculum also makes it the perfect place to host an eclectic mix of scholars whose disciplines include economics, accounting, finance, and political science as well as anthropology, geology, literature, art, and public policy.

"We could have easily done it in San Jose, but we wanted to have it in Santa Cruz," Bruce said. "We wanted to have the students involved."

The conference is only the latest in Bruce's collaborations with his alma mater. Bruce increased his involvement with UC Santa Cruz after he sold his successful asset management firm five years ago.

His contributions have included initiatives as diverse as helping the Center for Integrated Water Research bring a reverse osmosis water treatment unit to the city of Watsonville to sponsoring a two-year lecture series as part of the South Asia Studies Initiative and supporting aspiring math and science teachers along with promising graduate students in politics. He is even working with the Center for Games and Playable Media to create a video game focusing on environmental issues and the ocean.

Bruce's first creation was the establishment of the Mark Bruce Fellowship for Math and Science Teachers at UCSC in honor of his brother, who died in the World

Trade Center attacks on 9/11. His support includes the purchase of classroom supplies in under-resourced schools in Watsonville and Salinas.

Bruce also established the Robert Meister Scholars Fund to support graduate students in politics and bring the "best and the brightest" to UCSC. His \$250,000 gift in 2006 funds a \$50,000 fellowship that has been awarded three times so far.

To date, Bruce has given more than \$1 million to UCSC.

Along the way, Bruce has contributed yet another valuable resource: his time and expertise. For three years he served as chair of the Board of Councilors, an advisory group to Division of Social Sciences Dean Sheldon Kamieniecki.

Now Bruce is helping to guide the campus's comprehensive campaign effort while serving on the advisory board for the Santa Cruz Institute for International Economics, the South Asia Studies Initiative, and the Sury Initiative for Global Finance and International Risk Management.

His advice for other alumni: Re-establish your old links to the campus. Rekindle old mentorships. If possible, show up there in person. Get involved. Contribute in a way that will drive and inspire future generations.

"They should hunt down old professors, talk to students, fund a scholarship, or fund a speaker series," Bruce said. "It's so easy to get engaged."

—by Amy Ettinger

**"Hunt down old professors, talk to students, fund a scholarship, or fund a speaker series. It's so easy to get engaged."**

—Stephen Bruce

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## How will you build your legacy?



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