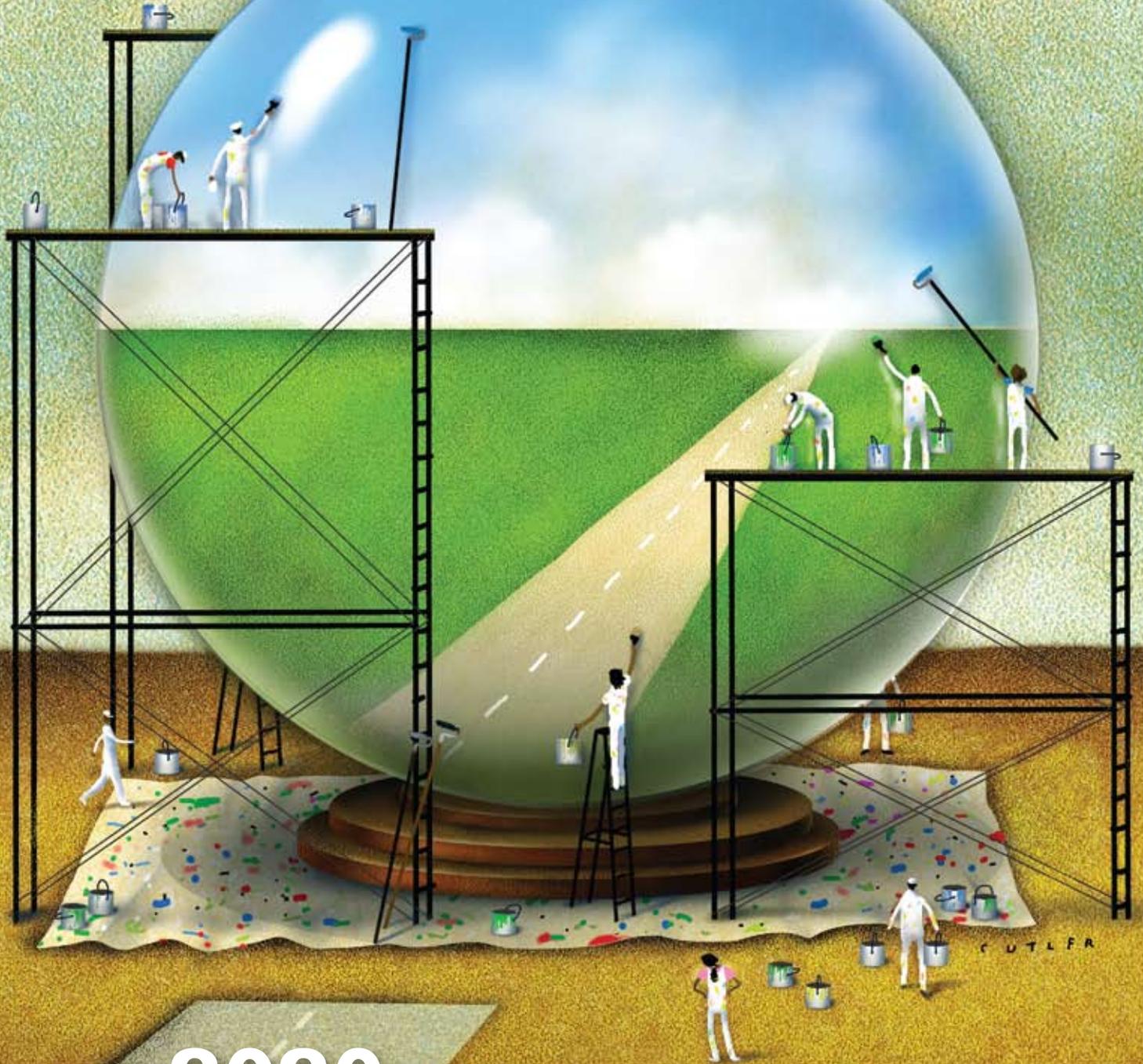


UC SANTA CRUZ

REVIEW

Spring 2010



**2020
vision**

**Great minds
shaping the future**

Big Ideas

Cross-Cultural Analysis Collaborative Endeavor
 Mathematical and Formal Reasoning Environmental Awareness Technology and Society
 Scientific Inquiry Statistical Reasoning
 Creative Process Interpreting Arts & Media



They're ^{still} at our core.

If you're like most UC Santa Cruz alumni, some of your strongest memories are of your college core course—new ways of looking at the world, dynamic discussions, close collaboration between students and faculty.

We've revitalized this hallmark of UCSC to address the complex issues of our times, embrace new approaches, and refine traditional ones.



Be a part of it again. Visit ucsc.edu/news_events/generaleducation.

UC SANTA CRUZ

REVIEW
Spring 2010

The Spring 2010 Review contemplates "2020 vision"

As we begin this new decade, we look forward into the next 10-year span with stories illustrating how UC Santa Cruz will help build a bridge to the future.

The next network

Engineering professor J. J. Garcia-Luna-Aceves hopes to spark a revolution in networking that will change cyberspace from a destination you go to through your PC to an overlay on existing reality.

Making a cappella sing

A Cappella Records—started by student entrepreneurs—specializes in simplifying licensing and royalty accounting so that a cappella albums can be quickly and efficiently placed into digital marketplaces.

State of confusion

Can California's fiscal mess be fixed? If so, how? Review asked two politically connected alums—one on the left, one on the right—for their prescriptions for our state's financial ills.

Galaxies far, far away

The groundbreaking work of UCSC astronomers has already revealed the most distant galaxies ever seen. Their latest project will gather enough new information to occupy scientists for years.



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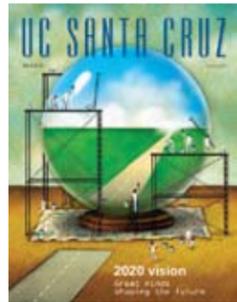
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FROM THE EDITOR

We're back.

You may have noticed that you haven't received a *Review* magazine in the mail for awhile. That's because we suspended publication of our print version after the winter '08-'09 issue because of budget challenges, though of course *Review* magazine, and archives, continued to be available on the web at review.ucsc.edu.

However, we've reallocated funding to this important publication because we understand the value of the printed word, of keeping in touch with our community, and of telling our story—sharing the extraordinary advances and accomplishments made by our programs and our people.

We've changed the paper we use to a thinner, lighter selection that's less expensive. This way we use less paper—appropriate for a campus with high environmental ideals—and also save money.

But there are other, more substantive changes. We've done some work to make the magazine cleaner, bolder, more relevant, both in design and in content.

In this issue, you'll read about how our people will help shape the next decade: An engineering professor is quietly staging the networking revolution; astronomers are making important new advances in understanding our universe; politically connected alumni are wrestling with the question of how to fix California's budget morass. And much more.

So—we're back. We hope you like this new *Review*—and that it makes you proud.

Let us know what you think—we want your letters.

Write to us at review@ucsc.edu.

—Gwen Mickelson,
editor

Kudos

Books by literature professor **Rob Wilson** and economics professor **Rob Fairlie** were selected by *Choice* magazine as Outstanding Academic Titles for 2009.

Choice is considered the most important publication geared toward academic libraries in the United States, reviewing hundreds of academic works from a range of disciplines.

Choice picked Wilson's book *Be Always Converting, Be Always Converted: An American Poetics* (Harvard University Press) and Fairlie's *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States* (MIT Press) written with research associate Alicia M. Robb.

Discover Magazine named a paper by **Chris Darimont**, a postdoctoral researcher in environmental studies, 30th among the Top 100 science stories for 2009.

The study, "Human Predators Outpace Other Agents of Trait Change in the Wild," drew worldwide attention when it was published in the online issue of the *Proceedings of the National Academy of Sciences*.



PHOTO: BRETT ELOPFI, COURTESY OF WITWATERSRAND UNIVERSITY

UCSC researcher contributes to major hominid fossil find in South Africa

Researchers in South Africa have discovered two remarkably well-preserved fossil skeletons of an ancient human ancestor dating to almost 2 million years ago. The discovery is described in two papers published in the April 9 issue of *Science* by an international team led by Lee Berger of the University of Witwatersrand, South Africa.

The first paper describes the fossils as representing a new species of hominid, called *Australopithecus sediba*. It appears to be a transitional form between more ape-like early *Australopithecus* species and early members of the genus *Homo*, which includes modern humans (*Homo sapiens*). The second paper describes the geological context of the find, including insights into the nature of the landscape in which the hominids lived.

"This is one of the richest fossil sites in Africa, and we want to understand the environment these early hominids lived in. The geologic analysis is also important for directing future efforts to find other fossils," said Daniel Farber, a researcher and lecturer in Earth sciences at UCSC and a coauthor of the second paper.

This is UCSC

Grad student wins award for fisheries research

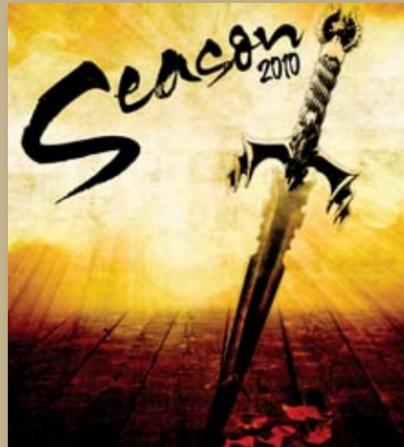
Alexis Jackson, a graduate student in ecology and evolutionary biology, received a \$500 first prize from Ecology Project International (EPI) to fund her research on grouper populations and fisheries management in the Gulf of California.

The EPI alumni awards program provides incentives for former participants to continue conservation work. Jackson, who went to Costa Rica with EPI in 2002, is now a doctoral candidate working with Giacomo Bernardi, professor of ecology and evolutionary biology.



PHOTO: JIM MACKENZIE

This is UCSC



2010 Shakespeare Santa Cruz season to explore love

The 2010 Shakespeare Santa Cruz season will feature a slate of three plays that explore the theme of “love” in all of its ramifications—from first blush, to wrenching jealousy, to familial dysfunction of the highest order.

The renowned UCSC theater company’s 2010 lineup includes Shakespeare’s *Love’s Labour’s Lost* and *Othello*, plus James Goldman’s *The Lion in Winter*.

Artistic Director Marco Barricelli continues to build upon SSC’s reputation for producing inventive interpretations of Shakespearean plays, while introducing SSC audiences to more contemporary works by American playwrights.

“It is terribly important to me in building my third season during these economically challenging times that we continue to focus on quality and not take a safe road into theatrical malaise,” said Barricelli.

All three plays will be performed in repertory from July 20 through August 29.

For tickets, visit santacruztickets.com or call (831) 459-2159.

\$2.1 million grant will help ‘make science real’

A multidisciplinary team of UCSC environmental scientists won a \$2.1 million grant to link graduate students and Watsonville-area high school teachers to develop innovative approaches to teaching math and science with hands-on research and projects in environmental sciences.

The five-year project, funded by the National Science Foundation, involves professors and grad students in the departments of Environmental Studies, Ecology and Evolutionary Biology, and Education and is known as Santa Cruz-Watsonville Inquiry-Based Learning in Environmental Sciences, or SCWIBLES.

“It’s a tremendous opportunity for hands-on learning,” said Watsonville High School Principal Murry Schekman. “It will make science real for our students.”



Gregory Gilbert, SCWIBLES director and UCSC professor of environmental studies

Gregory Gilbert, SCWIBLES director and UCSC professor of environmental studies, said the program will help train science graduate students in how to translate and share scientific concepts and processes with a diverse and non-scientific audience, principally high school students and teachers.

It will also provide teachers with research experience and the practical tools that help bring science alive to their students, Gilbert said. “They are educating the next generation of potential scientists, professionals, and leaders in the growing local green economy.”

UCSC among top in geosciences

In a survey of the top institutions in geosciences, UC Santa Cruz ranks 18th in the world. The ranking reflects the quality of UCSC’s research in geosciences and its influence on the field.

The survey was conducted by the British publication *Times Higher Education (THE)*, using data provided by Thomson Reuters from its Essential Science Indicators database. The analysis looked at scientific papers published in peer-reviewed journals during the period from January 1999 through June 2009. The rankings were based on the number of citations per paper, a measure of the impact a paper’s findings have on the field.

“The ranking by citations per paper (impact) seeks to reveal ‘heavy-hitters’ based on per-paper influence, not mere output,” explained an article accompanying the rankings, published in *THE* in November 2009.

In this study, the category of “geosciences” includes atmospheric research and oceanography as well as geology and Earth sciences. At UCSC, this would include research conducted in the Department of Earth and Planetary Sciences and the Department of Ocean Sciences.

Architect honored for environmental accomplishments

Frank Zwart, UC Santa Cruz campus architect and associate vice chancellor for physical planning and construction, was selected for the prestigious College of Fellows of the American Institute of Architects (AIA). The honor came as *Forbes* magazine online cited the UCSC campus as one of the most beautiful in the world.

The AIA cited Zwart, who retired April 1, for combining elements of conservation, beautification, land use regulation, and transportation through professional and administrative expertise.



Frank Zwart

“Frank’s expertise in identifying and collaborating with architects who have the sensitivity to realize our campus vision has resulted in one of the most beautiful campuses in the world,” said Chancellor George Blumenthal. “That UCSC’s rich natural environment has been more important than individual buildings in creating a campus identity is a lasting testament to Frank’s talents and efforts.”

Zwart graduated from Cowell College in 1971 with a bachelor’s degree in mathematics. He earned his master’s in architecture from Princeton University, then returned to campus in 1988 after working with architectural firms in Princeton, Los Angeles, Santa Monica, Aptos, Philadelphia, and Carmel.

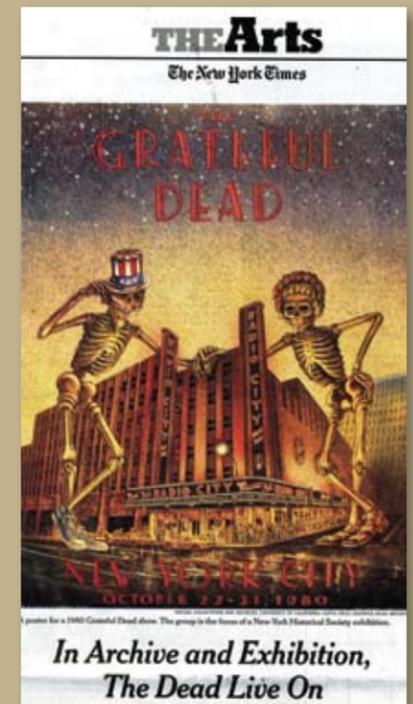
“To have had the opportunity to continue UCSC’s long-standing tradition of sensitive collaboration between thoughtful architects and a spectacular environment has been both a privilege and a pleasure,” said Zwart.

Grateful Dead Archive garnering the limelight

The Grateful Dead Archive at UCSC’s McHenry Library continued to garner widespread attention with feature articles in *Atlantic Magazine*, *Rolling Stone*, and a cover story in the *New York Times* arts section.

In the March issue, *Atlantic* senior editor Joshua Green spotlighted music professor Fred Lieberman and the academic and scholarly impact of the archive across the arts, management, and business.

A select exhibit from the archives went on display March 3 at the New York Historical Society. The *New York Times* weighed in a week later with a story on the archive’s historical impact and value.



Dead reckoning: Library hires archivist for Grateful Dead holdings



Nicholas Meriwether

UCSC has appointed Nicholas Meriwether as the new archivist for the campus’s historic Grateful Dead Archive.

Meriwether comes to Santa Cruz from the University of South Carolina, where he has served as oral historian in the South Caroliniana Library for the past five years. His background experience includes work as an educational, research, and rare-book consultant.

Meriwether holds a bachelor of arts degree from Princeton University, plus a master’s in library science—with a specialization in archives—from the University of South Carolina.

His research on the Grateful Dead, their cultural significance, and their impact on late 20th century society has resulted in a number of publications.

Meriwether is the editor of *All Grateful Instruments: The Contexts of the Grateful Dead Phenomenon* (Cambridge Scholars Press, 2007), as well as four volumes of *Dead Letters: Essays on the Grateful Dead Phenomenon* (Dead Letters Press).



The next network

The next “Big One” has finally hit the San Francisco Bay Area. A massive earthquake has left entire city blocks in ruins. There is no water or electricity. Disaster recovery teams are roaming the city, but coordination is nearly impossible, as many of the cell phone towers have toppled. • Halfway across the globe, a group of soldiers are separated from their platoon in a crumbling building and are surrounded by enemy forces. They attempt to radio their commanding officer for backup only to hear static, and the war-zone equivalent of a dropped call. • In both of these instances, the answer to the quintessential question of the wireless age—“Can you hear me now?”—is a dangerous and terrifying “no.”

UC Santa Cruz engineering professor J. J. Garcia-Luna-Aceves is hoping to change that through a multidisciplinary look at the science, technology, and even social side of networking. If he and his colleagues succeed, the benefits would quickly trickle into our everyday lives, not only eliminating cellular “dead zones” in our cities but helping create a world where mobile video chat becomes commonplace, our myriad devices link up seamlessly, and smart objects communicate with each other, and with us.

• In this vision, cyberspace shifts from a place you go to through your personal computer, to an overlay on top of our existing reality where the information you need is proactively delivered right to you, wherever you are.



Story by David Pescovitz | Illustration by Dave Cutler



‘The network and technology should disappear so that it operates seamlessly in the background to deliver services the users actually want.’

—Engineering professor
J. J. Garcia-Luna-Aceves

and transmitted with the same likelihood of success. Indeed, the ARPANET’s architects developed protocols and systems that provided for just that, and the Internet of today still runs on their innovations. The rub is that while those protocols are well-suited for wired networks, they fall short when you clip the cables.

For starters, wireless networks have lower bandwidth than the fiber-optic lines that are the main arteries of the Internet. Meanwhile, the layouts, or topology, of wireless networks are constantly changing as people and devices move between cell towers, for example, or the radio channels are sullied by interference, making them less reliable.

The social factor

According to Garcia-Luna-Aceves, the first step in addressing these issues is to strip away all the technology and reconsider what is meant by a network in the first place. Historically, researchers have focused solely on improving communications networks by developing new protocols and methods for routing data around uniformly, just as the creators of the Internet did. Indeed, Garcia-Luna-Aceves and UCSC engineering colleagues Hamid Sadjadpour and Katia Obraczka recently led a multi-university project called Dynamic Ad-hoc Wireless Networks (DAWN) to develop and test new routing protocols to increase the capacities of wireless networks.

For example, the network could be smart enough to pre-fetch information that a user may want and then hold it until it’s needed, using the network more efficiently. For the user, the data would be right there instead of having to point, click, and wait. Of course, determining what to store, and for how long, is no small feat for a computer algorithm.

And no matter how smart the software, a network, Garcia-Luna-Aceves explains, is much more than the digital technology behind the curtain. A network is also the people who use it, and the information that’s exchanged across it. Those social factors and information demands should be taken into account when building wireless networks where almost every resource—from bandwidth to battery life—is at a premium.

“The notion that we need to enable everyone to talk one-to-one with everyone else, and maintain the routes to all these sites and nodes that we never use, is a big problem,” Garcia-Luna-Aceves says. “So now we are studying how the flows in a network result from common interests and needs.”

This idea is somewhat akin to the concept that you don’t build highways to everywhere—less-traveled-to destinations are best served by small roads.

Currently, the researchers are exploring how to map a social network on top of a network infrastructure. For example, in a military setting, there’s a chain of command, which is a form of social network.

PHOTO: JIM MACKENZIE

So the network needn’t require that every device be able to talk to every other device. Meanwhile, many military communication systems require a great deal of bandwidth, which also must be accounted for in the network architecture.

“Only by figuring out the social network and information network overlays can we start talking about increasing the capacity of the network and delivering quality information to the users,”

Garcia-Luna-Aceves says. “One of the challenges is to develop a mathematical theory of networking that encompasses the whole range of networks, including wired networks, in a holistic way.”

Going ad-hoc

The Network Sciences Institute at UCSC is funded by the U.S. Army Research Laboratory through a new 10-year, \$35.5 million grant for the Communications Networks Academic Research Center, a collaboration involving Pennsylvania State University, UCSC, UC Davis, and

other organizations. The army is particularly interested in the mobile ad-hoc networks that can be deployed in places where there is no mobile infrastructure.

In these systems, there are no central nodes in the network. Rather, each device passes data from one to another bucket-brigade style until the information reaches its final destination. Of course, a similar approach could be used to establish robust communications

in disaster areas or even regions where wireless infrastructure was never built.

“J. J. has always found a way to address critical military needs, such that the U.S.’s national security can be increased, but his work has also found relevance in commercial environments,” says James

Freebersyser, director of advanced systems development for Raytheon BBN Technologies, based in Cambridge, Mass. “From my perspective, his ability to operate in both spheres is unique.”

These kinds of ad-hoc wireless networks are also a key foundation for next-generation sensor networks, consisting of

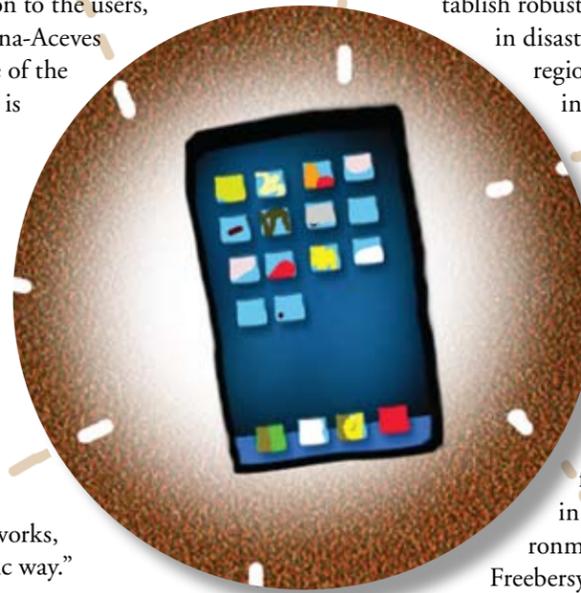
A wireless smart thermostat in your house might link with temperature, motion, and sunlight monitors in every room to automatically create micro-climates that keep you comfortable while also lowering your energy bill.

tiny wireless transceivers outfitted with sensors for myriad applications such as environmental monitoring, diagnosing a building’s structural integrity, or reducing energy consumption in the home. For example, a wireless smart thermostat in your house might link with temperature, motion, and sunlight monitors in every room to automatically create micro-climates that keep you comfortable while also lowering your energy bill.

Outside of your house, pervasive networks could provide access to a variety of location-enabled services, where restaurant reviews or local news is delivered in context through “augmented reality” applications that are much more elegant and accurate than today’s early offerings. Your cell phone, tablet computer, and digital camera could link automatically to a wall-size display or office printer as you pass by, or instantly interface with the entertainment system in your car. This is the transformation in networking that Garcia-Luna-Aceves is hoping to spur.

“The network and technology should disappear so that it operates seamlessly in the background to deliver services the users actually want,” Garcia-Luna-Aceves says. “Only then will we have a revolution in networking.”

David Pescovitz is co-editor of the popular blog BoingBoing.net and a research director at Institute for the Future, a nonprofit forecasting think tank in Palo Alto.





Making a cappella sing

Since A Cappella Records launched in May 2009, it's sold more than 10,000 digital downloads, and business is growing 25 percent a month.

Two UC Santa Cruz students are meshing art, business, and the Internet to forge a new musical venture: the first all-digital, all a cappella label.

By **Matt King**

Chris Crawford and Jesse Avshalomov are two very inspiring music nerds who have accomplished a most unusual feat: They've turned their obsession into a revenue stream and escaped the drudgery of a day job before they've even left campus.

The plan? Make you a huge fan of a cappella music. Crawford and Avshalomov are the founders of A Cappella Records, the first all-digital, all a cappella label, devoted to a musical genre that uses only voices as instruments.

"People have these notions of a cappella, that it's something you only do in college—like ultimate Frisbee," Crawford says of his favorite music. "That's not the case anymore. It continues to grow, and we keep coming across some real gems that have mainstream appeal but have been pushed off to the side because they have the a cappella label."

If the notion of making a killing in a cappella seems far-fetched, consider these facts:

In May 2009, an a cappella-ish version of the Journey song "Don't Stop Believin'" went to the top spot on the iTunes chart.

In June 2009, a bunch of UCSC students went viral on YouTube with an a cappella cover of a *Saturday Night Live* rap spoof.

Last winter, an a cappella version of *American Idol*, called *The Sing Off*, fared well on NBC.

This summer, a musical version of *Glee*, the Fox hit TV show about high school singers, is touring the country.

That sounds like a huge latent market the label will be the first to exploit.

"The biggest segment of the market," Crawford says, "is people who would not say they're an a cappella fan, but we're able to prove to them that they like an a cappella cover."

PHOTO: JIM MACKENZIE

Chris Crawford, left, and Jesse Avshalomov, founders of A Cappella Records. To hear songs in the A Cappella Records music catalog, go to www.acappellarecords.com.



The Glee bump

Most of the credit for the sudden surge in interest goes to *Glee*, which for two seasons has serenaded millions with the sounds of contemporary vocal music.

The music on *Glee* isn't technically a cappella, but it feeds the same sensibilities of complex harmonic structures and joyful noise, what Crawford calls "epic choral."

"What *Glee* has proved to us is that there is a market for really good, primarily vocal covers," he says.

'People have these notions of a cappella, that it's something you only do in college—like ultimate Frisbee. That's not the case anymore.' —Chris Crawford, cofounder, A Cappella Records

Indeed, since A Cappella Records launched in May 2009, it's sold more than 10,000 digital downloads, and business is growing 25 percent a month. Today, it counts more than 500 songs in its online catalog, and that should double in six months.

The business plan is a simple one: license music from already-produced CDs and distribute the songs internationally over the Internet.

At a dollar a pop, the label and the artist each clear 30 cents. The value to artists comes from A Cappella's handling of complex legal issues, like the licensing of cover songs and ongoing royalty payments associated with digital sales, which are different than LP or CD sales. A Cappella's founders say the complexity of the digital marketplace keeps a lot of music out of iPods and earbuds.

"It's such a barrier to entry," Avshalomov says. "The requisite knowledge to do it

properly is at a really high level, and if you do it wrong you run the risk of committing a copyright infringement, which could be really expensive."

Partners in success

A Cappella is a four-man venture. Ryland Hale (B.M. music, Cowell '08) and Ross Mourey, a music education major out of UCLA, are the other partners.

Crawford, 22, will graduate in June with a degree in music and business; Avshalomov, 26, is finishing his master's in performance.

California natives, they look the part of laid-back Silicon Valley entrepreneurs.

A cappella animates them. Crawford, who grew up singing at Grace Cathedral in San Francisco and with the globe-trotting Pacific Boys Choir, is a wild gesticulator when he talks about the music, and Avshalomov becomes a mild-mannered truck driver, exclaiming about the "*\$@%! triplets" in the background of a favorite song.

Avshalomov has been a fixture in the UCSC opera scene since he was an undergrad, but he was in an a cappella group in high school called, aptly enough, the Testostertones.

"It was," he says, "a bunch of 14- to 18-year-old guys doing odd songs and covers and adding pelvic thrusts where necessary."

Avshalomov doesn't have any formal business training, but he's sipped at success as an online entrepreneur, selling T-shirts.

When the movie *Napoleon Dynamite* was in theaters, he and a friend made "Vote for Pedro" shirts and pocketed \$5,000.

"I realized there was all this money to be made in pop culture on the Internet," he says. Now the goal is to "create something solid, something in the real world, something with actual structures and an office."

Planning the business

They've honed their approach through the campus's annual business plan competition. Last year, they made it to the semifinals, and this year they have advanced to the finals with a revised version of their plan. The winning team gets \$18,000 and meetings with potential investors.

The contest is emblematic of the interdisciplinary environment on campus, where students can dabble in anything that catches their interest and turn a hobby into a remunerative passion.

"At UCSC, it's discover who you are, explore, and everything will work out," Crawford says. "It's so creative and inspiring."

"I've yet to meet a professor there who does not go out of their way to help students whenever possible," Avshalomov adds. "There also seems to be an uncommon balance and camaraderie among the faculty, across what is often a bitter divide in the emphasis of performance-based or theory-based musical education."

To be a success, a cappella watchers say A Cappella Records will need to grow fast and maintain the personal relationships that are the glue within the a cappella community.

"Prospects for success are good, particularly if they can secure the funding needed to provide more features than one would expect from a traditional label," says Dave Sperandio, a North Carolina

A cappella is finding a voice at UCSC



PHOTO: TERRY WAY

The oddest thing about the founders of A Cappella Records is neither of them is a member of one of UCSC's a cappella groups.

That's because Chris Crawford is more into arranging and composing, and when Jesse Avshalomov matriculated several years ago, the school's then-paltry a cappella scene didn't appeal to him, so he went with opera.

But things have changed. In the last year, two a cappella groups have been established, one all-female and one all-male.

In all, there are five groups on campus now. That doesn't compare to schools in the Ivy League, but UCSC is up and coming, with shows that draw as many as 300 customers and groups that travel constantly to perform at other campuses.

"We're smaller than schools like Berkeley, but I don't think that detracts from our talent," says junior Ian De Borja, a member of Cloud 9 and a founder of brand-new Trouble Alliance. "Everyone's good; I love watching everyone perform."

Here's the rundown on the five groups and how to catch their acts:

Cloud 9: pop-rock from Jackie Wilson to Lady Gaga; 14 co-ed members; www.cloud9acappella.com

Acquire: 18 co-ed members; www.acquiremusic.org

Isang Himig: affiliated with the Filipino Student Association; 18 co-ed members; www.isanghimig.wordpress.com

The High Tones: pop-rock from The Beatles to Destiny's Child; 11 female members; www.hightones.org

The Trouble Alliance: pop with a barbershop flair; 8 male members; no web site yet.

Acquire performed at Reunion Weekend's Day by the Bay celebration, which included reunions, a lunch, and a community fair.

singer who's been performing for 20 years and works with the nonprofit Contemporary A Cappella Society of America. "The potential market is pretty substantial."

They're helped by knowing the right people at iTunes, where Crawford interned for three years, a connection that should aid their next mission: getting digital music stores to recognize a

cappella as a featured genre, making it easier for fans to find the music.

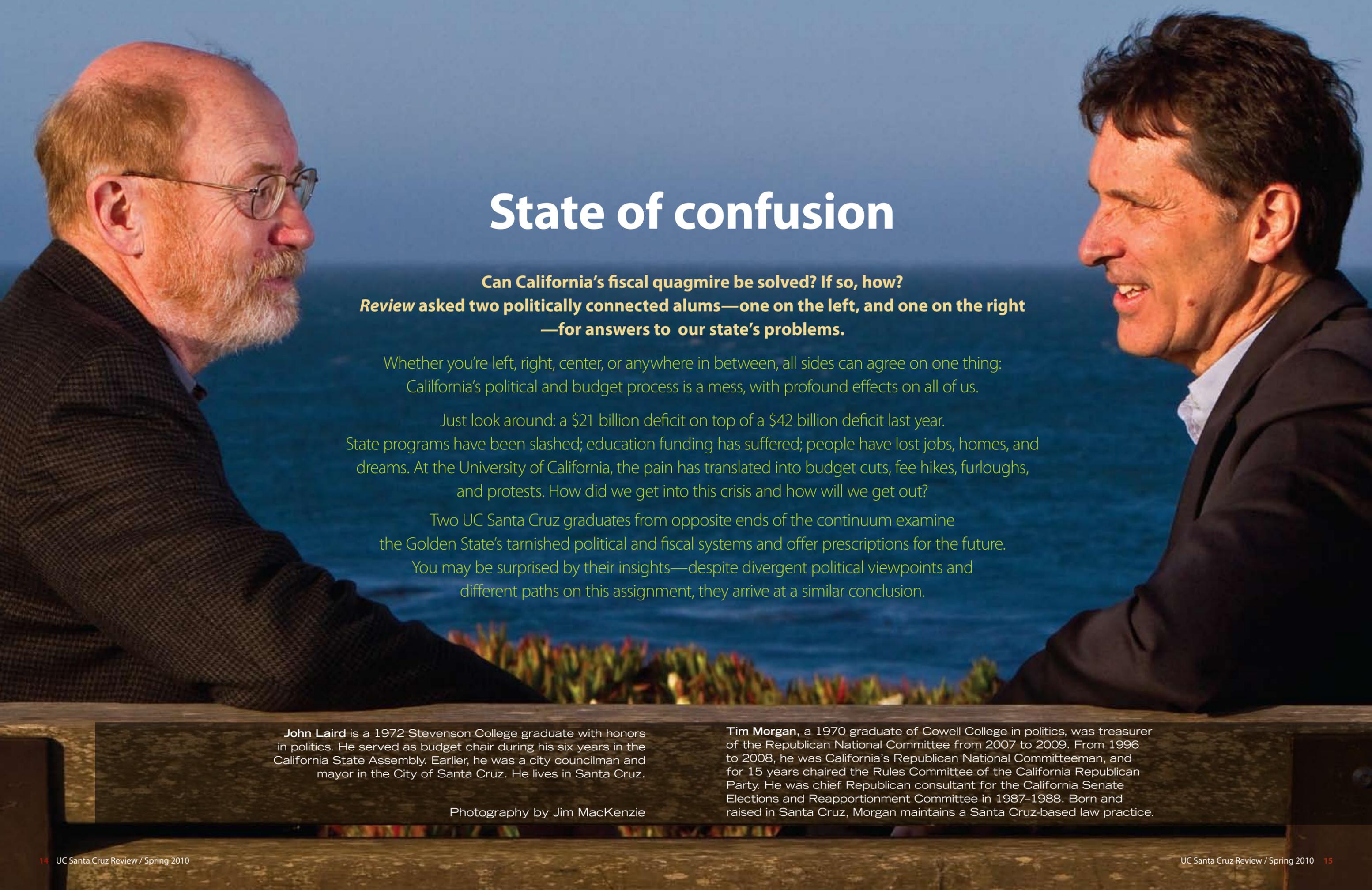
"It's starting to do what real genres do," Avshalomov says. "You have a central genre, and then you have splinter groups who say, 'We're going to take our own approach,' which reinforces the core as a whole."

The hope is that the genre will be identified with the label, the way record producer Berry Gordy, founder of the Motown record label, once owned soul and rhythm and blues.

"I tried to model the label after Motown," Crawford says, "because the coolest thing about Motown is that whenever there was a release, you had an idea of what to expect. Motown had a sound, it had an identity.

"I thought, 'Wouldn't it be cool if a cappella had a label, and when there's a new release coming out from A Cappella Records, you know what to expect and get excited about it?'"

Matt King is a freelance writer living in San Jose.



State of confusion

**Can California's fiscal quagmire be solved? If so, how?
Review asked two politically connected alums—one on the left, and one on the right
—for answers to our state's problems.**

Whether you're left, right, center, or anywhere in between, all sides can agree on one thing:
California's political and budget process is a mess, with profound effects on all of us.

Just look around: a \$21 billion deficit on top of a \$42 billion deficit last year.
State programs have been slashed; education funding has suffered; people have lost jobs, homes, and
dreams. At the University of California, the pain has translated into budget cuts, fee hikes, furloughs,
and protests. How did we get into this crisis and how will we get out?

Two UC Santa Cruz graduates from opposite ends of the continuum examine
the Golden State's tarnished political and fiscal systems and offer prescriptions for the future.
You may be surprised by their insights—despite divergent political viewpoints and
different paths on this assignment, they arrive at a similar conclusion.

John Laird is a 1972 Stevenson College graduate with honors in politics. He served as budget chair during his six years in the California State Assembly. Earlier, he was a city councilman and mayor in the City of Santa Cruz. He lives in Santa Cruz.

Tim Morgan, a 1970 graduate of Cowell College in politics, was treasurer of the Republican National Committee from 2007 to 2009. From 1996 to 2008, he was California's Republican National Committeeman, and for 15 years chaired the Rules Committee of the California Republican Party. He was chief Republican consultant for the California Senate Elections and Reapportionment Committee in 1987–1988. Born and raised in Santa Cruz, Morgan maintains a Santa Cruz-based law practice.

Photography by Jim MacKenzie

State of confusion

Morgan:

The Golden State is hurtling at warp speed toward the black hole known as sovereign default, the same financial crisis menacing Greece. No state in the Union has ever been in this position before, and no one is completely sure what it would mean for a state to default on its obligations. But we know it isn't good.

The chronic imbalance in the state's budget, producing the current \$21 billion deficit for 2010–11, and approximately \$500 billion (and growing) in unfunded public pension obligations, reflects decades in which the state has bent to the will of special interests and continued to promise more than it could ever deliver. As enormous as the unprecedented spending has been, it is a mere down payment on all the promises made to date.

Voters made two strong efforts to alter course and put the state on a sound financial footing at the height of the taxpayer revolt in the 1970s. The first was Proposition 13, which strictly limited increases in property taxes except on sale or transfer. State voters passed it soundly in 1978.

The second was the Gann Initiative, which voters approved by nearly 75 percent in 1979. It limited increases in annual state spending to a base limit, adjusted for increases in population and inflation.

The school worker lobby severely weakened the Gann spending limit in 1988, persuading 50.9 percent of the voters to approve Proposition 98, ostensibly to benefit local schools. Then in 1990, Proposition 111 was sold to the voters as a way to eliminate freeway congestion. It finished the job and rendered the spending limit essentially meaningless.

Over the last two decades without the spending limit, state spending has increased much more rapidly than personal income. And notwithstanding increasing taxes to one of the highest levels in the country, the state has incurred a structural deficit requiring even higher levels of debt. California has created one of the worst business environments in the country, resulting in loss of business investment and jobs to states with lower tax and regulatory burdens.

Shortly after California abandoned the spending limit, Colorado voters passed the Taxpayer's Bill of Rights, which operates very much like the Gann limit was intended to. In contrast to California, state spending in Colorado has grown at roughly

and adopt a California version of the federal Hatch Act, to prohibit state and local government employees from engaging in partisan political activity. Such a limitation on electioneering, first implemented by Thomas Jefferson, would do much to restore fairness to our politics, by ending the dominance of public employee groups whose interests are manifestly self-serving.

We should also return to a part-time legislature as we had until 1966. This alone would save billions—some in salaries, but more in the cost of new legislation that would never see the light of day. A permanently sitting legislature is an invitation to plunder by special interests, just as an open henhouse is to foxes. We need to limit the time available for mischief making.



Tim Morgan

Voters need to take California back from special interests

Proposition 13 has survived all attacks against it, both electoral and judicial. As a result, homeowners are protected against local officials' predatory raids on home equity and can know, with certainty, what it will cost to remain in their homes when they buy them. This has also had the benefit of limiting increases in local government spending.

the same rate as the private economy. From 1993 to 2007, real per capita state spending grew 28 percent, while per capita GDP grew 30 percent. So a spending limit can work, even in a state regarded as open and progressive as Colorado.

The only course open to California voters now is a form of electoral self-defense, to be exercised through the initiative process.

Voters should reinstate a spending limit

Unions should be prohibited from spending member dues on political causes without specific written permission from their members.

Each one of these recommended changes is designed to protect Californians against selfish special interests, which have sapped this state of its vitality and are propelling it to certain destruction. ✌️

Laird:

California State government is dysfunctional and suffers from an absence of the leadership necessary to fix it. This year's continuing state budget crisis makes the case.

Faced with a \$21 billion budget gap for 2010–11, Governor Schwarzenegger has proposed protecting public education from the brunt of cuts along with a ballot measure to ensure that California spends less on prisons than for higher education. On its face, a good direction.

In reality the governor balanced his proposed budget with almost \$7 billion

later this summer, and he is positioned to say it's someone else's fault.

Faced with an even larger budget gap last year, a Field Poll showed voters wanted no cuts to the biggest parts of the budget and supported tax increases only if they were on someone else.

The fact is that over the last decade Californians have been receiving a service level that's higher than they have been paying for, with the reality that the state must either cut services, increase revenues, or do some combination. The current situation can't continue.

We need real leadership, yet the governor is not providing an honest budget discussion, and efforts to reform California's broken government are stalling. The general agreement that reform is needed is matched only by wide disagreement on what it should be.

My own view is that we need some basic reforms to California's political and budgetary process. Last year the voters took the first step by approving a new way for state legislative districts to be drawn, but there are many other necessary fixes.

The budget gap is in large part due to voter-passed state initiatives that earmark budget dollars for a new purpose without bringing new money to the table. Every

situation.

In 1990, California voters approved one of the strictest term-limits laws in the nation. As a result, we have a legislature with no institutional memory. After being elected to my third Assembly term, there were 37 new Assembly members in an 80-member body. The largest economic meltdown since the Great Depression is no way to provide on-the-job-training for almost one-half the State Assembly.

And the two-thirds budget approval—a system shared only with Rhode Island and Arkansas—has been a major cause of legislative gridlock. In budget matters, California should respect majority rule.

Put these with hundreds of millions of dollars in special interest spending on elections and campaigns—and the view that you have to be wealthy to serve at the top—and you see the fix California is in.

If we are going to meet the challenges of a diverse state that is a giant economic engine fueled by public investment, we need to amend the initiative process to pay-as-you-go, bring stability to the revenue system to adequately project future budgets, tweak term limits for longer service in each house, allow for majority rule, and design a campaign finance system that puts people before special interests.

John Laird

Time for leadership and reform

of new federal assistance (the chance of which the nonpartisan legislative analyst termed "almost nonexistent"), proving this to be just meaningless posturing.

Instead of proposing a real budget, and using the six months before approval to have a real conversation about the tough choices, the governor has set up a situation in which severe cuts will be made at the last minute over a matter of weeks

time such a measure is passed, it squeezes whatever else is in the budget.

Almost 85 percent of the state's general fund revenue comes from two sources—sales tax and personal income tax—that swing wildly with the economy. It is hard to make a five-year projection on the budget when the revenue system magnifies fluctuations in the economy and makes it almost impossible to predict even next year's

This will be very difficult, as there are interests that will lose something from each proposed change. All of this will require voter approval, but it's time to trust the voters with an honest conversation and get to work on fixing California. There's too much at stake to fail. ✌️

Faculty profile **Gary Young:** Why poetry matters

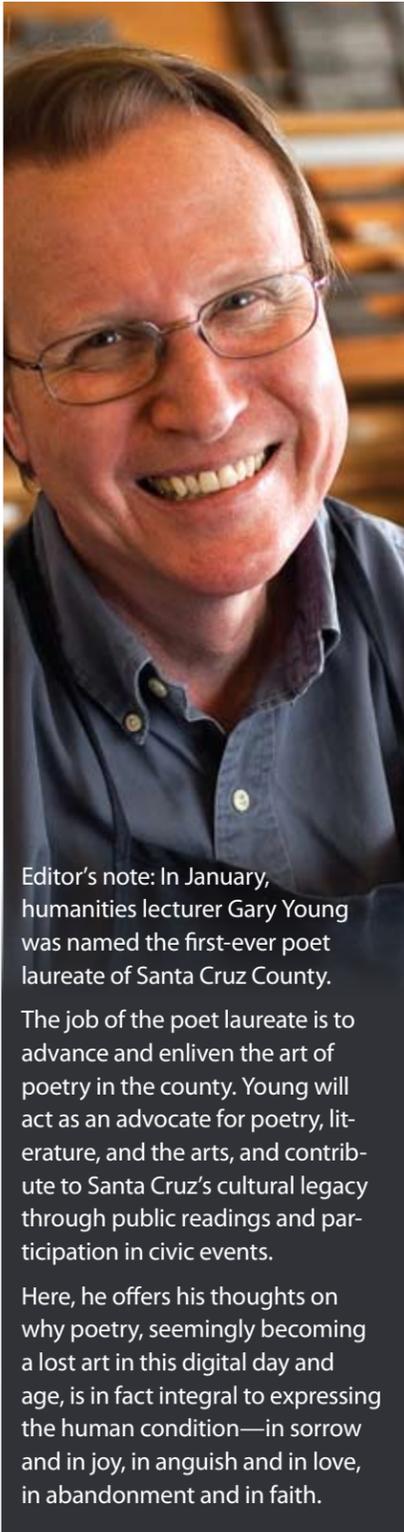


PHOTO: JIM MACKENZIE

Editor's note: In January, humanities lecturer Gary Young was named the first-ever poet laureate of Santa Cruz County.

The job of the poet laureate is to advance and enliven the art of poetry in the county. Young will act as an advocate for poetry, literature, and the arts, and contribute to Santa Cruz's cultural legacy through public readings and participation in civic events.

Here, he offers his thoughts on why poetry, seemingly becoming a lost art in this digital day and age, is in fact integral to expressing the human condition—in sorrow and in joy, in anguish and in love, in abandonment and in faith.

At a time when it seems that the only thing we hear about books is the fact that they will soon be obsolete, and that readers are becoming an endangered species, it's a rare and glorious thing for a community to come together to recognize the value of poetry and to encourage participation in its many joyful manifestations.

By naming a poet laureate, the community made an unequivocal declaration that poetry is a vital artistic pursuit that should be encouraged and applauded.

Poetry's primary function is to speak about things for which there are no words. Poetry offers us a chance to articulate pain that ordinary speech cannot express; joy that surpasses our capacity to explain; or love that resists reduction to mere words. This paradox is one of the things that keeps poetry alive in every age and in every culture. In an increasingly secular age, poetry is also a place where things of the spirit may be freely investigated or extolled without the constraints of one or another orthodoxy.

For the poet, poetry offers a life of inexhaustible possibility. It's a humbling art, because we wrestle most often with our failures—every poet knows that his or her best poems could be even better. Poetry is hard work, but it is labor touched by grace. Human beings were made to sing—in praise and in sorrow, to each other, to the earth, and to the gods. It is one of our most precious birthrights. In an age when

Poetry by Gary Young

Last night I dreamed about a bobcat, and this morning I found one sleeping beneath the persimmon tree. I was almost close enough to touch him when he woke, fixed me with his eyes and disappeared into a thicket. The air was damp with last night's rain. The matted leaves cushioned my steps, and persimmons blazed in the branches of the tree like a hundred suns. I don't know if the cat appeared because I dreamed of him, or if I dreamed of him because he was so near. (From *Bear Flag Republic: Prose Poems and Poetics from California*, Greenhouse Review Press/Alcatraz Editions)

electronic media dominate so much of our conversation, poetry offers a little island where words are still holy. William Carlos Williams said it best in "Asphodel, That Greeny Flower":

It is difficult
to get the news from poems
yet men die miserably every day
for lack
of what is found there.

It's much more important that our community determined that we should have a poet laureate than the fact that any individual was honored with the position. This is really about recognizing poetry and the art of the word. I'm flattered to have been chosen for the post, of course, but I'm nothing more than a stand-in for all the many wonderful poets who live here.

I came to Santa Cruz 40 years ago with the explicit intention of becoming a poet. I studied at UCSC with William Everson, Stephen Kessler, and many other marvelous writers and teachers, and I was blessed with the friendship of Morton Marcus, Joe Stroud, Jim Houston, and an army of brilliant and generous poets and writers. This place has made me what I am. It has nourished me as an artist and as a person, and it's a privilege to now have a chance to give something back to the community that has given me so much.

—Gary Young, humanities lecturer

Student profile **Ryan Shannon:** A life philosophy

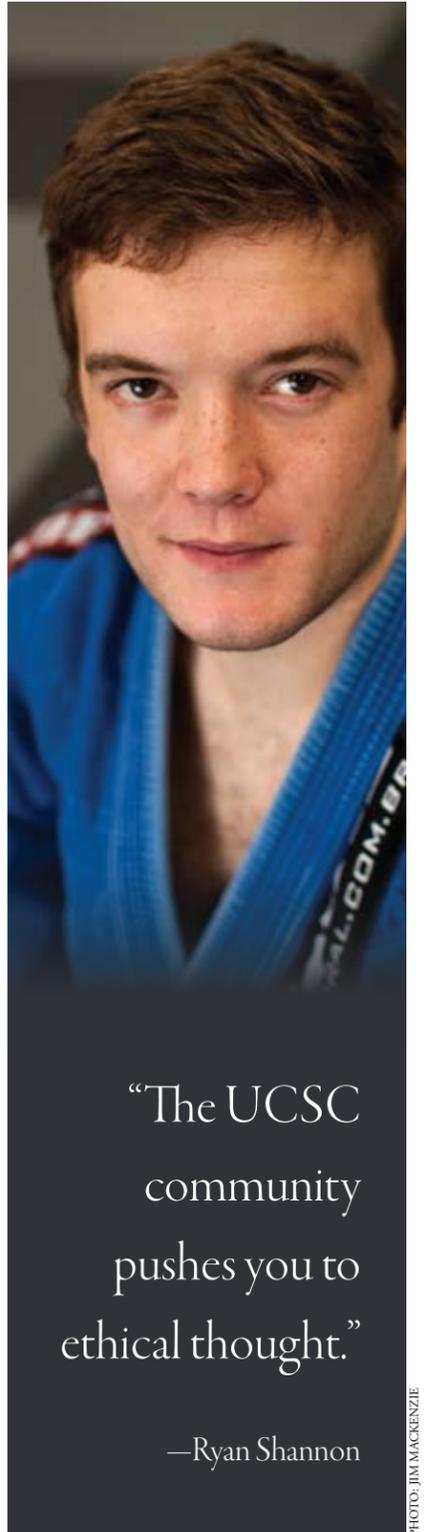


PHOTO: JIM MACKENZIE

Ryan Shannon, philosophy and politics senior at College Eight, ponders questions most 22-year-olds don't:

Should medical professionals be actively involved in torture?

Is it wrong for a woman to auction her virginity in order to pay off a debt that was fraudulently incurred in her name?

Part of the reason Shannon thinks about thorny issues like these is that he was a member of UC Santa Cruz's Ethics Bowl team, which faced those exact dilemmas on its path to a first-place regional finish and a ninth-place spot in the national Ethics Bowl championship—losing their round against the eventual winners.

But the other part is that the Chicago native is simply passionate about philosophy and believes a philosopher's viewpoint is not only important for his own life, but for the world.

"The main purpose of philosophy is to drive you to think and to examine life," said Shannon. It promotes curiosity and keeps a sense of wonder alive, he said.

The son of a physician and a school nurse/educator, Shannon was swept into the world of philosophy while attending a Jesuit high school. He spent the next years reading, studying, and savoring the philosophical questions that, he said, both inspire and puzzle him.

Shannon came to UCSC because of its reputation as progressive university and its emphasis on environmental concerns. But once here, he said, he quickly discovered a vibrant community in the school's philosophy department.

He cited professors David Hoy and Daniel Guevara, and Ethics Bowl coach Kyle Robertson, as inspirations. "The

UCSC community pushes you to ethical thought," he said.

He became involved in the Ethics Bowl team his senior year, bringing a thoughtfulness, work ethic, and the ability to look at an issue from all angles to the group, said Robertson, a graduate student who was a big-firm litigator before he came to UCSC.

But Shannon's love of philosophy isn't reserved only for competition. He uses it in his own life, too.

"From an ethical point of view, if you don't step back and reflectively look at what you are doing in life, you may act unethically and hurt your own purpose," Shannon said.

So, for instance, when he worked as a campaign field organizer for Barack Obama and found himself focusing on poll numbers and donation amounts while demanding volunteers work harder, he realized his mistake. A philosopher would see the faithful volunteers not just as the means to an end, he said, but the end themselves.

Shannon even takes a philosophical approach to the sport of Brazilian Jiu-Jitsu, citing Aristotle's admonition to lead a healthy, well-rounded life as a reason for practicing the martial art.

While Shannon's most immediate plan was a seven-day backpacking trip through the Mojave Desert, he said he is headed for law school and a career in environmental policy, which he believes is crucial for the survival of people and the planet.

He also suggested a new government post: "How about a national philosopher laureate?" he said.

—Peggy Townsend

"The UCSC
community
pushes you to
ethical thought."

—Ryan Shannon

Galaxies far, far away

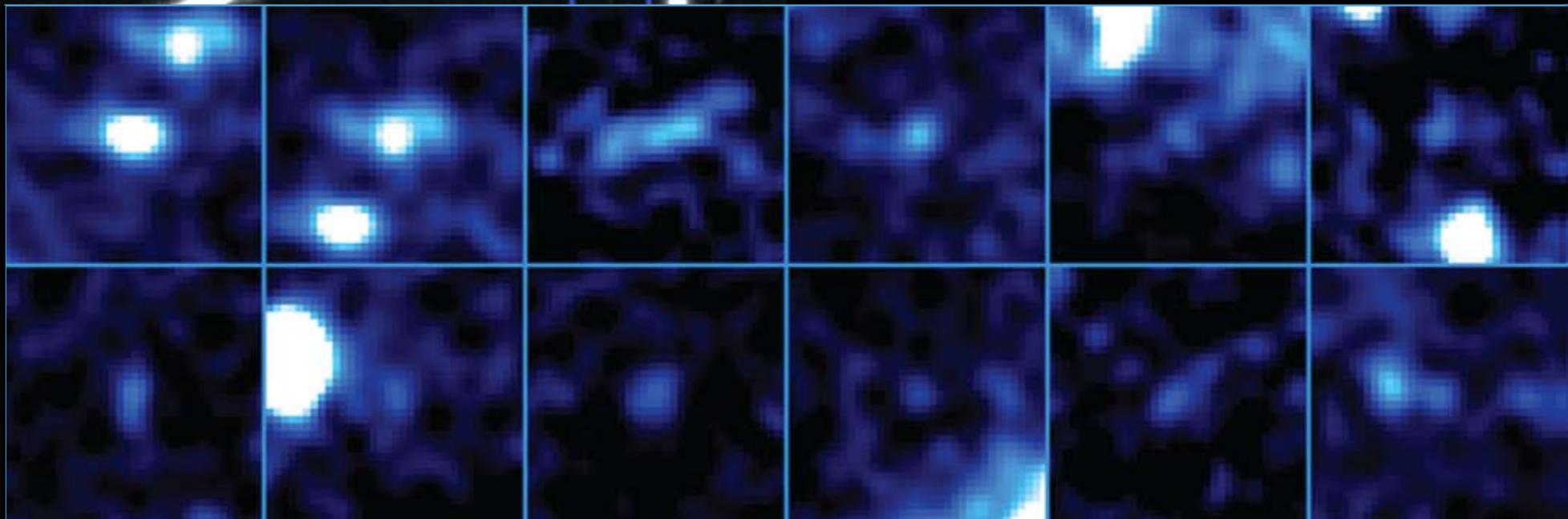
Using a new camera on the Hubble Space Telescope, astronomers at UCSC are making breakthrough discoveries about the distant universe.

Like everyone else, UCSC astronomers are forced to live in the present. But with the help of the Hubble Space Telescope, they are peering further and further into the past.

“We’re asking one of the grandest questions of existence: where do things come from?” says David Koo, professor of astronomy and astrophysics.

The groundbreaking work of UCSC astronomers has already revealed the most distant galaxies ever seen. Their latest project will gather enough new information about the distant universe to occupy scientists for years, bridging the gap between current instruments and more powerful telescopes planned for the future. Now two decades old, Hubble is in the last stage of its life, but a new instrument, the Wide Field Camera 3 (WFC3), has given it unprecedented abilities—and UCSC astronomers are exploiting it to discover new galaxies, exploring the universe as never before. • “Hubble is now more powerful than it has ever been in the past,” says Koo. He’s on a team led by professor of astronomy and astrophysics Sandra Faber that will use a record amount of observing time on Hubble, opening the telescope’s eyes to the universe for two months.

The most distant galaxies ever seen appear in this image taken last year by the Hubble Space Telescope. The faintest objects (circled above and enlarged in the grid at right) represent primordial galaxies, the digital imprints of starlight that left those galaxies just 600 million to 700 million years after the Big Bang and traveled across the universe for 13 billion years to reach Hubble’s detectors.



Galaxies far, far away

The groundbreaking work of UCSC astronomers has already revealed the most distant galaxies ever seen.

'Rich' science

Astronauts installed the WFC3 during Hubble's last servicing mission in May 2009. The camera takes pictures in visible wavelengths as well as ultraviolet and the near-infrared, which have wavelengths that are shorter and longer, respectively, than what our eyes can see.

"This camera is incredibly powerful—a red-sensitive camera that's taking pictures in ways that we couldn't before," Faber says. "The science we'll study is extremely rich."

Professor of astronomy and astrophysics Garth Illingworth is already demonstrating the power of this new camera, leading a team that has discovered the most distant galaxies yet. Because light from

That initial data set contains the most distant pictures ever taken in visible wavelengths—reaching back to 900 million years after the Big Bang—and by combining it with the deepest-ever infrared images of the universe from Illingworth's WFC3 survey of HUDF, the researchers discovered galaxies from just 600 million to 800 million years after the Big Bang.



PHOTO: JIM MACKENZIE

these distant galaxies takes billions of years to reach Hubble's mirrors, the telescope acts as a time machine, providing astronomers with pictures of the cosmos as it was billions of years ago. The deeper Hubble looks into space, the farther it gazes into the universe's 13.7 billion-year history.

"When we first saw the data, we were just astonished at the quality," Illingworth remarks. "We were doing things that would've been impossible with the old cameras on Hubble." The new camera is 40 times better at finding these early galaxies, he says.

Illingworth and his team, which includes UCSC astronomer Rychard Bouwens and researcher Daniel Magee, pointed the telescope at the Hubble Ultra Deep Field (HUDF), a small patch of sky about one-tenth the size of the moon, that was first studied in 2004 with the Advanced Camera for Surveys, an instrument for which Illingworth was a deputy principal investigator.

mass, these faint smudges were the seeds that merged and grew into the majestic galaxies we see today.

Surprisingly, these early galaxies were very blue, Illingworth says, suggesting a lack of dust and perhaps of the heavier elements that were later forged in stars like our Sun. The astronomers also discovered that the 600- to 800-million-year old galaxies were already forming stars 300 million years prior, much closer to the time when the first stars in the universe were born.

"That's a remarkable result," he says.

These first galaxies filled the universe during a period called reionization, when all the hydrogen gas in the cosmos somehow

became ionized, its electrons stripped away by some source of ultraviolet light. The identity of this source has been a long-standing mystery, and studying these galaxies may provide much-needed clues—is there enough bright ultraviolet light that escapes from these galaxies? Are there enough galaxies to begin with?

Hubble's last hurrah

While Illingworth's HUDF survey focused on three small areas in the sky with the deepest-ever near-infrared images, Faber's upcoming project covers a spectacular 70-times-larger area less deeply over five well-studied regions.

"They're perfectly complementary, deep and wide," Illingworth says. "They go hand in hand."

Faber's survey will also stretch back to 600 million years after the Big Bang, snapping pictures of galactic nurseries and compiling a census of these infants to see how they grow and what sorts of environments surround them.

"This presses the limit of this camera to the very edge," Faber says. "With our survey, we're going to have a much larger area and we're going to be able to count these [young galaxies] for the first time very accurately."

Also led by co-principal investigator Henry Ferguson of the Space Telescope Science Institute in Baltimore, the newest survey will start at the end of the year and take three years to complete. With Hubble near retirement, this project could be its last hurrah, complementing ground-based telescopes and other space telescopes, such as the Spitzer Space Telescope and the Chandra X-ray Observatory.

"We're adding that final, wonderful data

detailed structure of galaxies. The new camera will also be able to discern these stellar seniors near the center of galaxies, where supermassive black holes lurk. The black hole tugs at the swarm of stars around it, altering trajectories and velocities. Snapshots that include the older stars would help reveal how a humongous black hole influences the shape and size of its galaxy.



PHOTO: JIM MACKENZIE

set to make a lasting legacy of those five key regions for studying distant galaxies," Koo says.

Faber's team is interested in the time when the universe was just a few billion years old, when it was abuzz with galactic activity. Star births were booming, galaxies were crashing into each other at a high clip, and lots of exotic behemoths called supermassive black holes—which are millions or billions of times as massive as the Sun—were gobbling up gas and dust at galactic centers, generating enormous amounts of heat and energy as quasars, the brightest objects in the cosmos. To understand galaxies today requires understanding galaxies during this period, which Faber calls the high-water mark of galaxy formation—akin to the growth spurts of adolescence.

Previously, Hubble wasn't able to see the redder, older stars, and so its images of galaxies were incomplete, appearing ragged and irregular. But in their survey, Faber explains, they'll be able to detect this "scaffolding of older stars," as she calls it, revealing the

those of present-day supernovae.

The expanding universe adds another layer of uncertainty to the calculations, as astronomers' interpretation of supernovae depends on the shape of the universe, which is itself strongly influenced by dark energy. But early on, when the universe was about 5 billion years old, matter was more densely packed together, and so gravity was more important than dark energy. As the cosmos expanded, the space between galaxies grew and the effect of gravity waned while dark energy remained constant and gained influence. So by studying Type Ia supernovae before dark energy held sway, astronomers could compare them to today's supernovae and better calibrate the cosmic measuring sticks.

In the next decade, several bigger telescopes will come online. The James Webb Space Telescope, an infrared instrument, is slated to launch in 2014. Other ground-based scopes include the Thirty Meter Telescope in Hawaii—for which the University of California is a partner institution—the European Extremely Large Telescope, and the Atacama Large Millimeter Array in Chile.

But once Hubble retires, Faber's survey will be the last big stockpile of data for at least several years. The database will then help astronomers identify targets to focus on with these larger telescopes, serving as a bridge to the future, Koo says.

"It's not the culmination or the end," he says, "but an extremely important next advance."

And UCSC astronomers are leading these two remarkable Hubble projects, whose legacy will stretch into the next decade.

Marcus Woo is a 2007 graduate of UCSC's science writing program. He lives in Pasadena.

Alumni Notes

To receive invitations and e-newsletters about alumni activities, send your e-mail address to review@ucsc.edu.

We'd like to hear from you

► Send an e-mail to review@ucsc.edu ► or submit a note via the web at alumni.ucsc.edu (go to Class Notes)

COWELL COLLEGE

'71 **Nan ROHAN** returned to California in fall 2007, where she continues to edit the *Straw Guild* newsletter and to participate in the National Association of Wheat Weaving; she also assists with the care of two grandchildren. **Peter MYERS**, a screenwriter in Los Angeles, will publish his advice to other writers, *NOW WRITE! Screenwriting: Exercises by Today's Best Screenwriters, Teachers and Consultants*, in September.

'78 **Felicia RICE** received a 2009 Rydell Visual Arts Fellowship. Her work was exhibited at the Santa Cruz Museum of Art and History and she was co-curator of an international book-arts show.

'79 **Kathleen ADAMS's** book, *Art as Politics: Re-crafting Identities, Tourism, and Power in Tana Toraja, Indonesia*, received the National Book Award from the Association of Jesuit Colleges and Universities.

'81 **Sherril WELLS** reports that she has become "a quilting addict." She has purchased land, planted trees, and now needs money to buy chickens.

'89 **Ryan James HAUPT** is "living the nerd dream." He hosts the podcast "Science... sort of" and writes articles on science and comics for marvel.com and ifanboy.com. **Matthew LIAO-TROTH**, associate professor in and chair of the Management Department, Western Washington University, edited and published his first book, *Challenges in Volunteer Management*.

'01 **Michelle DAVID** is pursuing a master's in urban and regional planning at San Jose State, works as a program manager on the UCSC campus, and serves as vice chair of the Santa Cruz City Arts Commission.

STEVENSON COLLEGE

'68 **Raymond STEINER** recently married his long-time partner, Yumi, whom he met while teaching in Japan; his classic rent-a-car business has morphed into a limo service in Colorado Springs.

'69 **Joan FITTING Scott** was interviewed for a feature on CNBC called "Financially Speaking, What Type of Boomer Are You?" which focused on the imminent retirement of the Baby-Boom generation.

'74 **Walter BOYES** regretfully reports the death of his beloved wife, Betsy Gail Boyes (SJSU '82), on July 29; she was 51.

'84 **Shari Lynn ANDERSON Allison** wrote an article, "Taking Death off the Table in the Land of Enchantment," which was published in the June issue of *The Champion* by the National Association of Criminal Defense Lawyers.

'89 **Michael SPRINGER** has launched a new online business networking service, zomexa.com, which introduces compatible professionals to one another in order to forge business relationships.

'92 **Marcia WALL** is developing an educational program for mentally disabled adults; she lives in New Orleans.

CROWN COLLEGE

'86 **Robin BARRETT Hastings** worked for Luxology LLC in the finance department until August and is "now a housewife again."

'89 **Nick KOPSINIS** attended the 20th anniversary of UCSC's Theta Chi fraternity in October.

'06 **Allison FRANTZ De Gros** married in 2009 and works as associate director of Donor Stewardship at UC Berkeley.

MERRILL COLLEGE

'75 **Robert GRIES** is taking care of his mother in Oceanside, Calif. He enjoys mountain biking, trips to Lake Tahoe, and working on alternative energy projects.

'87 **John TOROK** filed a Ph.D. dissertation in Ethnic Studies at UC Berkeley that examines the intersection of race, immigration, and civil liberties in Cold War New York Chinatown.

'02 **Trang TRAN** moved back to Santa Cruz to open her own dental practice.

'03 **Elena COMO** started her own company, Atlantico Books, in 2005; she imports CDs and DVDs from Brazil and Portugal for use in academic, musical, and professional settings.

'04 **Sean FITZWATER** managed a dengue-virus research lab at UC Berkeley and received a master's degree in global disease prevention and control from Johns Hopkins University, where he is currently working as an epidemiologist at the School of Public Health.

PORTER COLLEGE

'77 **Laura MARELLO** was awarded Phi Beta Kappa status in 2006. Her first novel, *Claiming Kin*, was published by Guernica Editions in September. Landscape artist **Kathleen LIPINSKI** has completed an 8- by 14-foot painting and several smaller ones depicting scenes from Zion National Park for a new building in Salt Lake City.

'81 **Karla HUEBNER** completed her Ph.D. in 2009 and moved to Dayton, Ohio, to teach at Wright State University, where she has found another UCSC alumnus.

'87 **Andrew MERSMANN** is the author of *Frommer's 500 Places Where You Can Make a Difference*, a book about volunteer vacations; it was published in October.

KRESGE COLLEGE

'92 **Andrea FIGLER Ventura** has joined the Los Angeles office of the Dykema law firm, where her practice focuses on commercial litigation in areas such as consumer finance, automotive issues, and product liability.

'94 **Mark THOLKE** and **Freya McCAMANT** (Cowell '93) are the parents of two girls. Mark develops large-scale wind and solar projects; Freya is an environmental attorney and busy mom.

'95 **Chris WILTSEE** was appointed executive director of the San Francisco chapter of The Recording Academy, the organization that sponsors the GRAMMY Awards; he is in charge of the chapter's programs and events.

OAKES COLLEGE

'90 **Erin LALE** has published *Asatru for Beginners*, a book about the pagan religion of the Vikings. She has also published shorter works of nonfiction, fiction, and poetry.

'91 **Danielle OCHS-TILLOTSON** was elected a shareholder of Ogletree Deakins, the third-largest labor and employment law firm in the U.S., in February.

'08 **Stephanie BLANCH** departed for southern Chile in March; she is teaching English in a public high school as part of Harvard University's World Teach program.

'09 **Amy Marie ALLEN** spent her last year in college studying in Spain; she has been working in the business of pop culture and comic books at Atlantis Fantasy World for the past five years.

COLLEGE EIGHT

'95 **Kate McFADDEN** has been awarded a Fulbright Scholar Grant and will teach at the National University of Rwanda in 2011. She's an assistant professor of ecology, evolution, and environmental biology at Columbia University.

COLLEGE NINE

'05 **Ariel JACOBS** was awarded a fellowship by the Takashi Kiuchi Summer Internship for 2009–10; she is pursuing a master's degree at the Bren School of Environmental Science and Management at UC Santa Barbara.

GRADUATE STUDIES

'69 **Stephen KESSLER** (M.A. literature) received the 2010 Harold Morton Landon Translation Award for his translation from Spanish of Luis Cernuda's *Desolation of the Chimera*.

'75 **Marc HOFSTADTER** (Ph.D. literature) published his fifth book of poetry, *Rising at 5 AM* (Latitude Press), in March.

'87 **Steve KATZ** (Ph.D. sociology) was appointed publisher of *Mother Jones*—an independent, nonprofit, investigative news organization—in February.

'95 **Maria OCHOA** (Ph.D. history of consciousness) and **Barbara IGE** (Ph.D. literature, '97) are co-editors of the anthology *Shout Out: Women of Color Respond to Violence*.

'04 **Daniel MASSEY** (M.F.A. digital arts and new media) and **Aaron KOBLIN** (Crown '04) completed the online work *Bicycle Built For Two Thousand* in 2009, which comprised more than 2,000 voice recordings collected via Amazon's Mechanical Turk web service; the work won the Trans-mediale 2010 Distinction Award.

'06 **Bob GIGES** (M.F.A.; B.A. psychology, Porter '77) coauthored an article in the digital-media journal *Leonardo* entitled "From Router to Front Row: Lubricious Transfer and the Aesthetics of Telematic Performance."

IN MEMORIAM

'70 **Rebecca RAY** (Cowell), dedicated volunteer docent at Natural Bridges State Park, died at her Santa Cruz home on December 9, 2009; she was 61.

'89 **Bradley S. KISNER** (Kresge), president if INX Digital International of San Leandro, Calif., died suddenly on August 22, 2009, in Santa Cruz; he was 47.

'09 **Kenneth A. GRAM** (Kresge) died unexpectedly on November 18, 2009, while visiting friends in Annapolis, Md.; he was 22.

By Guy Lasnier

Narrative evaluations become instructor optional

UCSC's Academic Senate voted overwhelmingly in April to modify the campus's undergraduate evaluation policy to make it instructor optional.

The Senate had been reconsidering the campus's iconic narrative evaluation system for more than a year; the action in April followed a vote 10 years earlier in which faculty made letter grades mandatory, in addition to written evaluations.

With a 45–5 vote, the Senate revised the student-evaluation policy again to allow instructors to prepare a written evaluation if they wish. Proponents said students could also request a written evaluation if one were not offered and could appeal if an instructor refused.

Larger classes, heavier workloads, a mandatory 15-day deadline to file the narratives, and computer programs that create less personal written evaluations all were cited as reasons for change.

"This will revitalize our narrative evaluation system that most of us don't take seriously," said Brent Haddad, professor of environmental studies and a member of the Senate's Executive Committee that recommended the change.

In introducing the debate, Senate chair Lori Kletzer called the proposal "historic legislation." The goal, added vice chair Marc Mangel, professor of applied mathematics and statistics, "is to keep the best part of the narrative evaluation and eliminate some of the things that have become negative."

Others argued that the latest revision is tantamount to killing the system entirely. UCSC Alumni Association President Amy Everitt (Stevenson '92) argued passionately for reform, not elimination, and said she "predicts a slow death" for narratives. Politics chair Dan Wirls, one of five no votes, called the result "death by voluntarism."

In the end, dissatisfaction with the status quo across all academic divisions led to the move to make narratives optional. As John Johnson, president of the Graduate Students Association, put it during the February debate: "We want them, but we don't want to do them."

Join the conversation at community.ucsc.edu.

Alumni in Profile

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Nina Grove: Helping vanquish some of humanity's most vexing diseases



PHOTO: JAY BLAKESBERG

Sitting in the San Francisco office of the Institute for OneWorld Health, **Nina Grove** faced a daunting task. She needed to find a way to manufacture, at a commercial scale, a semi-synthetic version of the drug artemisinin, which is used as part of a combination treatment for malaria.

Artemisinin is derived from the wormwood plant. Not only was it costly to produce, but vagaries of weather and supply meant the quantities needed to help fight a disease that kills more than a million people each year wasn't reliable.

In order to make the drug available to more people, Grove had to orchestrate a unique coalition that included a biotechnology startup, a UC Berkeley researcher, a philanthropic foundation, and a big drug company.

If anyone could do the job, it was Grove.

Grove, who graduated from Oakes College with a degree in biology in 1979, had spent 20 years at biotech giant Genentech, helping in the launch of four major drugs in less than 18 months: Avastin for colon cancer, Xolair for asthma, Tarceva for lung cancer, and Raptiva for psoriasis. It was there, she said, she learned how collaboration, mutual respect, and a goal-oriented process could bring stunning results.

'I want to leave the world a better place.' —Nina Grove

She applied that same strategy to the Artemisinin Project.

"My job was to keep everybody moving forward toward a common goal in a collaborative way," Grove said.

With \$42.6 million from the Bill and Melinda Gates Foundation, Grove shepherded the project to the point that the drug will soon be produced by the pharmaceutical company Sanofi-Aventis, and with government subsidies, should bring the cost of the combination treatment called ACT down to about \$1 per patient.

"This unique approach is one of many that need to happen in the goal to eradicate malaria," said Grove, who also worked on a project to provide a low-cost treatment for the deadly disease visceral leishmaniasis, which is caused by the bite of a sand fly.

The daughter of Jewish immigrants who left Germany to escape the Holocaust, Grove is now taking time off to spend more time with her family and volunteer in her community, but then will look for her next project.

"I've always had the need to help other people," said the San Francisco resident, "and the most satisfying way I can do that relates to public health."

Her goal in life is simple.

"I want to leave the world a better place," she said.

—by Peggy Townsend

Cathy Calfo: An advocate of the green revolution

When **Cathy Calfo** was in ninth grade, she and some of her fellow students campaigned to have a controversial bike lane installed near their school. Little did Calfo realize that that push for needed change would become a hallmark of her life.

Now 52, Calfo (Merrill '95, American studies) is executive director of an organization that is working to build a green economy in the United States, which she believes is the way not only to fight climate change but also to put millions of Americans to work.

Along the way, Calfo also has been executive director of the California Democratic Party, run political campaigns, worked as California's deputy state treasurer, and helped push the investment of \$1.5 billion in state pension funds into environmentally responsible companies, green technology, and renewable energy.

"My involvement in politics," said Calfo, "is rooted in being able to move policies that make things better for people."

A founding member of Santa Cruz's Commission for the Prevention of Violence Against Women, Calfo still lives in the city where she went to college. But now, three days a week, she catches a bus and train to the San Francisco office of the Apollo Alliance. There, she oversees a \$2.5 million program that has built a coalition of labor, business,

and environmental and community leaders to push for an economy that, she said, "is both energy-efficient and equitable."

The single mother of three sons, Calfo believes that without this shift, not only will the next generation face the environmental consequences of climate change, but also the disappearance of the American middle class, which is being eroded by the loss of blue-collar jobs.

"This is a huge moment, a huge opportunity, if we do it right," she said.

Some of her organization's projects include training workers from L.A.'s inner-city to do a green retrofit of city buildings and the establishment of a Green Jobs Corps in Oakland. Part of 2009's \$787 billion stimulus bill also included clean-energy and green-collar job programs inspired by Apollo Alliance policy proposals.

In her own life, Calfo's desire to provoke change led her to volunteer for an organization that helped homeless teens. Discovering that many of these children had been in the foster-care system, Calfo began to investigate.

Seven years ago, she brought a 3-year-old foster child named Elijah into her life and has now adopted him.

"It's probably the best thing that ever happened to me," she said.

—by Peggy Townsend



PHOTO: JAY BLAKESBERG

'This is a huge moment, a huge opportunity, if we do it right.' —Cathy Calfo

Alumni in Profile

David Talbot: Innovative energy found at UCSC led to Salon.com

The web magazine Salon.com, the bestseller *Brothers: The Hidden History of the Kennedy Years*, and an upcoming graphic history book all have one thing in common besides their creator, journalist **David Talbot**.

They each have their roots in Talbot's alma mater, UC Santa Cruz.

Talbot (Stevenson '73, sociology) came to the wooded campus in 1969 because it was the only college that would have him. His protests over the ROTC program at the exclusive Harvard Boys School in Los Angeles had so angered the principal, the administrator wrote to every college to which Talbot had applied to advise them Talbot was a "discipline problem" and should not be admitted, Talbot said. Talbot wrote his own letters to the schools; UCSC was the one college that accepted him.

It turned out to be the best revenge for Talbot, who said he fell under the spell of a half-dozen "white-hot and brilliant" professors at UCSC.

"They opened my eyes and got me to think," Talbot said. They changed his life.

Living in a rambling Chestnut Street Victorian, Talbot became part of a loose collective of students and professors who set out to create a new world. They started a food cooperative and a women's health clinic.

"It was the spirit of: If it doesn't exist and needs to exist, we should create it," said Talbot, who used that same innovative energy to leave the safety of a newspaper job in the mid-1990s and start what was then a grand experiment, the web magazine Salon.com.

Exhausted after 10 years of web life, Talbot retired to write a book sparked by a term paper he had done in college. *Brothers*, his 2007 examination of the Kennedy presidency and assassination, became a bestseller. It is now being made into a TV miniseries as part of Talbot's latest undertaking: an independent media production company he formed with his siblings.

"That spirit of jumping into the void and being terrified and exhilarated—all that was familiar to me from my years in college," Talbot said. "It really shaped my sense of self," a self that embraces risk as a necessary part of innovation.

Next up for the San Francisco resident is an illustrated "pulp history" of general-turned-peace-activist Smedley Darlington Butler. *Devil Dog: The Amazing True Story of the Man Who Saved America* will be released by Simon & Schuster this year and has been optioned by director Oliver Stone.

And the first place Talbot heard about the little-known hero?

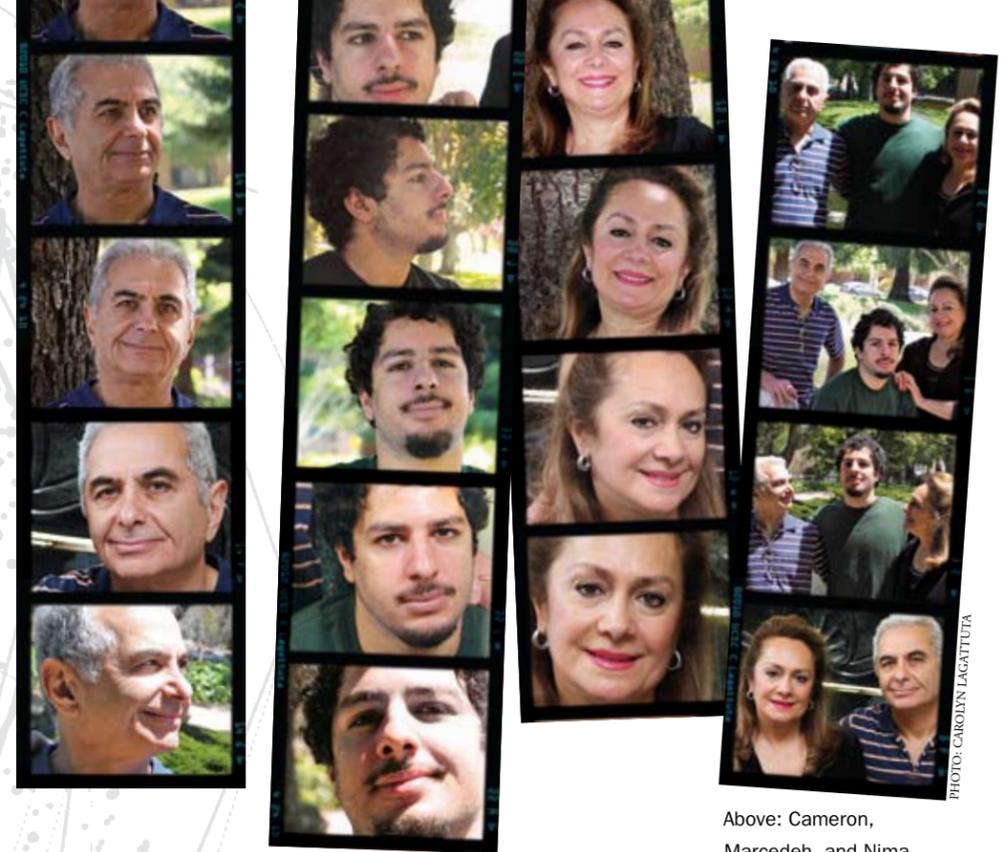
In a study group at UC Santa Cruz.

—by Peggy Townsend



PHOTO: JAY BLAKESBERG

'That spirit of jumping into the void and being terrified and exhilarated—all that was familiar to me from my years in college.'
—David Talbot



Above: Cameron, Marcedeh, and Nima
PHOTO: CAROLYN LAGATTUTA

Why we sent our two sons to UCSC

With the mind-boggling array of options available for college-bound high school seniors, why does a parent choose to send his or her child to UC Santa Cruz?

We posed that question to parent Cameron Mashouf of San Jose, who sent his two sons, Nima and Kayhan, to UCSC.

Mashouf, an orthodontist, teaches clinical orthodontics at University of the Pacific. His wife, Marcedeh, has a master's in civil engineering and now tutors math and science.

Q. Why did you decide on UCSC for your sons?

A. For a number of reasons, but primarily we heard about the quality of education at UCSC from a physician who studied at UC Davis, UCSC, and UC Berkeley. She liked UC Santa Cruz the best of all of these campuses and considered it to be the highlight of her education.

Q. What are they studying?

A. Our older son, Kayhan, graduated in 2006 with a B.S. in molecular, cell, and developmental biology. He is now at Boston University School of Dentistry and will be graduating next month. He will start graduate school in the fall at the University of Colorado, to become an orthodontist. Our younger son, Nima, is studying psychology at UCSC. He is in his fourth year.

Q. What has made the biggest impression on you regarding their experience?

A. The quality of education and the support of the faculty and staff have been exceptional. The first-year core courses were particularly helpful, preparing our sons to write well and to become critical thinkers.

Q. How has UCSC prepared your sons for the future in ways that might be different from other schools?

A. Aside from the academics, UCSC has provided our sons with intellectual growth that, in our opinion, surpasses many other educational institutions. The diversity of the student population and faculty, as well as a culture that promotes open-mindedness, have been quite impressive.

Q. Where did you both go to school? How does the UCSC experience compare to yours?

A. I went to the University of Tehran for five years, UC Berkeley for one year, Loyola University of Chicago for two years, University of Illinois for two years, and the University of Chicago for one year. My wife went to the University of Louisville for six years. UCSC is more nurturing and provides a more open-minded atmosphere.

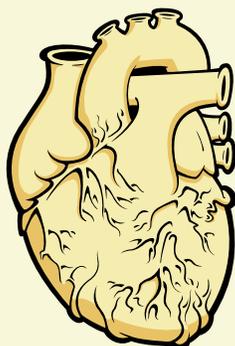
Q. Would you recommend UCSC to others?

A. Definitely. We have grown to love UCSC and constantly brag about it.

For more information about UCSC's parent programs, contact Frankie Melvin at (831) 459-1770 or fmelvin@ucsc.edu.



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Now we need your heart.



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