

UC SANTA CRUZ

REVIEW

Fall 2012

At UCSC,
THE SKY IS **NOT** THE LIMIT...

ALSO: THE CAMPUS AS A **NATURAL CLASSROOM**

STUDENTS **BRIDGE** DIGITAL DIVIDE

MARS LANDING



PHOTO: JIM MACKENZIE

From the **Chancellor** UC Santa Cruz earns high marks—again

Young, smart, and beautiful.

There are many ways to describe UC Santa Cruz, but those three words sum us up remarkably well—particularly in light of our recent ranking as one of the best universities under the age of 50.

We won't celebrate our 50th anniversary until 2015—but we've already accomplished so much. This issue of *Review* is packed with stories of exploration and discovery, from astronomer Connie Rockosi mapping the outer range of our galaxy to historian Gail Hershatter capturing the experiences of women in rural China.

Two issues ago, our cover story focused on UCSC's role in the emerging field of personalized medicine. That effort took a major stride forward this spring, when UCSC partnered with the National Cancer Institute to establish the Cancer Genomics Hub (CGHub), a national repository that will help scientists around the globe make progress in their pursuit of genomics-based approaches to understanding cancer as a disease—and develop new options for treatment.

Our good news extends to graduate programs. I'm delighted to announce our new Ph.D. programs in feminist studies and Latin American and Latino studies, and a new master's program in theater arts.

As we approach our 50th anniversary, UCSC has achieved a level of research excellence in fields as diverse as linguistics, engineering, economics, and marine science. We've outpaced peer institutions that have been around twice as long.

The backdrop to all this is, of course, our stunning location. Anyone who has ever set foot on campus will appreciate the story in this issue about the ways in which our setting inspires teachers and students, and even shapes the experience of learning itself.

Here's to being young, smart, and beautiful!

Sincerely,

George Blumenthal



PHOTO: YESTER DICK

The road to '65

50 years ago:

Countdown to **UCSC's** **50th anniversary**

Fifty years ago, in the fall of 1962, the Cuban Missile Crisis was escalating, and the United States and the Soviet Union came as close as they ever would to global nuclear war.

Against that backdrop of worldwide disaster, a University of California campus was being born in Santa Cruz, getting ready for its opening three years later.

Preparations for the new campus were beginning to roll. In September 1962, the campus's first librarian arrived, ready to start a university library from scratch.

His name was Donald Clark (1911–1993), and he was the first of Chancellor Dean E. McHenry's academic appointments at UCSC.

Before his appointment at Santa Cruz, Clark had been at Baker Library at the Harvard Graduate School of Business for more than 20 years.

Chancellor McHenry's invitation to participate in the Santa Cruz experiment in public higher education was a rare opportunity that Clark felt he couldn't pass up. He was also excited by the prospect of building a new library.

"Can you imagine the opportunity that would be given a librarian to start from zero?" Clark asked his interviewer in his oral history, *Donald*

Cover image: M51 (also known as the Whirlpool galaxy, or NGC 5194,5195) in the constellation Canes Venatici. This galaxy, at a distance of roughly 40 million light years, is a favorite target of amateur astronomers, and was the first galaxy in which spiral structure was recognized (by William Parsons, Third Earl of Rosse, in 1850).



UC SANTA CRUZ

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Where's Sammy? Sammy the Banana Slug is hidden somewhere in this issue. Can you find him? He'll look like the Sammy above. Email review@ucsc.edu with his location in the magazine. The first reader to send us Sammy's hiding spot will get a shout-out in the next issue. Happy hunting, and Fiat Slug!

Editor's note: UCSC is turning 50 in 2015! How time flies. We're starting the celebration by presenting stories in each issue of Review of what was happening on campus 50 years ago. First up: In 1962, the founding University Librarian arrives on campus and begins creating McHenry Library.

T. Clark: Early UCSC history and the founding of the University Library.

"Clark was a book man first and foremost, but he looked beyond the titles," said Hal Hyde, UCSC's first vice chancellor of business and finance. "He was broadly interested in the community and in geography."

In late October 1962, President John F. Kennedy negotiated with Soviet Premier Nikita Khrushchev to settle the Cuban Missile Crisis. The world breathed easier, and work on the UCSC campus could continue without the threat of nuclear disaster.

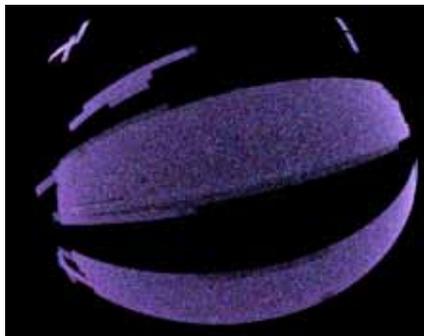
Clark proceeded with making plans for the building of McHenry Library. He became a pioneer in the area of library automation, working to create a computerized book catalog at UC Santa Cruz in the 1960s—the first such effort in the UC system.

Today's library—recently renovated—includes a café, collaborative study areas, a large information commons containing more than 60 computer stations, a "laptop bar" with stools for optimum studying, and full wireless coverage.

Though McHenry Library has embraced the digital information age, it remains, as it began, a place for study, contemplation, and discovery—just as its founders envisioned it.

A UCSC astronomy professor and the Sloan Digital Sky Survey point a telescope toward our galaxy's birth.

The UCSC campus is a 'living laboratory'—and a natural lecture hall.



Mapping the sky

8

Classrooms without walls

12

Bridging the digital divide

16

Ocean Investment

28



An ambitious program combines IT training with student-driven social justice ventures.

Alums' \$1 million gift will further efforts in ocean health.

HAPPENINGS/NEWS 4 | UNCOMMON PEOPLE 20 | ALUMNI PROFILES AND NOTES 22

UNIVERSITY
OF CALIFORNIA
SANTA CRUZ

Chancellor
George Blumenthal

Vice Chancellor,
University Relations
Donna Murphy

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Editor
Gwen Mickelson

Creative Director
Lisa Nielsen

Art Director/Designer
Linda Knudson (Cowell '76)

Associate Editor
Dan White

Cover Photo
Sloan Digital Sky Collaboration,
sds.org

Photography
Eric Arvizo
Scott Karoly
Carolyn Lagattuta
Elena Zhukova

Contributors
Amy Ettinger
Jane Liaw (SciCom '08)
Dana Mackenzie (SciCom '97)
Guy Lasnier (Merrill '78)
Scott Rappaport
Tim Stephens
Peggy Townsend
Dan White

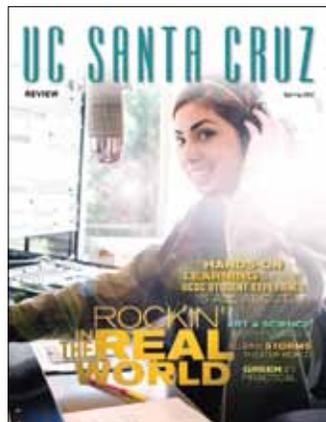
Produced by
UC Santa Cruz
Communications
& Marketing

1156 High Street
Santa Cruz, CA 95064-1077
Voice: 831.459.2495
Fax: 831.459.5795
E-mail: review@ucsc.edu
Web: review.ucsc.edu
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Your Turn and “best of” social media

Our feature on the hands-on learning opportunities at KZSC in the spring '12 issue provoked an outpouring of warm memories from alums. We share a few of their letters here. Live long, Great 88! Share your story at [facebook.com/kzscradio](https://www.facebook.com/kzscradio)



RADIO RADIO

I smiled and tapped some old memories spurred by your stories and history, having been one of the pioneering (and pretty bewildered) disc jockeys back in the late '60s. I had a show on KRUZ on Friday nights with another Stevenson student, Bob Sloan. We called the show “SOS” (“Schnaidt or Sloan”), and we really did need help. We played the music we liked, partied, and reached an audience in the dozens.

I know the station has gone on to better and more legitimate things, but its beginnings were part of our discovery processes and coming of age. We had a great time being on the radio. We did no harm, we think.

—STEVE SCHNAIDT
Stevenson '70

Your article brought back warm memories. I was one of the early crop of DJs at KRUZ. Little did I know that my days spinning vinyl would lead me to a journalism career that included covering rock music at the *Minnesota*

Daily and stringing for *Rolling Stone* (one of the first women to do so); doing investigative reporting about United Way at a Sacramento rock-and-roll radio station (one of the first reporters to do so); getting fed up with lying weasels and going to law school to level the playing field when reporting—and then spending 27 years (and counting) as a legal journalist/lawyer at New York-based media company ALM (I still love rock and roll).

—MONICA BAY
*Cowell 1967–69,
College Five, 1969–71*

I was the station manager of KZSC for four years from 1975–79, and I led the station's first renovation and power increase in 1980 mentioned in your article.

After working as a commercial radio jock, in TV news, and as a video editor following my tenure at KZSC, today I head a Los Angeles-based media production company that serves Fortune 500 companies. There is no doubt that my UCSC degrees in communications and music, anchored by my years at KZSC, were fundamental to my life and career path.

—ROBIN LEWIN
Kresge '79

My *nombre* is “Dr. G.” I was one of the many Latino or Spanish-language programmers of KZSC. I moved back into the area about five-and-a-half years ago and have since been dreaming of returning to KZSC. I had the most amazing adventure

programming and airing what I called then “Alternative Music in Spanish.” I was not aware at the time that an actual movement of what was referred to as Latin Alternative or Rock en Español existed outside of the Santa Cruz County borders.

Gracias, and que viva KZSC!

—GERARDO SANDOVAL

My main show was Mystic Maneuvers, playing progressive, indie, and trance-oriented rock à la Dead Can Dance, Smiths, Peter Gabriel, etc.

I was also a founder of Night of the Living Dead and the Jazztronauts, and I filled in on the Celtic music show on occasion. I was co-music director from 1987–89 and helped bring our album intake from 5 or 10 albums a month to more than 100.

—RENNIE SAUNDERS

I was station manager at KZSC from 2000–02. I was on the panel that hired [broadcast advisor] Michael Bryant, and I spearheaded the Measure 4 initiative to student parliament back in '02 [which provided KZSC with funding for renovations]. It serves me great bittersweet joy to see not only the article in the spring *Review*, but to see all the improvements! The mic for one!

Anyway, I wanted to applaud KZSC 88.1. It was one of the best times of my life thus far.

Keep it left of the dial!

—MARUJA CLENSAY
Kresge '02

Get social

Our 26,000+ Facebook friends share their memories, thoughts, complaints, and compliments with us. Check out some of the best comments from our Facebook page in the past few months.



BEING 100% BANANA SLUG MEANS ...

Being 100 percent Banana Slug means that I'm sufficiently sentimental and nerdy to have traveled to the campus in the fall of 2006, on the 30th anniversary of my first month as an undergraduate, and taken the above photograph. Of all the good fortune I've had in my life—at this point 34 years after graduating—nothing surpasses the transformative experiences I had at UCSC. I don't visit very often anymore, but it was like a dream, in all its messiness, fondly remembered.

— ROB BRINER
Merrill '78

What does Being 100% Banana Slug mean to you? Tell us at: bananaslugs.ucsc.edu



University of California, Santa Cruz



Are you still connected to your first roommate? What life lesson did you take away from the experience?



Tracie Burruel: My first roommate is one of my closest friends. Life lessons . . . time helps you remember the good things. Stay in touch with the ones you like, you may never see them again. If you come home to spaghetti on the ceiling, get new roommates. Look out for each other.



What wisdom did you gain from the wildlife during your time on campus?



Andrea Wagman-Christian: It's what the wildlife did for my son. He is a more whole person . . . between the redwoods, ferns and raccoons, the pine needles underfoot and the sweet smell in the air, I know he has a deeper spirit than if he had stayed in the city for college. He will always long to reproduce that his whole life.



Welcome to all the new Banana Slugs!



Steve Raphael: one of the best days of my life . . . being dropped off at my dorm in august of 1990. a new chapter started . . . and UCSC was just perfect.



What's your best memory of graduation weekend?



Kate Grimes: 1980—Oakes, Patrick and I counting down the days to our wedding, 1982, my Oakes graduation, and going out for chocolate madness at the Saturn Cafe. We came back in 2010 for our son's graduation from Kresge. good times all.



Ryn Schneider: leaving our house on Archer Dr. and walking to take the shuttle to Porter College wearing our cap and gowns as a solid group of friends that stuck together for 4 years through it all. Class of 2004, thanks for the memories!

Like us, and join the fun!

www.facebook.com/ucsantacruz

HOT dates

Founders Celebration 2012

ucsc.edu/founders

October 12, 2012

Founders Celebration 2012 Honorees

FOUNDATION MEDAL

Martin Rees,

England's Astronomer Royal

Intel Corporation cofounder **Gordon Moore** and wife **Betty Moore**, founders of the Gordon and Betty Moore Foundation

FIAT LUX AWARD

George Ow & Gail Michaelis Ow, renowned community philanthropists

ALUMNI ACHIEVEMENT AWARD

Shannon M. Brownlee, writer and essayist

FACULTY RESEARCH LECTURER

Gail Hershatter, UCSC professor and History Department chair

Martin Luther King Jr. Convocation

events.ucsc.edu/mlk

February 6, 2013

Scholarship Benefit Dinner

events.ucsc.edu/sbd

February 23, 2013

Alumni Reunion Weekend 2013

events.ucsc.edu/reunion

April 26–28, 2013

For more events, visit:

events.ucsc.edu

This is UCSC

News and people of note



The night sky 4 billion years from now would look something like this as the Andromeda galaxy begins to collide and merge with the Milky Way. The image is based on dynamical computer modeling of the future collision between the two galaxies.

Milky Way destined for head-on collision with Andromeda galaxy

Our galactic neighbor the Andromeda galaxy is on a collision course with our own Milky Way galaxy, according to new observations by a team of astronomers using the Hubble Space Telescope. Also called M31, the Andromeda galaxy is the closest spiral galaxy to the Milky

Way. Painstaking measurements of its motion show that it will collide with the Milky Way about 4 billion years from now. M31 is now 2.5 million light-years away, but inexorably drifting ever nearer to us under the mutual pull of gravity between the two galaxies.

Puragra Guhathakurta, professor of astronomy and astrophysics at UC Santa Cruz, said astronomers have long speculated that the two galaxies would eventually collide. "Now we've shown that a collision is inevitable," he said.

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UCSC nabs 'young' award

UC Santa Cruz is ranked seventh in the world among the 100 best universities less than 50 years old, according to an analysis by *Times Higher Education*.

UCSC ranked first in the world in the key citation index (30 percent of the final score) that measures the influence of an institution's research.

UCSC and UC Irvine, both founded in 1965, were the only American universities to rank in the top 10. Irvine was fourth. Pohang University of Science and Technology in South Korea was ranked first.

'Personalized' medicine gets closer

The emerging field of "personalized" or "precision" medicine holds great promise in the fight against cancer. If scientists can identify the genetic changes that drive each patient's cancer cells, they can use that information to develop targeted treatments. But achieving this goal will require massive amounts of genomic and clinical data and a sophisticated infrastructure to manage and analyze the data.

UCSC has completed a first step in building this infrastructure, according to UC Santa Cruz bioinformatics expert David Haussler.

Haussler's team has established the Cancer Genomics Hub (CGHub), a large-scale data repository and user portal for the National Cancer Institute's cancer genome research programs. CGHub is providing cancer researchers with efficient access to a large and rapidly growing store of valuable biomedical data.

The project is funded by the National Cancer Institute through a \$10.3 million subcontract with SAIC-Frederick Inc., the prime contractor for the Frederick National Laboratory for Cancer Research.



Grateful Dead Archive Online goes live

In June, the UCSC Library launched the Grateful Dead Archive Online (GDAO) at www.gdao.org.

Several years in the making, GDAO features nearly 25,000 items and more than 50,000 scans selected from the Archive at UC Santa Cruz, documenting the Grateful Dead's 30-year history from 1965–1995.

Students, scholars, and anyone seeking to learn about the Grateful Dead will be able to access digital surrogates of a broad range of historical artifacts including photographs, fanzines, fan-decorated envelopes, and more.

Zimmerman winner to continue legacy

"I plan to continue Gabe Zimmerman's legacy by pursuing issues I'm passionate about," said Yethzell Díaz, a senior with a double major in Latin American and Latino studies and sociology, as she was awarded the first Gabriel Zimmerman Memorial Scholarship.

Zimmerman (Stevenson '02, sociology), who was an aide to U.S. Rep. Gabby Giffords, D-Ariz., was killed in the January 2011 shooting in Tucson that wounded Giffords.

Díaz received the \$2,500 scholarship in an April ceremony at Stevenson that brought together her family and Zimmerman's parents.

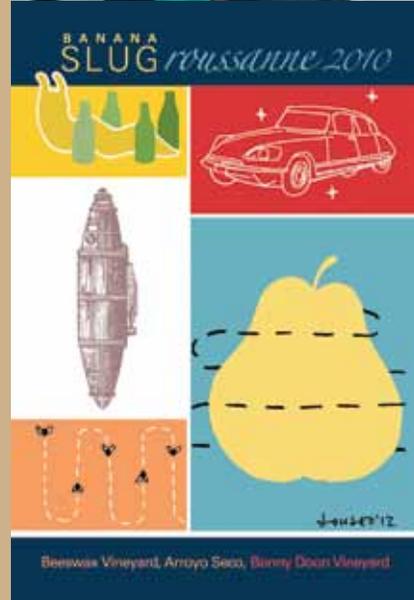


PHOTO: C. WATERS

The new wine label (bottom), created by UCSC art major Louise Leong (top), includes references to taste, style, and the winemaker's car.

Arts Division gets creative

Arts Dean David Yager recently partnered with Bonny Doon Vineyard winemaker and alumnus Randall Grahm (Porter preferred year '74, philosophy, literature, pre-med) to develop specially bottled wines with custom-designed labels by UCSC art students.

Part of the proceeds from these wines will go to supporting UCSC arts scholarships.

Art major Louise Leong created the winning image for the 2010 Banana Slug Roussanne white wine. She is also a staff illustrator for the campus's student newspaper, *City on a Hill Press*.

Leong's brightly colored label includes images of honey bees, plus the winemaker's signature red Citroen automobile.

The partnership is part of renewed efforts by Yager to reconnect with alumni and communities near and far.

History prof pens cover story for *The Nation*

The June 11 issue of *The Nation* magazine featured a cover story by UC Santa Cruz history professor Dana Frank.

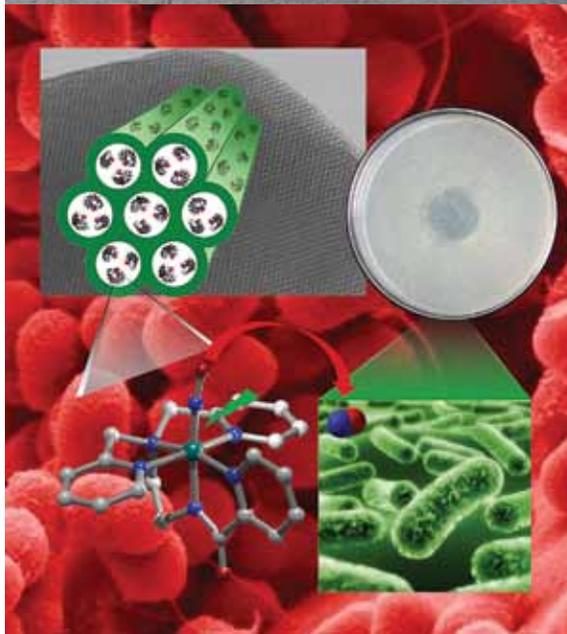
Titled *Honduras: Which Side is the U.S. On?*, the article examines the impact of the 2009 military coup in Honduras and U.S. policy supporting the new regime, describing a corrupt drug war that Frank says has been used as the pretext for increased U.S. militarization of the area.

One of the top academic experts on Honduras in the United States, Frank has been commenting on the volatile situation in the region for media including National Public Radio, the *Chicago Tribune*, and the *Associated Press*.

Drug-resistant bacteria tackled with new method

Researchers at UC Santa Cruz have developed a novel approach for eradicating drug-resistant bacteria from wounds and skin infections, using light to trigger the controlled release of nitric oxide. The UCSC team developed a photoactive compound that releases nitric oxide when exposed to light, and loaded it into a porous, biocompatible material that could be applied as a sprayable powder.

In laboratory tests, the light-triggered nitric oxide treatment eradicated a highly drug-resistant strain of *Acinetobacter baumannii*, a type of gram-negative bacteria that causes hard-to-treat and potentially lethal infections throughout the world, including serious infections in soldiers wounded in Iraq and Afghanistan.



(top): Dana Frank reporting from Honduras.

(middle): This figure shows the porous, biocompatible material (left) containing a photoactive compound (center), which releases nitric oxide to eradicate bacteria (right).

(bottom): Nearly 150 pounds of polystyrene foam waste products were diverted from landfills—and slated to be turned into surfboards—at a recent foam recycling event on campus.

The team led by Pradip Mascharak, professor of chemistry and biochemistry, and graduate student Brandon Heilman published their results in the *Journal of the American Chemical Society*.

Turning trash to slash

In February, UCSC Environmental Health & Safety put on polystyrene foam recycling collection day for the laboratories on Science Hill.

Physical Plant teamed up with a program called Waste to Waves (wastetowaves.org) based out of southern California, which collected all the polystyrene foam products and will use them to make surfboard blanks.

The event was hailed as a major success, with nearly 150 pounds of Styrofoam and other polystyrene products winding up in the recycling containers instead of going to a landfill.

Organizers say the event went so well, they will host follow-ups on a regular basis.

“Campus laboratories have been saving their (foam products), waiting for an opportunity to sustainably recycle the problematic waste,” said April Anstey, Hazardous Waste Manager for UCSC Environmental Health & Safety.

Book details efforts to save seals

In 2009, federal officials monitoring the endangered Hawaiian monk seal population asked marine biologist

Terrie Williams if she could care for an orphaned pup at her lab at UCSC. Williams, a professor of ecology and evolutionary biology, jumped at the opportunity to study one of these rare tropical seals in her marine mammal physiology program.

She had little idea at the time just what it would mean to get involved in the life of Kauai Pup 2, or KP2.

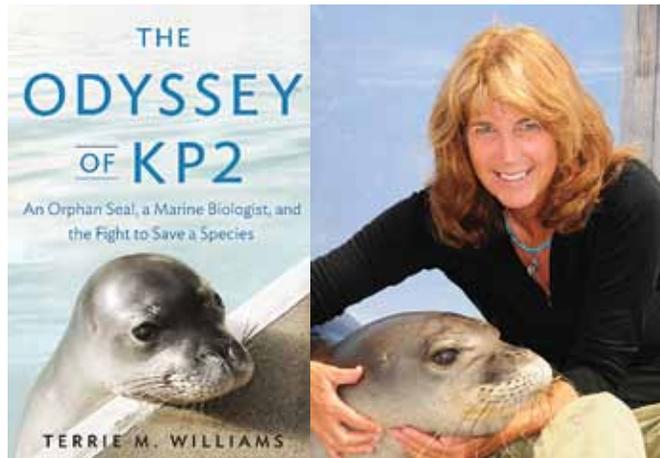
Her new book, *The Odyssey of KP2: An Orphan Seal, a Marine Biologist, and the Fight to Save a Species*, is the story of this boisterous seal pup, the special bond Williams formed with him, and the scientific insights that could help to save an endangered species.

Prison expert testifies on solitary confinement

UC Santa Cruz psychology professor Craig Haney, the nation's leading expert on inmate mental health, was called to testify before a U.S. Senate subcommittee investigating solitary confinement.

For many inmates, Haney told senators, "solitary confinement precipitates a descent into madness." Prisoners in long-term solitary confinement suffer psychological breakdowns from the lack of human contact that can lead to psychosis, mutilations, and suicide, Haney said.

Haney has been named to a National Academy of Science panel of leading scholars and experts on corrections to study the causes and consequences of high rates of incarceration in the United States.



(top): Marine biologist Terrie Williams with KP2 during an eye exam at UCSC. (NMFS Permit #13602-01) (middle): Film and digital media professor B. Ruby Rich on the cover of the *San Francisco Chronicle's* Sunday Datebook arts section. (below): Psychology professor Craig Haney delivers his testimony to a Senate subcommittee.



Since 1986, the Frameline Award has been given every year to a person who has made a major contribution to LGBT representation in film, television, or the media arts.

Past honorees have included film historian and author Vito Russo, Hong Kong director Stanley Kwan, avant-garde lesbian filmmaker Barbara Hammer, producer Christine Vachon, and producer/distributor Marcus Hu.

In memoriam: M. Brewster Smith

M. Brewster Smith, professor emeritus of psychology at UC Santa Cruz, whose research and testimony contributed to the landmark 1954 U.S. Supreme Court decision that banned school segregation, died in August in Santa Cruz. He was 93.

Smith joined UC Santa Cruz as vice chancellor for social sciences in 1970, five years after the campus opened. He served in that capacity until 1975, then continued as a professor of psychology until he retired in 1988. Even after retirement, Smith was an active teacher and researcher.

"Psychology has lost a major contributor and statesman," said longtime UCSC colleague psychology professor Thomas Pettigrew.



Film professor honored at SF LGBT Film Fest

UC Santa Cruz professor of Film and Digital Media B. Ruby Rich received the 2012 Frameline Award at the 36th annual San Francisco International LGBT Film Festival, which ran June 14–24.

MAPPING

The background image is a figure showing the region of sky imaged by the Sloan Digital Sky Survey, centered on the north galactic cap. (below) UCSC Professor of Astronomy Connie Rockosi, a member of the multi-institutional team that built the digital scanning camera for the Sloan Digital Sky Survey.



Astronomy professor Connie Rockosi is a bright light in the Sloan Digital Sky Survey, which aims to discover how our galaxy was born

THE SKY

On Friday nights, while her high school classmates were going to parties, Connie Rockosi enjoyed a different kind of celebration: star parties at her local astronomy club in Cranford, New Jersey.

One night, she saw a star disappear as it passed behind the rings of Saturn and then wink at her through a gap in the rings. Even if she couldn't see the gap directly, the reappearance of the star proved that it was there.

"It was a neat experience," she says. "It's the kind of detective work that we have to do as astronomers, because we can't go out and poke at the things we observe. We have to tell a story based on very limited and indirect observations. This was my first taste of what it's like to do science."

Now, as an astronomy professor at UC Santa Cruz, Rockosi, 40, has the opportunity to practice this kind of deduction on a regular basis. She studies the history and structure of our Milky Way galaxy. But you can't see what the Milky Way looked like 5 or 10 billion years ago through any telescope. You have to piece together the clues and tell a story.

Rockosi has already found enough clues to completely change astronomers' view of the Milky Way. Instead of a relatively placid whirlpool of gas that condensed and formed a spiral of stars, we now know that the Milky Way has been a voracious feeder on smaller, nearby galaxies. Rockosi and her colleagues have identified several streams of stars that are moving at a different velocity from the surrounding stars. These streams are the torn-apart shreds of a devoured galaxy. Though the stars have been assimilated by the Milky Way, their anomalous motion is a relic of the galaxy that they grew up in.

The discovery would not have been possible without the Sloan Digital Sky Survey (SDSS), a huge collaborative project funded by the Alfred P. Sloan Foundation that has assembled a virtual encyclopedia of stars and galaxies.

continued next page

To find a stream of stars moving at the “wrong” velocity, as Rockosi did, you have to look at lots of stars, and you have to survey a vast area, because the Milky Way is all around us. In other words, you need an archive just like the one that SDSS has compiled.

Birth of a survey

It’s no accident that the Sloan Digital Sky Survey came along just in time for Rockosi’s research, because she helped build the equipment in the first place. She began working on the project in 1992, when she was still an undergraduate at Princeton University and the telescope existed only on the drawing board of her professor, James Gunn. She has continued to work for the Sloan survey ever since.

Gunn, the project’s chief scientist, envisioned a new kind of telescope with a huge field of view, which could simultaneously measure the spectra of 640 different stars or galaxies, like a fly with 640 eyes.

The “eyes”—or detectors—that would make or break the project, a new generation of devices, weren’t even available yet. When they finally did arrive, they were beyond finicky. Each one was a precision instrument that differed from all the others, and needed an engineer who knew exactly how that particular detector behaved. That engineer turned out to be Connie Rockosi.

“She started in the spring of her junior year,” Gunn says. “I knew that she was considered the star student of the electrical engineering department. She turned

out to be every bit as good, if not better, than everyone said.”

Her first project was building circuit boards for the detectors, which she did so well that Gunn asked her to keep working on the Sloan camera while she was in graduate school at the University of Chicago. Although it meant putting her dissertation on hold, she shepherded the camera from the drawing board to its installation at Apache Point, New Mexico, in 1998.

As the rest of the telescope came on line, she took on more and more responsibility for running it. By the time Rockosi joined the UC Santa Cruz Astronomy Department in 2004, “she knew more about the nitty-gritty of that telescope than I did,” says Gunn.

Rockosi received a 2006 Packard Fellowship for Science and Engineering—one of the nation’s most prestigious honors for young faculty members.

Technical talent

To her colleagues on the Sloan project, Rockosi’s technical skills became legendary.

“My first time at Apache Point Observatory was in August 1999, just when they were bringing the spectrographs out,” says David Schlegel of Lawrence Berkeley National Laboratory. “Everything was already broken. I kept hearing people say, ‘Connie will be out here soon, she’ll fix it.’ So one day I’m chitchatting at a meal with a person named Connie, who looked about 16 years old.



(top): A map of stars in the outer regions of the Milky Way Galaxy, derived from the SDSS images of the northern sky. (bottom): Apache Point Observatory in the Sacramento Mountains of New Mexico. The Sloan Digital Sky Survey’s 2.5-meter telescope is on the left. White Sands National Monument is visible in the distance, above the telescope. The monitor telescope, used for calibrations, is inside the small dome to the right of center. Optical fibers for spectroscopy are pre-positioned each day in the building on the right (behind the trees). The building in the center rolls on rails to cover the 2.5-meter telescope when it is not in use.

About halfway into the conversation I had this epiphany: Connie! You must be the person everyone is talking about! In my mind she was such a towering figure, I had thought she must be much older.”

It isn't just machines that Rockosi has learned to handle. In the current funding cycle, called Sloan-III, she coordinated the Milky Way part of the survey, which meant managing people.

“She understands politics like no one her age I've ever met,” says Heather Morrison of Case Western Reserve University. “She doesn't have an ego that needs to be stroked or coddled. She understands when people might be getting peeved about something, and she is ahead of you in worrying about that. And she is very protective of the needs of graduate students.”

The increased focus on the Milky Way is itself a major evolution of the Sloan Digital Sky Survey, which was originally intended to answer large-scale cosmological questions about the structure of the universe.

Sloan-I was essentially a survey of galaxies and quasars, which collected data on the stars in our own galaxy only as a byproduct. They were like bugs on the windshield that the telescope had to look through.

But a funny thing happened: the bugs on the windshield turned out to form interesting patterns. The telescope was seeing mostly stars that are in the Milky Way but lie outside the main disk, in the so-called halo.

“The cartoon picture we all learned in graduate school was that the halo was pretty uniform,” Rockosi said.

However, Brian Yanny of Fermilab and Heidi Newberg of Rensselaer Polytechnic Institute found clumps and streams of stars in the halo.

“That fits well with the theory that galaxies form from smaller dwarf galaxies that merge together to form a larger one,” Rockosi says. She is now continuing their work with her own students, trying to de-

termine how common these mergers have been, and how many mergers it takes to form a Milky Way.

“Although we're looking at our own galaxy, we're doing cosmology too,” Rockosi says. “We're trying to understand whether our galaxy fits the picture of how we think galaxies form. We just get to do it up close and personal, on smaller scales.”

Weighing the galaxy

One of the projects Rockosi has in mind for the future sounds deceptively easy: to weigh the galaxy. In fact, nobody quite knows how much mass there is in the Milky Way. To figure that out, you need to study the orbits of stars that are as far away as possible from the center.

“The problem is that the galaxy is not made up just of stars, but mostly out of dark matter,” Rockosi says. “The stars are all concentrated at the center. The most interesting places to look at are far out, and that's where the fewest stars are. That's why you need a big survey and a big view of the sky, to pick out these very rare objects.”

At present, Sloan-III is funded through the summer of 2014. Beyond that, everybody on the team hopes for continued support from the Sloan Foundation, and the science projects for a prospective fourth round have already been selected.

One other change will also take effect. Gunn, Rockosi's mentor, is planning to retire from his position as operations coordinator for the survey. Beginning in 2014, Rockosi will take over his duties.

“I can't imagine Sloan-IV happening without her,” Gunn says.

Dana Mackenzie is a freelance mathematics and science writer based in Santa Cruz. He is a 1997 graduate of the UCSC science communication program.

Private funding changes paradigms

Thanks to the Sloan Digital Sky Survey, astronomers now have a catalogue of images and spectra for hundreds of thousands of stars in the Milky Way, as well as hundreds of thousands of galaxies beyond the Milky Way. It is one of the greatest success stories ever for privately funded science.

About a third of the original \$75 million to get the telescope built, and to organize a team of several hundred people, came from the Alfred P. Sloan Foundation, based in New York City. The rest came from government sources and individual universities. The foundation has continued to support the operation of the telescope through two more cycles, called Sloan-II and Sloan-III.

The value of the Sloan survey, Gunn says, resides not so much in any great discoveries as in the vast amount of information that it places at every astronomer's fingertips.

“It's like building a pyramid,” Gunn says. “Rather than one huge brick, you need thousands of small ones.”

The Sloan Survey has changed the way that astronomy is done, Gunn adds. Astronomers used to spend two nights on the telescope to observe something, he said. (Or not—astronomers would often wait months to get two nights on a telescope, only to have their plans ruined by cloudy weather.)

“Now you learn to do database queries,” Gunn says. “The whole paradigm has changed because of the Sloan Survey.”

Classrooms without walls



Science Communications Program instructor Martha Mendoza teaches the art of observation using UCSC's natural landscape.

“Do you have the flashlight?”

Martha Mendoza asked as she made her way through the forest, eucalyptus leaves crackling beneath her shoes. Her destination, a damp cave, was not far from the road.

Mendoza (Kresge '89, journalism/education), a Pulitzer Prize-winning reporter for the Associated Press, teaches an investigative reporting class at UC Santa Cruz for graduate students in the Science Communication Program. | Most lessons take place in a classroom. | “But there comes a day in our semester when I tell them, ‘Tomorrow, wear sturdy boots and be prepared to get muddy.’ Usually they are mystified and excited,”



From the grasses
of the meadows
to the tips of
towering redwoods,
the UCSC campus
is a 'living laboratory' and
a natural lecture hall

Mendoza said. | For professors across the disciplines, the redwood-lined, rugged, and occasionally spooky campus is a vast resource. | Taking advantage of the university's extremely unusual location, teachers are not afraid to have students cross creeks, dig through sticky mud, and get their hands—not

to mention their pant legs—dirty. | The setting and learning are inextricably linked. At the Center for Agroecology & Sustainable Food Systems, apprentices learn organic gardening and farming. At the UCSC Arboretum, which houses the largest collection of Australian and South African plants outside their native

countries, students volunteer and pursue internships. Over the years, student interns have conducted archaeological excavations within the Cowell Limeworks Historic District.

continued next page



PHOTO: CAROLYN LAGATTUTA

Alex Chacon, 19 (College Nine '15, plant science), working at the Forest Ecology Research Plot (FERP), part of the UCSC Campus Natural Reserve

The land also inspires reflection and creativity; when College Eight lecturer Candace Calsoyas teaches freshman seminars on “Environment and Society,” she leads students across the wooded campus while they walk, talk, and learn—a model that dates back to Aristotle, who founded the peripatetic school.

“Though UCSC is exceptionally beautiful with its mountain perch, majestic redwoods, and textured seascape below, still every landscape and cityscape suits the ‘walk and talk,’” Calsoyas said. “Unlike being in the classroom, students don’t feel put on the spot and are more liberated by being outside.”

Over the years, UCSC’s unique location has informed, enriched, and expanded the curriculum while allowing students to test their hunches and perfect their skills outdoors.

Spelunking with a skilled reporter

“Oh, look,” Martha Mendoza said as she paused in a clearing. “It’s a deer. And oh, there’s a fawn. And another! Last time we were out here, a lizard ran right over a student’s foot. It scared her.”

Mendoza’s experiential slogs are meant to help students learn to capture telling details on paper, even when they find themselves in unnerving places.

“Part of the lesson is being in an uncomfortable situation and still being observant,” she said.

Gingerly, Mendoza lowered herself into the throat of the limestone cave, using a sturdy ladder. There were no sounds but Mendoza’s breathing, the “droop-droop-droop” of an unseen water source, and the “smack” of her sunglasses, which fell off her face and landed in some dark corner of the cave.

Several of the campus caves provide habitat for rare cave invertebrates, some of which are believed to occur only on campus. These species are likely sensitive to disturbance, and educational users are informed about ways to minimize impacts while taking advantage of the opportunity to teach amidst and about these unique and rare organisms.

“A reporter has to be out of the comfort zone,” Mendoza said as she turned on her flashlight, which only poked a hole in the dark. “If I’m in Haiti, reporting on exploratory drilling at a gold mine, and there’s all this noise and people walking by with weapons, I have to really settle

myself and say, ‘What are these people wearing, and is it hot or cold out? What’s going on?’ Even if I had beautiful photos and video, it’s just not the same as getting it down on paper in the moment.”

Insects, chaparral, and scientific processes

Erika Zavaleta, associate professor of environmental studies, uses outdoor opportunities in every course she teaches—even 350-person lecture classes.

“UCSC has a huge diversity of ecosystems right on campus: mixed conifer forest, chaparral, grassland, redwood forest, riparian forest, streams, and of course agricultural lands,” she said. “Where I grew up in the Northeast you would need to drive for hours to cross through this many kinds of ecosystems.”

Zavaleta takes an inquiry-based approach, giving students the chance to explore an area and wrestle with such questions as, “Are there more kinds of insects in the forest or the chaparral?”

Students haul field guides, compasses, transect tapes, and nets into the field. Soon they’ve made graphs and drawn up posters to present to the class.

“I hear them talk about what an exciting thing it is to think and problem-solve for themselves, and get out and actually do science rather than just hearing about it,” Zavaleta said.

“Just the simple experience of looking in the right places for salamanders and finding them, or of trying to figure out why the forest ends and the grassland starts right at a particular place, lights up so many students,” Zavaleta continued. “They connect places with intellectual ideas and practical skills.”

Stalking the elusive microphage

The students of Grant Hartzog, professor of molecular, cell, and developmental (MCD) biology, take to the forest in search of bacteriophages, viruses that attack bacteria.

So many exist in nature that they are thought to kill off a large proportion of bacteria on planet Earth every day. Still, students must prowl around in search of them.

First they isolate the virus from the soil, photograph it with help from an electron microscope, and extract its DNA. Then a laboratory takes a close look at the DNA sequence.

When it comes to phage hunting and genetic documentation, “you don’t need an abundance of technical skills to be successful right away,” Hartzog said. “You need to be enthusiastic, curious, and willing to learn.”

The result is original findings.

“Every student is doing the same kind of technical manipulations, but each is collecting a unique virus,” Hartzog said. “This means that although these beginning students are working together on similar projects, they are doing authentic research and making a real contribution. They take a project and have total ownership of it.”

They even get to name the newly discovered phages. So far, undergraduates have dubbed them Darth, FlowerChild, Haze, Jeffabunny, TreeBaby, Zigzag, Rage, Lugosi, DomoArigato, and Firecracker, among other names.

One of Hartzog’s students, Daniel McKernan (Oakes ’14, human biology), quickly learned that some areas on campus are better than others for finding phages.

“It is best to collect soil samples in damper shaded areas,” he said. “I collected about 15 soil samples here on campus at UCSC in the dirtiest, muddiest, smelliest areas I could find.

“The search was fun,” McKernan said. “It took hiking in creek beds and digging through mud. It was interesting to go out in search of stagnant, wet soil.”

The next step was examining the phage using an electron microscope.

“If the phage that I have isolated is novel, meaning that it has never before been discovered, I think I will name it after my dog, Broseph,” McKernan said.

Reading a forest, leaf by leaf

In late summer, five student interns ventured out into the UCSC Campus Natural Reserve, 400 acres of protected natural lands on the 2,000-acre campus.

They were heading out toward the 15-acre Forest Ecology Research Plot (FERP), a research and teaching site established by environmental studies professor Greg Gilbert five years ago. There, students and scientists have catalogued and tagged more than 10,000 individual plants, including Douglas-fir, coast live oak, Shreve oak, and tanoak.

These students—mostly undergrads, but also a couple of newly minted UCSC graduates—are all paid interns, advancing science by helping

with the FERP research project, spending eight hours a day, five days a week, in the forest.

“There’s nothing else like this in the UC system,” said Gage Dayton, director of UCSC Natural Reserves. “You can learn a lot in the lecture hall or lab. But if you want to get a feel for what poison oak looks like, bang a hammer on a rock, dig a pitfall to trap and catch an animal, measure light penetration in a real forest, and capture and analyze water from a creek, you just can’t get that in the classroom or a laboratory. And this is right outside our door.”

Getting students out to natural areas would have been logistically difficult and expensive “if you had to find buses for all of them,” Dayton said. “But this is five minutes from the door of traditional classrooms. All students should be getting out here and using it.”

Along the way, the students get an intimate knowledge of how science works and best practices in research. They also have fun, making deliberately geeky jokes about “liking lichens” and sampling huckleberries straight off the vine.

Cave care

UCSC’s caves are sensitive habitats that require careful stewardship by all.

Appropriate use of the campus caves is limited to research and occasional guided visits for university classes, during which students are informed about ways to minimize impacts while taking advantage of the opportunity to learn about the area’s unique geology and its rare subterranean organisms, according to Alex Jones, Campus Natural Reserve steward.

Jones urges visitors to be sensitive to flora and fauna throughout the campus’s natural areas, including its caves.

“Caves on and around the UCSC campus provide habitat for rare cave invertebrates, including the Dollof cave spider and the Empire Cave pseudoscorpion, which are believed to occur only within these caves,” Jones said. “These species and the caves’ geologic features are vulnerable to disturbances caused by recreational use. Substantial degradation of cave features has been documented within the past few decades since their discovery.”

The huckleberries are of the same genus as blueberries, explained Alex Chacon, 19 (College Nine ’15, plant science). “They’re the worst plants to measure because of how bushy they are and how many stems they have.”

They insist that a visitor sniff a sprig of spicy wild mint and feel the contours of asmooth hazelnut leaf. They express sympathy for a western fence lizard that someone, perhaps a speeding bicyclist, has squished on the trail, and marvel at a strewn-about deer carcass.

In the process, they grow their scientific skills hour by hour, day by day.

“When you work on someone else’s project you start seeing how scientists think,” said Kathlyn Franco, 22 (Cowell ’12, environmental studies), who wants to be a mammalogist.

“You start seeing how they find and fix mistakes and how to find a better way,” Franco continued. “You start building all these ways of seeing and doing. Gage [Dayton] will often answer my questions with questions: ‘What are the drawbacks and benefits of doing this?’”

To trek with these bright students through the reserves, past thick stands of chaparral, Douglas-fir, and madrones with peeling bark, is to see the campus landscape in a completely different light. At last they arrived at the FERP, where every single shrub and tree of a certain height and diameter is being studied.

Considering this whole place is a living laboratory, it makes sense that the students suddenly stopped and put on what appeared to be lab coats. Actually, they were lightweight all-white Tyvek suits, designed to protect them from one of the plants they’re studying—native poison oak.

“Poison oak is very interesting,” observed Catherine Scheid, 20 (Cowell ’14, environmental studies), who has no fear of the nasty stuff. She may be immune. “It takes different forms. It can grow like a shrub. Sometimes it looks like a little tree.”

The students were accompanied by Alex Jones, UCSC Campus Natural Reserve steward. Student interns spend so much time out here with him that they’ve started to know the forest intimately.

“A Cooper’s Hawk nested here in the spring,” Jones observed. “The female used to dive-bomb the interns. Now they’re at the stage when we can hear three chicks begging for food.”

Contact Dan White at dwhite1@ucsc.edu.

01:25 AM

An ambitious program at UCSC combines practical training in **information technology** with student-driven **social justice** ventures

BUILDING BRIDGES OVER THE DIGITAL DIVIDE

Guadalupe Guerrero picks raspberries for a living in the fields of Watsonville. Until recently, she could not use a computer. | For many of us who do use computers, our digital lives have become almost as vivid and important as our real-world ones. In our intricately connected society, being shut out from the online world is greatly limiting, and the space between those with access and without is a growing divide. | “Technology has been revolutionary in every aspect of our lives,” UCSC sociology professor Paul Lubeck says. “Economic opportunity is increasingly dependent on using these technologies.”



Guerrero has now leaped the divide. Today she has a website for her burgeoning bakery side business. She uses YouTube to learn new baking techniques and Facebook to post photos of her cakes and communicate with family in Mexico. She checks her daughter's grades online.

"She's comfortable with the computer now," says daughter Ebelin Mata, 14, a Watsonville High School sophomore.

Ebelin and Guerrero are both clients of the UCSC Global Information Internship Program (GIIP), a unique undergraduate social justice venture: GIIP guided Guerrero into the digital world, and they recently organized a technology camp on the UCSC campus, where Ebelin and other Watsonville-area Latino high school students learned to develop mobile apps and navigate the ins and outs of college applications.

Tech consultants to nonprofits

GIIP's project in Watsonville is just one of many the program has developed around the world. Nonprofit organizations have limited resources and often

can't take advantage of existing technology that could greatly improve their efficiency. GIIP interns identify causes close to their hearts—environmental, educational, or otherwise—and seek out nonprofit partners in those areas that need their information and communications technology services. The interns essentially act as tech consultants to their nonprofit partners, be they in Watsonville or Nigeria.

"It's an amazing thing to take someone in Africa where books are unknown, and put them on the Internet where they can see all the libraries available to them," says Lubeck, GIIP founder and director.

GIIP interns help partner nonprofits wherever technology would improve operations: interns might teach courses on basic computer programming, set up databases and websites for small organizations, or create digital videos.

Meanwhile, UCSC undergraduates who join GIIP gain skills they cannot attain in a lecture hall, such as "the ability to analyze problems facing a community and address them," says GIIP Fellow Yethzell Díaz (College Nine '12, Latin American and Latino studies/sociology).

"People come out of GIIP knowing how to run a nonprofit—it's the equivalent of two to three years' experience of high-level nonprofit work," says GIIP Global Advisory Board member Mark Headley (Stevenson '83, politics and economics). "It's very much in the founding spirit of UCSC: students are given a certain amount of freedom to explore."

Headley has been a long-time supporter of what he calls the "unique and inspiring GIIP experience"; he recently made a gift to the program that will establish the Dorothy E. Everett Endowed Chair and fulfill other program needs.

Field experiences in Ethiopia

When then-GIIP intern Jyeshtha Wren (College Ten '11, intensive sociology) arrived in Ethiopia to work with grassroots reproductive health organizations, her partners on the ground were surprised to see a young woman traveling across the world alone. They wondered how her husband (for surely a woman at the ripe old age of 25 would be married) could possibly allow this.

Wren went with a keen interest in learning about gender-based violence. The



(Left to right): Nadya Tannous in the Balkans working on peace and conflict resolution with Serbian orphans; Dmitry Kogen working with children in India; Katie Roper doing film work in Kenya; Shelley McCoy doing women's health work in Nigeria.

girls in one community she assisted had called for an office of women's affairs to be added to their local police station, where records of violations against women could be kept. With the handwritten forms the station was using, it was impossible to create a database; Wren developed a Microsoft Access electronic form for reporting violations and trained staff to use the program.

Wren saw firsthand the ingenuity required to go against practices ingrained in culture. The director of one organization working to eradicate female genital mutilation deployed many strategies simultaneously, recognizing that change would only come when the tides of public opinion shifted. He pushed for schools to open in places where there were none, since schools could teach reproductive health and messages of non-violence. He promoted public weddings of brides who were "uncut," showing that brides who hadn't been mutilated were still marriageable.

Wren's field experience led to her decision to go beyond research and policy work and become a midwife. Now a UC San Francisco Masters Entry Program in Nursing student, Wren plans to create a birth and wellness center incorporating a pharmacy and shop that will make it self-sustaining, not dependent

on grants for funding. It is, she concedes, a "huge vision," but GIIP has given her the confidence—and entrepreneurial acumen—to aim high.

The basics of GIIP

In 1998, when Professor Lubeck launched GIIP as an informal working group to explore how technology could be used for public good, he had no inkling how that small group would grow.

Now GIIP is an established curriculum anchored by a three-course series, during which interns come up with an idea, write a business plan, learn to design and implement a project, and apply for grant funding. They take technological workshops tailored to their project needs and skill levels. Interns who do well during their first year are invited to become Fellows, tasked with managing GIIP, teaching technology workshops, handling program publicity, and doing anything else needed. "What makes GIIP work is Fellows have power," Lubeck says.

Even after launching into the world, some alumni are later compelled to return as Executive Fellows, overseeing operations. Katie Roper (Stevenson '07, environmental studies and economics), credits GIIP as her "first taste of having total responsibility for a

project that was ambitious and meaningful." She is now an Executive Fellow and GIIP's managing director.

With so much demanded of interns, Lubeck realized formal recognition was necessary to credit those who had taken on especially time-consuming enterprises; thus was the "intensive sociology" (a.k.a. Global Information and Social Enterprise Studies [GISES]) major/minor born, with support from the sociology department. GISES majors complete an honors-quality information technology project and document in detail their experiences. Fifteen GISES majors and minors graduated last year.

Flexibility in the real world

The city of Cairo, Egypt, has no formal recycling program. Instead, there are "garbage villages," whole communities that make their living from selling the recyclables they find among the garbage of Cairo residents. Men from the garbage villages roam around the city collecting trash and bring it back to the village, where women and children sort through the piles, picking valuables from rotting organic waste.

One woman, Lydia Marcos, started an NGO to help a small garbage village bring in infrastructure like water pipes. Marcos got to chatting with her



(left to right): Rebecca Wage in Washington, D.C., working for the Center for International Policy; Lucas Healy in Ghana working on mobile apps for voter rights; Jyesha Wren with the Dukum Town Police Department in Ethiopia.

friend, GIIP Fellow Sarah Shokair (College Nine '13, environmental studies/Earth sciences), one day. Shokair had just learned to create donor databases using Excel, exactly what Marcos needed. They decided Shokair would set up databases, donor newsletters, and a web presence for Marcos's organization, and put together a training packet so interns could take over later.

Shokair researched intensively for several months; meanwhile, things were suddenly moving for the garbage village: the government finally approved a water pipe into the village. Residents were too busy to provide updates for the newsletter and website. Shokair suggested she obtain a computer for the village so they could upload updates themselves. There again she was stymied, as there were no public facilities in which to place a computer.

The ability to roll with punches is impossible to learn in class. After investing much energy into her project, Shokair recognized perhaps this was not the ideal moment to pursue it. She moved on to other work, but wants to resume

“GIIP is a lot of work, but as with all the best things in life, you get out of it what you put into it.”

— GIIP Fellows coordinator
THOMAS GELDER

her venture on a smaller scale when things settle. When she told Roper about the experience, Roper assured her it was OK: things change all the time when you go into the field, and you have to be flexible.

Tech camp

At the recent technology camp on campus, Ebelin and the other high school students toured UCSC on a sunny August afternoon. GIIP Fellows coordinator Thomas Gelder, a senior GISES major (College Ten), brings them to a high point overlooking athletic facilities, a soccer field and, further in the distance, the Pacific Ocean. The students stop for a minute and

quietly gaze at the water. Today they will walk through forested paths, the main library, and other UCSC landmarks while Díaz and Gelder cheerfully lay out the world available to them if they become UCSC undergraduates themselves.

Later that day, the students will start a week's course on mobile app development. They'll also learn how to apply and pay for college, and the benefits of federal student aid, something Gelder says he didn't discover until well into his college career. He doesn't want them to make the same mistake.

Gelder is tying the two camp themes together by teaching the students to build a “personalized college mentor” app that will keep track of their college application process, reminding them of important details such as deadlines and the extra-curricular activities they should list in their applications. Many of these students will be the first in their family to attend college; perhaps some will go into technology fields, where Latinos are underrepresented. Gelder wants to give them whatever advantages he can.

“GIIP is a lot of work, but as with all the best things in life, you get out of it what you put into it,” Gelder says.

Young people at university are exposed to giant, insurmountable problems, Gelder says, and they can feel helpless to make a difference beyond “liking” something on Facebook.”

GIIP puts many more powerful tools than Facebook into the hands of those who truly yearn to better the world.

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.





PHOTO: CAROLYN LAGATTUTA

Kevin “Skippy” Givens: Good sport

Search as you may, you won't find a hulking sports stadium at UCSC, nor will you find a football team hiding out behind a redwood.

But you will find plenty of sporting spirit, and a student community built around athletic activities. Since 1988, Kevin “Skippy” Givens, 58, has been a key player in the UCSC athletics arena.

He's been the intramural sports supervisor on campus for the past 25 years, and the sports club supervisor for the past 12 years. During that time, he introduced “fut-sal”—indoor soccer—to the intramural sports program, as well as self-officiated sports such as co-ed volleyball.

The point of these sports clubs and teams is not to rack up the big wins. The clubs are designed to enhance the student experience on campus.

“Most notably they help create communities,” Givens said. “Secondly, they create profound opportunities for

leadership. Thirdly, these programs create lifelong friendships.

“A common theme in the UCSC sports clubs is the grassroots, student-initiated love of a particular sport,” Givens said.

Students come from every educational discipline. “I try to inspire the student leaders of these teams to be inclusive in nature,” he said. “There have been so many interests and academic successes among our team members.”

For example, he points with pride to students such as Brooke Miller, a Division I volleyball athlete at UC Berkeley who came to UCSC to work on her Ph.D. in biology. A friend in the Biology Department convinced her to try out cycle racing and join the UCSC cycling team. She ended up winning the Collegiate National Championship shortly after that.

“I haven't tracked the graduation rates for sports club athletes, but it's remarkably high,” Givens continued. “Many of my students have been Regents Scholars and straight-A students. They owed much of their focus and academic enthusiasm to the balance and quality of life that sports brought them.”

Givens came to UCSC by way of Sonoma State University, where he

started the intramural, sports club, and recreation program as a student back in the 1980s.

“I had no idea what I was doing, but I had the guts to try it, and as I made mistakes, I learned from them and moved the programs forward,” he said. “One of the things I did toward the end of my tenure at SSU was to come and visit UCSC and observe how a ‘real’ program was run. I knew many of the OPERS folks from attending the big annual Frisbee tournaments that would happen during summer on the East Field. That connection paid off handsomely.”

Givens has also been influential off campus, having sparked a strong interest in freestyle Frisbee in Santa Cruz County. Givens, who held the course record of 12 under par at DeLaveaga Disc Golf Course for about eight years back in the early 1990s, and has won 14 world titles in freestyle, calls Santa Cruz “a slice of Frisbee heaven. I love helping to put on the annual ultimate tournaments, I love playing the local disc golf courses, and my favorite is still freestyling on the beaches with a firm wind in my face.”

—by Dan White

Contact Dan White at dwhite1@ucsc.edu.



Gail Hershatter: Bringing women's stories to light

Gail Hershatter built a career by talking to people left out of history. She has traveled to rural parts of China uncovering stories that would otherwise have been lost. She listened to the tales of 8-year-old girls sold as child brides, and the stories of women who survived famine and became political activists during the Communist Revolution.

Hershatter grew up in the 1950s, during a time when the United States had an "oversimplified view of China," she said. Like many in her generation, she learned about the country from news reports about the U.S. table tennis team's visit to China and Nixon's attempts at diplomacy. She became curious about Asia during the turbulent 1960s.

"I'm of the generation very much influenced by the Vietnam War," said Hershatter, who is a professor of history and History Department chair. "The other major influence on me was the second wave of feminism in the United States."

In 1979, Hershatter moved to China for two years to work on her Ph.D. dissertation for Stanford, about workers in the north China city of Tianjin. She became part of the first generation of U.S.-based scholars allowed to do field research in China. A subsequent project led her to uncover details about prostitutes in Shanghai. Her book, *Dangerous Pleasures*, was published in

1997 and later translated into Chinese. She brought a suppressed world to life by drawing from an unusual variety of sources—from gossip columns, guidebooks, and interviews to medical records.

Her methods sometimes resemble those of an anthropologist rather than a typical historian. Her grass-roots approach to recovering oral histories shows a side of China that has seldom been explored by scholars before. She is one of the few Western women to travel to some of these far-flung areas. She teamed up with her research partner, Gao Xiaoxian, and spent more than 10 years making her way through the rural Shaanxi province. She spoke to 72 elderly women—and a few surviving men—about their lives before and after the Revolution.

Last year, she published *The Gender of Memory: Rural Women and China's Collective Past* (University of California Press, 2011). The book is filled with stories of the poor, rural women who were left out of history books. Many of these women never had an opportunity to share their life stories before.

"My work is really looking at the connections between 'Big History' and the daily life and local consciousness of these rural women," Hershatter said.

Hershatter's groundbreaking work has helped to influence some Chinese historians

and the way they conduct their research. More academics in Asia are starting to write down the oral history of underrepresented people before it's lost for good.

"If you look at my work and the work by historians in China, we're having diverse but overlapping conversations," said Hershatter.

Hershatter holds the title of distinguished professor, having climbed to the top of the ladder in academia with her impressive teaching and publishing record, said Bill Ladusaw, dean of humanities, who describes her as "one of the most distinguished faculty members on campus" and one of the world's most expert scholars on Chinese women's history.

Last year, Hershatter served as president of the Association for Asian Studies. Her recognition in the fields of history and women's studies helps boost UCSC's academic and teaching reputation, said Ladusaw.

Hershatter has been selected to give the Faculty Research Lecture, the top honor bestowed by the UCSC Academic Senate. She will be honored at the Founders Day gala dinner in October and will deliver her talk on February 12, 2013.

—by Amy Ettinger

Amy Ettinger is a freelance writer based in Santa Cruz.

Alumni Notes

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COWELL COLLEGE

'69 **Patricia ZYLIUS** recently self-published *Dear Sweeties: Tom Cuthbertson on His Dance with Cancer*. The book is a collection of email letters that **Tom CUTHBERTSON** (Cowell '67) wrote about his life with pancreatic cancer, from diagnosis, through following an alternative treatment that seemed promising for some time, and ending with his preparation for death. The book includes a wonderful introduction by **Paul SCHOELLHAMER** ('69), a small selection of the 2,200 replies Tom received, a few short stories about Tom at different times in his life, and a final letter from his wife about his passing.

'76 **David KAHN** recently joined Renne Sloan Holtzman Sakai LLP in San Francisco as a partner, where he will continue to practice government and land use law after 32 years in the public sector. He said he is looking forward to the new challenges and rewards of private vs. public practice. His sailboat at South Beach Harbor will be a place to stay after a long day at the office.

'77 **Ron BENSON**, AIA, NCARB, LEED AP, was hired in August by HGA Architects and Engineers as senior associate in its Los Angeles office. A licensed senior project manager with more than 25 years of international and domestic experience, Benson joined the firm's higher education and healthcare practice groups.

'77 **Bob LOMBARDI** is a motorcycle safety instructor at a Bay Area Harley Davidson dealer. He continues to be active in the Modesto Tea Party, Madison Society, and other Bill of Rights support organizations.

'78 **Jean ROSS** recently moved to New York to take a position as the U.S. Program Officer for Transparent, Effective, and Accountable Government at the Ford Foundation. She looks forward to linking up with other Slugs-in-exile in the big city.

Mark SCHACK is a longtime middle-school math teacher who is beginning his third year as president of the California Teachers Association. With an empty nest at home, he is continuing his journey into the mandolin world, playing with bluegrass musicians in the area.

'79 **Kathleen (Kathy) ADAMS** was selected by the Princeton Review as one of the 300 "Best Professors" teaching at universities and colleges in the United States, Canada, and England. She is appreciative of her undergraduate UCSC mentors for their modeling of great teaching. She is a professor of sociocultural anthropology and Southeast Asian studies at Loyola University Chicago.

'92 **Ethan O. BRYSON, MD**, has released his new book *Addicted Healers: 5 Key Signs Your Healthcare Professional May Be Drug Impaired* from New Horizon Press. He is an award-winning associate professor in the departments of anesthesia and psychiatry at the Mount Sinai School of Medicine in New York. He and his family live in Bridgewater, N.J.

'95 **Neal ROGERS** is editor-in-chief of *Velo* magazine, the leading cycling magazine in the U.S. An interest in all things rock 'n' roll led Neal into music journalism while attending UCSC. After several post-grad years spent waiting tables, surfing, and mountain biking, Neal moved to San Francisco where he worked stints as a bike messenger and at a software startup. He moved to Colorado in 2001, taking an editorial internship at *VeloNews*, and never left. When not traveling the world covering races, Neal can be found riding his bike, skiing, cooking, or attending a concert. Follow him on Twitter at @nealrogers.

'92 **David SCHROEDER**, **Toby NEGRIN** ('96), and **Jeff MORSMAN** (Porter) celebrated their 20th college anniversary by

climbing and skiing Mount St. Helens in May. **Greg MCPHEE** (Crown '93) was also on the trip.

'99 **Amber Strong MAKAIU** won the 2011 Teacher Tolerance Award for excellence in Culturally Responsible Teaching. She teaches at Kailua High School and in April gave a talk at a UCSC Admissions event in Honolulu for prospective students.

STEVENSON COLLEGE

'71 **Charles STREETMAN** starred in *It Ain't Nothin' But the Blues* on the Main Stage at Portland Center Stage in Portland, Ore., in May and June.

'87 **Lance BERNARD** recently left Reno (for the final time) and moved to Cloverdale, which he enjoys immensely.

CROWN COLLEGE

'69 **Barbara THORNTON** got an MCP at Yale, finishing at MIT. In 1977, she married Ron Alex, an architect. She worked with the state of Massachusetts to implement deinstitutionalization, escaped for six months to Mexico and South America, returned to work with local government and public policy issues and have children, Rucker and Byron. She returned to school and in 1995 received an MBA from HBS. She worked in investment banking, management consulting and in 1997 started the e-commerce company, www.DesignerShoes.com, where she is now employed, while plotting a next career in public policy, then science fiction writing.

'77 **Michael PAPARIAN** recently started his sixth year as executive director of the California Pollution Control Financing Authority in the State Treasurer's Office. He is implementing new programs to help small businesses get financing, especially those seeking to assist or implement strategies for energy efficiency and environmental improvement.

'85 **Maggie SHIFFRAR** was appointed dean of the Graduate

School at Rutgers University, Newark, in April. ShiffRAR joined the psychology department at Rutgers-Newark in 1991.

'93 **Greg MCPHEE** helped **Jeff MORSMAN** (Porter '92), **David SCHROEDER** (Cowell '92), and **Toby NEGRIN** (Cowell '96), celebrate their 20th college anniversary by climbing and skiing Mt. St. Helens together in May.

'94 **Terran Elizabeth McGinnis (née ROSENBERG)** is the education supervisor at Dolphin Connection in the Florida Keys. She was formerly the education director at Marineland in St. Augustine, Fla., which is the world's oldest oceanarium. She co-authored a book about the history of that facility that was published by Arcadia Publishing in May 2011.

'11 **Forrest PHILLIPS** graduated as a film and digital media major with honors and is associate producer on the cultural/political radio show *In Deep* with Angie Coiro.

MERRILL COLLEGE

'73 **Bob CAREY** received the 2012 Presidential Jefferson Award for public service. He is founder and executive director of Sarah's Kitchen, an interfaith group that runs five soup kitchens in St. Lucie County, Fla., where the unemployment rate has been as high as 16 percent. Bob coordinates over 600 volunteers who served more than 38,000 hot meals last year. Sarah's Kitchen does not have any paid staff. Everyone who serves is a volunteer, including Bob.

'86 **Kris PERRY** was appointed executive director of the First Five Years Fund in August. Perry, a nationally recognized early childhood advocate, has been instrumental in driving effective early learning policy at local, state, and national levels. As executive director, Perry will oversee policy and communication efforts nationwide for the First Five

Years Fund, one of the country's leading organizations focused on improving federal policy regarding quality birth-to-5 education programs for at-risk children.

'91 **Carl ZIMRING** is associate professor of Sustainability Studies at the Pratt Institute in Brooklyn, where he talks trash and recycles a lot of material. His most recent publication is the two-volume *Encyclopedia of Consumption and Waste: The Social Science of Garbage* (SAGE, 2012).

PORTER COLLEGE

'72 **John COFFEY** was awarded a Fellowship in the Academy of General Dentistry. The award is presented to dentists who seek to provide the highest quality of dental care by remaining current in their profession. He completed 500 hours of continuing dental education within three years and passed a comprehensive exam in order to earn the honor. He has practiced dentistry in Santa Cruz since 1982 after earning his dental degree at UCLA.

'75 **Lori HIGA** is development director for Asian Neighborhood Design, a SoMa-based architecture, community planning, green construction, and solar PV installation training non-profit in San Francisco. **Gregory MEHRTEN** played the part of Pandarus in the Wooster Group/Royal Shakespeare Company co-production of *Troilus and Cressida*, which started August 3 at the Swan Theatre in Stratford-upon-Avon.

'77 **Laura MARELLO** published *The Tenants of the Hotel Biron*, a novel that takes the historical facts of a string of famous artists living in the Hotel Biron in Paris at the turn of the 20th century to create a fictional universe.

'86 **Mary LOCKWOOD** was an honored guest of the 11th gathering of the International Indigenous Grandmother's Council held in mid-July, in Lame Deer, Mont. Hosted by Cheyenne-Arapaho Grandmother Margret Behan in the Cheyenne Reservation with the theme of healing intergenerational trauma, the gathering was an intensive effort of prayer and ceremony. Near the site of Custer's Last Stand, the historic battle of Little Big Horn, the intention of healing historic trauma was indeed appropriate.

'88 **Carma SPENCE** announced the publication of her fourth book, *57 Secrets for Branding Yourself Online*, which is due out from Logical Expressions Inc. this fall. An author and speaker, she is an award-winning editor with more than 20 years of experience in marketing, public relations, and science communication. She also has written two cookbooks and a book about homepage design.

'92 **Andrew FENTON**, MD, was elected president of the California chapter of the American College of Emergency Physicians (ACEP). Representing nearly 3,000 physicians, California ACEP advocates for ER doctors and the rights of all patients to emergency health care 24/7. Andrew works in Napa and lives in Sonoma with his wife, Elizabeth, and daughter, Lucy. The family is also expecting twin sons in September.

'92 **Jeff MORSMAN**, **David SCHROEDER** (Cowell '92), and **Toby NEGRIN** (Cowell '96), celebrated their 20th college anniversary by climbing and skiing Mt. St. Helens in May. **Greg MCPHEE** (Crown '93) was also on the trip.

'00 **Nick SALICK** operates the Salick Family Law Group in Beverly Hills. He attended the University of La Verne Law School, graduated on the Dean's List in 2004, and passed the California bar exam on the first try, obtaining his law license in 2005. After working at four law firms, he started his own practice and has more than 37 clients and is considered a "Rising Star Super Lawyer," which, he noted, is quite a recognition considering his age (33) and his years in practice (6). His sister, **Adrienne SALICK**, graduated from Stevenson College ('92).

'01 **Joe DEPAGE** is a reformed man. **Forest F. WHITE** has published a book of poetry, *Gospels of Rage*, which will benefit the Combat Paper Project, an art program for veterans. He lives in Verona, N.J., and is married to the artist Ashli Sisk. He writes software manuals and leads training courses in his day job.

'05 **Angilee WRIGHT**, J.D., is a patent attorney at the intellectual property law firm of Thorpe North & Western in Salt Lake City, UT. She moonlights as a court-rostered domestic mediator, and teaches ski lessons to individuals with special needs. She is also a candidate

in phase II testing to be an FBI Special Agent. The professors and classes in UCSC's Legal Studies Department and Psychology Department, as well as the year she spent in Perth, Australia (through UCSC's EAP), inspired her life journey. She looks forward to returning to Santa Cruz to visit her family's local farm.

KRESGE COLLEGE

'79 **Julie HUTCHINSON** earned a BA in theater and is now senior vice president of casting at Universal Pictures. She lives in Los Angeles with her 11-year-old daughter.

'84 **William BERGER** was featured in the documentary *Wagner's Dream*. The film tracks the staging of Robert Lepage's production of Wagner's Ring of the Nibelung at the Metropolitan Opera in New York City where Berger works as a writer, producer, and radio commentator.

'98 **Christopher BROUGHTON** has been selected as a Term Member of the Council on Foreign Relations. The Term Member Program provides promising young leaders with an opportunity to deepen their knowledge and experience with international affairs and U.S. foreign policy through interactions with high profile leaders from government and the private sector, both from the U.S. and abroad.

'99 **Reyna GRANDE** is the author of the new memoir, *The Distance Between Us*, hailed by Kirkus Reviews as a "standout immigrant coming-of-age story." It received a starred review from Publishers Weekly. Her two previous books include *Dancing with Butterflies* (2009) and *Across a Hundred Mountains* (2006), which was the recipient of a 2007 American Book Award. Visit her at www.reynagrande.com.

OAKES COLLEGE

'94 **Ernie BRAY** has led his company to a fourth consecutive year ranking on Inc. Magazine's prestigious list of Fastest Growing Private Companies in America. As founder and CEO, Bray has also become known as a respected national business leader having been named 2012 Executive of the Year in Insurance at the American Business Awards this past June.

'97 **April ECONOMIDES**, founder of Green Octopus Consulting,

created the continent's first Bike-Friendly Business District (BFBD) program for the City of Long Beach to increase bicycling trips to local businesses. Its success garners significant national media coverage and has inspired other cities to follow suit. She's hired to speak around the U.S. and Canada about the business case for bicycling and is helping San Diego launch a BFBD program this summer. She was recently named one of Long Beach's "40 Under 40," was featured in Long Beach magazine for her green, car-free lifestyle, and serves on the host committee for TEDxSoCal.

'00 **Amber TURPIN** ended up staying in Santa Cruz after graduating from the Community Studies Department and works at Life Lab at the UCSC Farm, promoting garden-based education. She is also a freelance food writer, regularly contributing to Civil Eats and Edible Monterey Bay. In 2008, Amber was a staff member for Slow Food Nation, a groundbreaking event in San Francisco, prior to which she owned and operated the Sweet Pea Cookie Company for five years. She now lives with her husband on their small farm in the Santa Cruz Mountains, and they are expecting their first child.

COLLEGE EIGHT

'76 **Henri Bensussen (née FINGOLD)** serves as secretary on the Mendocino Coast Botanical Gardens board, and is on the board of the Mendocino Coast Writers Conference. Recent publications are in *Bridges: A Jewish Feminist Journal* and *Drash: Northwest Mosaic*. A member of Audubon, A.R.S., Mendocino Coast Writers Club, and Ft. Bragg Garden Club, she is the usual ardent birder, smitten gardener, and blocked writer who manages to keep upright most of the time.

'96 **John HERNANDEZ** is married to **Karla Hernandez (née HERRERA)** ('97). They have three children. John is a workers' compensation judge; Karla is a project director for the East Valley Community Health Center in West Covina.

COLLEGE NINE

'06 **Lindsay FLESHMAN** pursued a career in health care and won the Robert Wood Johnson

continued on page 26

Hal Aronson: Shining a light on women's health

—by Peggy Townsend



Hal Aronson toils in a backyard workshop in Berkeley in order to save lives in Africa.

What he's doing seems wildly simple: He is refining a portable solar system that can power LED lights in hospitals and clinics.

But giving doctors the ability to see and treat patients in places where electricity is spotty or nonexistent comes close to a miracle. Listen to Aronson and his obstetrician-gynecologist wife, Laura Stachel, describe scenes of desperate need, and the importance of their work becomes clear.

For instance, they recall the story of a pregnant woman whose uterus had ruptured during labor and was turned away from an African hospital because it was night and doctors could not see well enough to treat her.

"Light is life," said Aronson simply.

Aronson, who earned a bachelor's degree in politics (Cowell '79) and a Ph.D. in sociology from UCSC in 1997, is co-founder with Stachel of a nonprofit called We Care Solar (wecaresolar.org).

Its roots go back to 2008 when Aronson, a self-taught solar engineer, got an email from Stachel, who was part of a public-health research program in Nigeria.

Stachel described having to stand by helplessly while a pregnant woman with a condition readily treatable in the U.S. fought for

her life because doctors could not see well enough to aid her.

She asked Aronson if he could help.

"Designing a solution was pretty basic for me," said Aronson. Within a few weeks, he built a suitcase-sized solar power system, which Stachel could carry on a plane when she returned to Africa.

Four years later, 200 "solar suitcases" have been mounted in clinics and hospitals in 20 countries, with 200 more slated to be installed thanks to a recent grant.

And while statistics on the project's success are not yet available, the first hospital to receive solar electricity from the couple's efforts reported its maternal death rate had dropped 70 percent, according to Stachel.

The suitcases, which cost \$1,500 each and can power not only lights but also simple medical equipment, have gone through six iterations as Aronson worked to make them more durable and easier to use.

"Make it simple, make it plug-and-play, and make it easy to maintain," Aronson said. Without those specifications, he said, We Care Solar's portable energy system might end up like other well-intentioned technology brought to Africa: broken and discarded.

Just back from a trip to Uganda, where Aronson scaled rickety hand-built ladders

to install solar panels for units, he said one of the project's goals is also to train people to maintain them. Not only does that training keep the mini power plants running, but it also provides experience that can lead to better jobs for locals.

This kind of work touches Aronson's soul. It's a value he said he learned while at UC Santa Cruz. "There was a great spirit among the students then to create a positive experience in the world," he said.

Aronson's UCSC roots run deep: His father is emeritus professor of psychology Elliot Aronson. In addition, his son, stepdaughter, and three siblings also attended UCSC.

Sitting in his cluttered workshop, Aronson told of a doctor who took one of the couple's power systems to a small village in DR Congo.

The doctor arrived in the middle of a cholera outbreak, which usually would have left 50 to 80 percent of his patients dead. But, because he had light, the physician was able to monitor patients and administer IVs throughout the dark African nights.

All 126 of his patients lived.

When Aronson heard the story, he cried.

Peggy Townsend is a freelance writer based in Santa Cruz.



Steve Collins: A “real” rocket man

—by Peggy Townsend

As the one-ton rover, Curiosity, rushed toward the surface of Mars for a landing that was part dance, part crazy science, someone snapped a picture of Steve Collins.

His long hair clouding around him, his hands posed prayer-like, Collins was captured in the moment of wondering whether the project on which he had worked for close to five years would be a spectacular success or a humiliating disaster.

That photo of Collins (Porter '85, physics and theater arts) became a national symbol after the August 5 touchdown, not only of remarkable accomplishment, but also of the new face of aerospace. No more men with crew cuts and ties à la Apollo 13. This group had women, and guys with mohawks and long hair. They were cool and adventurous—they were mavericks, just as Collins is in real life.

Besides his work at the Jet Propulsion Lab, which nestles in the foothills of the San Gabriel Mountains near Los Angeles, the 53-year-old polymath is also an actor who has appeared in numerous plays. He is a dancer/choreographer, a soccer player, an autocross racer and a musician in an indie-rock band.

“I’m curious about things in a cross-disciplinary way,” he said simply.

The son of an Emmy-winning cinematographer and a music industry professional, Collins was fascinated both by space and entertainment.

He chose UC Santa Cruz because of its astrophysics and theater arts programs.

“It was a place where the physics people wouldn’t freak out when I put on tights to take modern dance,” he said.

His advisor, Physics Professor Emeritus Peter Scott, allowed him to do a rather unorthodox senior thesis on orbital rendezvous, which required him to learn computer programming. “He was very self-motivated to do unusual things, and to do them well,” Scott said of Collins.

The skills Collins acquired at UCSC landed him a job after graduation with a “mom-and-pop” aerospace company. In 1992, he was hired at the Jet Propulsion Lab.

His job as an “attitude control” engineer is to keep spacecraft pointed in the right direction, perform trajectory corrections, and figure out “what the heck just happened,” he said.

On the Deep Space One project, for instance, Collins helped fly the revolutionary, ion-propelled spacecraft toward the comet Borrelly. On the way, however, the spacecraft’s star-tracker instrument failed, basically blinding those guiding it. Over the next months, Collins and five others cobbled together a way to successfully fly the craft without the crucial sensor.

When Curiosity developed a strange “wiggle” as it flew toward Mars, Collins solved

that problem too. Heaters on the propellant tanks caused the shimmy, he said. It didn’t interfere with the mission.

During his career, Collins has helped deliver twin rovers to the surface of Mars, capture spectacular photos of Jupiter and its moons, send a spacecraft on a flyby of the Hartley-2 comet, and pilot the rover, Curiosity, to Mars with an innovative “sky-crane” landing system that allows spacecraft to settle in smaller and more discovery-rich areas.

Besides rocket science, Collins also regularly hits the stage as part of TACIT, Caltech’s resident theater company. He has done Shakespeare and musicals. In 2009, he played Galileo in *Life of Galileo*. He also is fullback for the JPL Cosmics soccer team, races his Mazda Miata through tricky autocross courses, plays the eerie-sounding theremin in a band called Artichoke, and choreographs dance routines.

It was the openness of UCSC, he said, that allowed him to explore his varied interests, and eventually land his “dream job.”

“At other, more structured schools, I think I could have gotten sideways with their expectations,” he said in a telephone interview. “Plus, Santa Cruz was a glorious place to live.”

Peggy Townsend is a freelance writer based in Santa Cruz.

continued from page 23

scholarship for future nurse leaders at New York University. After graduating with her bachelors of science in nursing, she became certified as a trauma nurse in the emergency department. She recently left the ER to work in the field of rheumatology, and she started a nurse practitioner program at UCLA in September to advance her skills and assist with the primary care provider shortage.

'12 Paul CRACIUNOIU worked full-time at the nonprofit tech company Mozilla after graduation. In February 2011, together with his brother and a friend from college, he started a company aimed at connecting people. They hired great UCSC computer science interns, grew to a few thousand users in the Bay Area, and then met with difficulty. Eventually they ended their project, but Craciunoiu learned a lot about what it takes to build a product, assemble a team, drive a vision and build company culture.

GRADUATE STUDIES

'99 Philip Choi was promoted to Associate Professor at Pomona College. He joined the faculty in 2007 and teaches Physics, Introductory Astronomy, Observational Astronomy, Life in the Universe Laboratory, and Stellar Structure and Evolution. His primary research interests are observational studies of galaxy evolution, including both detailed studies of nearby galaxies as well as large infrared and optical surveys of distant galaxy samples.

'02 William YARYAN is a lecturer in English, linguistics, and translation at Mahachulalongkornrajavidyalaya University in Thailand and presented paper June 1, 2012, at a conference there on "Big Tent Buddhism": Searching for Common Ground Among Western and Asian 'buddhisms.'"

'05 Tonya CLAYTON published *How to Read a Florida Gulf Coast Beach: A Guide to Shadow Dunes, Ghost Forests, and Other Telltale Clues from an Ever-Changing Coast*.

'08 Sean BURNS received the CLR James Award for Best Book of 2011 for his biography *Archie Green: The Making of a Working Class Hero*. The Working Class Studies Association granted Burns the award for his study of the influential, San Francisco-based, historian and folklorist of workers' culture Archie Green (1917–2009).

IN MEMORIAM

'71 Sandra J. (CHASE) Horlick (Stevenson) died March 1, 2012, after a long battle with cancer. She graduated with a BA in psychology from UCSC and worked as a self-employed bookkeeper and investment consultant. She was 63. **Robert George TANIGUCHI** (Crown) died in Campbell, Calif., on April 10, 2012.

'87 Chuck L. PETERSON (Cowell) died May 25, 2012. Chuck was well-known to the UCSC computer subculture of the 1980s as author of "tforum" and the popular "mtrek" real-time multiplayer game, both of which ran on the campus network. After graduation he worked as a software engineer and entrepreneur. He was 47.

'91 Randy JUDGE (Crown) died unexpectedly at his home on April 7, 2011. He held a BA in Earth sciences from UCSC and worked as an environmental consultant in Hawai'i and Nevada. He also worked as a regulator for the California Water Quality Control Board in Redding, Calif. He was 52.

UC Santa Cruz: A dream preferred

Promoting the sciences among minority students at the newly founded Oakes College

By J. Herman Blake

Ed. note: As part of this year's Alumni Reunion Weekend in April, emeritus writing lecturer Don Rothman and Oakes College founding provost J. Herman Blake sat down to talk about the transformative power of education. Their talk, which covered the importance of empathy and the enduring multicultural vision that guided the creation and growth of Oakes, moved many in the audience to tears. The following is an essay by Blake re-creating the talk.

When I joined the faculty of Cowell College in 1966, I thought my future path was clear and certain. My colleagues were young, hopeful, intelligent, and intellectual. They welcomed me into their company, and I felt privileged.

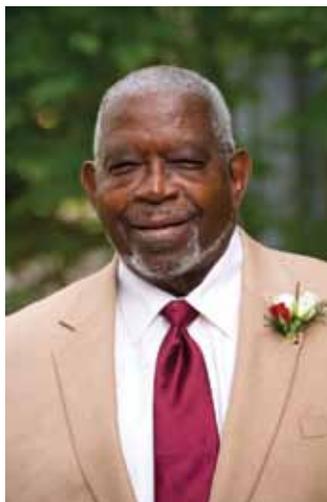
I could have stayed at Cowell forever. But deep inside me there was restiveness. Given my humble beginnings and the racial limits I had experienced in the years before UCSC, I felt ill at ease enjoying the boundless freedom of the present. I wanted to extend opportunity to many in the general community who would love to be where I was.

When Chancellor Dean McHenry asked me to partner with politics and community studies professor Ralph Guzman in planning a new college, I had my doubts. I had been on campus for just three years. My courses were just beginning to come together; while my research plans were dormant, my trajectory was academic scholarship, not administrative leadership. However, after counsel with Berkeley mentors, I accepted the invitation.

Ralph Guzman's dreams for the Latino community paralleled mine for the African American community. We both agreed our plans should be wholly inclusive in spite of some community pressures to limit our focus.

We needed a core group of faculty to do the initial planning, so we carefully listed those on campus we knew shared our values and goals and sought them out.

When Oakes College opened in 1972, we still did not have a name, but I was satisfied with College VII. We had a small contingent of faculty and about 250 students. The faculty was a source of great comfort—incredible minds, great teachers, and totally committed to the university as well as the college.



J. Herman Blake

There were about 20 or so minority students among that first group. Eventually we had a faculty that was about 30 percent women and 50 percent minority, many of them in the sciences.

Our goal of promoting the sciences among minority students began to take shape—and it was successful.

The doubts and fears that kept me awake at night, and often troubled my days, were eventually stilled by the visions, hopes, and dreams that soared into the stratosphere. Students who arrived with limited

preparation responded well—they not only overcame, they prevailed.

They are now attorneys, teachers, social workers, physicians, entrepreneurs, and college professors.

In 2012 I was invited to spend a week at Oakes College in celebration of its 40th anniversary. I went to classes and seminars throughout the campus; met with faculty members, students, staff, and community members; and attended gatherings at the homes of the provosts of Oakes and Cowell colleges.

Having left UCSC in 1984 to assume the presidency of Tougaloo College in Mississippi, I had little understanding of the extraordinary changes in the college and the university. The chancellor, George Blumenthal, had been one of the original faculty in Oakes College. An astrophysicist, he was an outstanding teacher with a sensitive soul, and all students—particularly minority students—flourished in his classes. It was a huge change from 1972. Intellectual understandings we anxiously sought then were now intuitively understood.

Everywhere I went, it was like stepping into the middle of a dream.

There is no limit to what UCSC can become.

To view the full talk between Blake and Rothman, visit youtu.be/bsDW_M-NdtY

CELEBRATIONS

More than 700 alumni gathered on campus in April for this year's **ALUMNI REUNION WEEKEND**. Alums laughed over long-dormant memories, reconnected with professors, and attended lectures and events.



Go to your happy place ... Mark your calendars for Alumni Reunion Weekend 2013 – Friday, Saturday, and Sunday, April 26, 27, and 28. Reminisce with friends old and new, meet current students, and revisit your favorite haunts on campus as we celebrate UC Santa Cruz's dynamic network of 80,000-plus alumni. | More information will be forthcoming at the Alumni Weekend website: events.ucsc.edu/reunion
If you are interested in being a reunion volunteer or helping plan a reunion event, contact Shayna Kent at skent1@ucsc.edu or (831) 459-3966.

Philanthropy Focus



Alums' \$1 million gift will further UCSC's efforts in ocean health

Christine and Rob Holo live far above the ground in a Manhattan high-rise, but they play in the ocean waves every chance they get.

The snow doesn't hold much interest for them. During vacation time, they would much rather lie out on a beach. Christine likes to look at the waves, while Rob enjoys diving into the depths.

It's a beautiful world down there, but its future is far from guaranteed. During their repeated visits to ocean waters across the globe, the Holos have learned about the problems facing marine habitats, including the dangers of plastics and overfishing.

After observing the situation firsthand, Rob and Christine Holo decided to take action, giving \$1 million to support the Center for Ocean Health at UCSC's Long Marine Lab, a premier research facility for coastal conservation, policy, and research.

Built entirely with private support, the center opened in 2001 with 23,000 square feet of labs, offices, and classrooms, providing much-needed facilities for faculty, researchers, and students.

A growing number of researchers and students have been attracted to the center, leading to a pressing need for additional space.

The Holos met as undergraduates at UCSC in 1987, and have maintained a strong connection to the Santa Cruz area. They credit their time at UCSC with their success in life as well as their environmental consciousness.

"We received a world-class education at a bargain price," says Rob Holo (Crown '87, history), who is a partner in the law firm of Simpson Thacher & Bartlett. "We feel a sense of wanting to give back to a place that gave so much to us."

The Holos are raising their two children with an appreciation and passion for science and the environment. Their son is attending CalTech in the fall. Their daughter is a junior in high school and has attended summer science camps in the U.S. and around the world.

They credit their daughter for deepening their environmental consciousness.

"Our daughter is really interested in the ocean—she's truly the environmentalist in the family," says Christine Holo (Oakes '90, biology).

When the Holos started researching the needs of UCSC and found an opportunity to contribute to the Center for Ocean Health, they decided it was a perfect fit.

The Center for Ocean Health expansion will provide 16,000 square feet of additional facilities for interdisciplinary research and education focused on marine conservation science and policy. The total cost of the planned expansion is \$12 million.

Despite living 3,000 miles from their alma mater, the Holos have maintained strong ties to UCSC, and have recently "reconnected" with the university. They have taken numerous family trips to Santa Cruz, and even celebrated their 20th anniversary in the town where they met. They plan to return in March to visit the Center for Ocean Health.

Christine Holo says she hopes the gift will inspire other alumni to support the university. They are helping to fund a project that will expand an existing classroom into a lecture room that can accommodate larger classes and seminars.

The new lecture room will be named the Holo Family Lecture Room.

"We very much wanted to contribute to education, especially to UC," says Christine Holo. "We hope it will serve an entire generation of students."

— by Amy Ettinger

Amy Ettinger is a freelance writer based in Santa Cruz.

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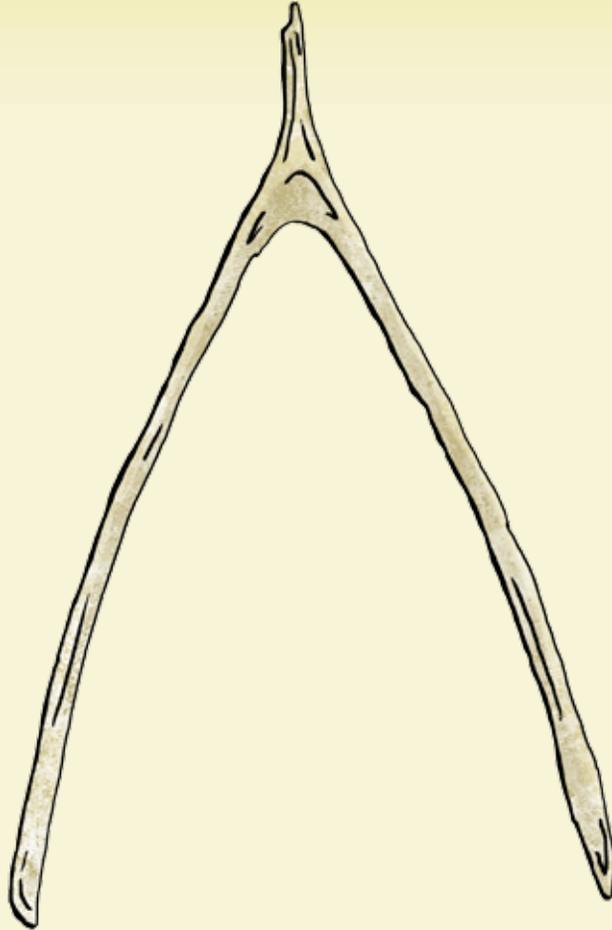
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