As the Earth warms, how will California be affected? Researchers at UC Santa Cruz are creating the climate models that will be used by scientists to find answers to this complex question.
A warming world
Earth scientist Lisa Sloan and her students have developed a computer model that is beginning to generate detailed—and ominous—scenarios of what California’s climate could look like by the middle of this century.

Lessons of love
A new book by sociologist Marcia Millman finds a stronger-than-suspected connection between real-life love stories and the romantic plots that have been replayed in films from Casablanca to Titanic.

Humanities champion
UCSC’s new dean of humanities, Wlad Godzich, charts the half-century decline of humanities scholarship in this country’s university curriculum—and makes a forceful case for reversing that trend.

Standing up for workers
Watching people lose their jobs to trade, technology, and downsizing prompted economist Lori Kletzer and a colleague to design a “wage insurance” proposal that has attracted support from government policy makers.
This summer marks the end of my fifth year as chancellor of UC Santa Cruz, and I will soon begin my sixth. This milestone has caused me to take a few moments to compare what I knew about UCSC at the time of my arrival and what I know about the campus now.

At the time of my selection as chancellor, I called UCSC a “jewel in the finest teaching and research university in the world.” When I made that statement, I had already been impressed by some of the campus’s most distinctive features: its commitment to undergraduate education; its reputation for excellence in a number of fields.

But I was still discovering the best part of the UCSC story: the people behind those programs—our creative and curious students, our talented and dedicated faculty and staff, our loyal and successful alumni, our supportive and generous donors and volunteers.

Evidence of the quality of these people is explicit throughout this Review. The issue features the likes of graduate student Jim Kent, who, working long hours, designed a computer program that he and other members of a UCSC team used to assemble the draft sequence of the human genome (page 2); Karen Holl, one of our faculty members, whose fieldwork is greatly advancing our knowledge of the world’s tropical forests (page 4); and Gillian Welch, one of our graduates, whose musical creations are featured on a popular movie soundtrack (page 25).

The cover story (page 8) details the work of Lisa Sloan, one of a number of distinguished UCSC Earth scientists. With the help of her students, Professor Sloan has developed a regional climate model that forecasts the potentially devastating effects that rising levels of carbon dioxide in our atmosphere will have on California.

This issue also features the work of two of our social scientists: sociologist Marcia Millman and economist Lori Kletzer. Professor Millman has authored a stimulating new book that explores the connections between real-life love and cinema (page 14), and Professor Kletzer has coauthored a thought-provoking “wage insurance” proposal for displaced American workers (page 20).

Let me also call your attention to a Q&A with the campus’s new dean of humanities (page 16). Describing a half-century of forces that have reduced the investment our country’s universities make in humanities scholarship, Wlad Godzich outlines what his division is doing to reverse that slide—and why.

Because of all these people and many more like them, I can say with great confidence that our “jewel” shines more brightly than ever.

M.R.C. Greenwood
Chancellor
Pinpointing the source of lead poisoning

A technique that detects the “fingerprints” of various lead sources may help target the causes of childhood lead poisoning. In a published study, UCSC researchers used the method to identify the environmental sources that caused lead poisoning in three Santa Cruz County children.

“It is typically very hard to identify the source of lead poisoning in children,” said Donald Smith, an associate professor of environmental toxicology.

Smith performed the study with lead author Roberto Gwiazda, an assistant researcher in environmental toxicology.

The technique they used exploits the fact that lead comes in several varieties, called isotopes. Their research was reported in a recent issue of Environmental Health Perspectives.

“This test is not always successful at identifying sources of exposure, but it provides a lot of information that should allow public health officials to reduce household lead contamination more effectively,” Smith said.

Almost one in every 20 children in the United States under age six suffer from lead poisoning. Exposure to even low levels of lead can cause aggressiveness, hyperactivity, impaired growth, a drop in IQ, learning disabilities, and other behavioral problems. Children are most vulnerable, because their bodies absorb lead more readily than adult bodies do, and their nervous systems are still developing.

The main sources of lead exposure in children are lead-based paint and lead-contaminated dust and soils. Although lead-based paint was banned in 1978 and leaded gasoline was phased out in the 1970s, about 38 million homes in the U.S. still contain leaded paint, and urban soils contain residual lead.

“People think the problem is solved because we’ve eliminated lead in gas and paint,” Gwiazda said. “But the number of children being exposed, mostly in old housing, is staggering.”

UCSC musicians perform at Carnegie Hall

How do you get to Carnegie Hall? Practice, practice, practice. It also doesn’t hurt to be a member of UCSC’s Wind Ensemble.

To perform at Carnegie Hall is to have arrived on the musical scene—and in late May, the 55-member UCSC group, under the direction of Robert Klevan, did exactly that, performing in the Ensemble Spotlight Series.

The Wind Ensemble has only been in existence since fall 1998.
A new study of metropolitan Los Angeles documents that neighborhoods that were selected to house toxic storage and disposal facilities (TSDFs) were more minority, poorer, and more blue-collar than census tracts that did not receive TSDFs.

The study charts the arrival of all high-capacity TSDFs in Los Angeles County against changing neighborhood demographics over the 1970, 1980, and 1990 census surveys. The research was conducted by Manuel Pastor, a professor of Latin American and Latino studies at UCSC, and was sponsored by the California Policy Research Center.

Simple comparisons looked at the character of an area before a TSDF siting and the demographic and other shifts that occurred in the years after a siting, as compared to the rest of the county. Subsequent complex statistical exercises confirmed that the racial/ethnic makeup of a given neighborhood mattered in the timing of a TSDF siting, while a similar analysis of demographic changes offered no evidence that TSDFs attract minorities.

For the past two years, UCSC researchers have been studying and monitoring coastal ecosystems as part of a long-term collaborative research project involving four major universities in California and Oregon. Now the organization funding the project, the David and Lucile Packard Foundation, has augmented its original $17.7 million grant to the four institutions with an additional $2,285,000 grant for the UCSC portion of the project. Called the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), the project involves researchers at UCSC, UC Santa Barbara, Oregon State University, and Stanford University who are studying organisms in nearshore habitats along a 1,200-mile stretch of coastal waters from Oregon to southern California.

The study zone is heavily influenced by human activities, but the natural dynamics of the ecological communities are not well understood, said Peter Raimondi and Mark Carr. They are leading a UCSC team responsible for all of PISCO’s field research in northern and central California, as well as some of the research in southern California.

“The college system is part of what makes UCSC a unique campus, and as we grow, they play a critical role in making the campus personal and supportive,” said Lynda Goff, vice provost and dean of undergraduate education.

The review concluded that among the greatest strengths of the college system is its ability to provide a “sense of place” and to deliver Student Affairs services. An important and less-recognized service is the role they play in offering academic advising to students.

The system’s greatest weakness is the academic role of the colleges. Planning for Colleges Nine and Ten ushered in a new model of academic affiliation.

Colleges Nine and Ten are affiliated with the Division of Social Sciences, and the provost of College Nine reports to Dean Martin Chemers, who has engaged faculty in the planning of the college academic program.

In recognition of her leadership and achievement, UCSC Chancellor M.R.C. Greenwood received a Women of Achievement award in a ceremony in San Jose this March.

Nominated by Susan Hammer, trustee of the UC Santa Cruz Foundation and former mayor of San Jose, the chancellor was among 14 women feted at the annual event, which is sponsored by the Women’s Fund of Silicon Valley and the San Jose Mercury News.

The honor recognized her career, noting her efforts to support the success of other women and to inspire girls to excel in math and science.
Ecologist boosts forest restoration

In an unparalleled ecological disaster, more than half of the world’s tropical forests have been lost since 1950, due in large part to the developed world’s appetite for agricultural and wood products. While environmentalists lobby for conservation, some scientists are trying to find ways to restore tropical forests that have been cleared and abandoned. So far, however, they are finding that they have much yet to learn.

Karen Holl, assistant professor of environmental studies at UCSC, is one of the few ecologists who has completed multifaceted studies of tropical forest restoration. In the December 2000 issue of Restoration Ecology, Holl reviews the results of her own work on abandoned pasture in Costa Rica and warns that the challenges of habitat restoration demand far greater site-specific knowledge than is currently available.

“Tropical forests have been impacted by humans for a long time, going back to before the Mayans, but we’re seeing a scope of destruction now that is unprecedented,” said Holl. “By contrast, recovery efforts are very new, and we don’t know very much, especially when we try to put all the pieces of the ecosystem puzzle together.”

The pressure is on, although even the most successful restoration projects couldn’t keep pace with the grand scale of the ongoing destruction, noted Holl. Tropical forests are disappearing throughout Asia, Africa, and Central and South America, and the future of the Brazilian Amazon—the greatest remaining tropical rainforest in the world—is bleak: Up to 40 percent of the Amazon may be cleared within 20 years if proposed infrastructure projects are approved, according to a report in the January 19 issue of Science.

Unlike many researchers, whose work focuses on a piece of the puzzle, such as soil nutrients or seed dispersal, Holl takes an ecosystem approach to forest restoration. Her research and that of others suggest that the chances for recovery depend a lot on the intensity of the disturbance—whether heavy equipment was used to clear the forest and whether a nearby source of seeds remains. “Some problems, like seed dispersal, are common to all tropical forest restoration projects, but others are site-specific,” said Holl.

Ecologists lack data on natural forest recovery processes, which makes it difficult to compare the effectiveness of human-managed intervention strategies with nature’s own power; but Holl’s work in Costa Rica has illuminated some success stories as her team tries to accelerate the natural recovery process.

The most successful strategies Holl has identified include planting native tree seedlings and shrubs to enhance seed dispersal and shade out pasture grasses.

The flight of a magnificent bird

A new study focuses on the flight of wandering albatrosses, such as this juvenile in the Crozet Islands.

A new study of flight performance in wandering albatrosses reveals significant differences between males and females and between adults and fledglings, and suggests that these differences influence where birds of different ages and sexes forage for food in the open sea.

Wandering albatrosses have long been admired as graceful masters of soaring flight. They spend most of their lives at sea, using the wind to travel tremendous distances in search of food.

The study is part of an ongoing research program investigating the physiology and ecology of these magnificent birds.

Scott Shaffer, a UCSC research biologist, is lead author of the study. He and UCSC professor of ecology and evolutionary biology Daniel Costa began working with Henri Weimerskirch of the French National Center for Scientific Research in 1997. Their study is published in the April issue of the journal Functional Ecology.

Shakespeare Santa Cruz will bring its summer audiences tales of love, magic, and tragedy as it celebrates its 20th anniversary season. The summer festival selections are Shakespeare’s Macbeth and A Midsummer Night’s Dream and Anglo-Irish author Oliver Goldsmith’s She Stoops to Conquer. The plays will be running in repertory July 11 through September 2. For more information, see www.shakespearesantacruz.org.

Karen Holl plants a native seedling in an area cleared of pasture grass in Costa Rica.
Evidence found of extreme warp in galaxy

Astronomers at UCSC have obtained new evidence of an extreme warp in the stellar disk of the Andromeda Galaxy (also known as M31), our nearest galactic neighbor. The findings were presented at the American Astronomical Society meeting in January by Puragra GuhaThakurta, UCSC associate professor of astronomy and astrophysics; graduate student Philip Choi; and David Reitzel, now at UC Irvine.

Previous studies had suggested the presence of a warp in the outer parts of Andromeda's stellar disk. The new findings appear to confirm those observations and suggest that the warp in Andromeda may be the most extreme case of a warped stellar disk ever observed in a spiral galaxy. Possible causes of the warp include interactions between Andromeda and its smaller satellite galaxies.

Many spiral galaxies, including the Milky Way, appear to have warps in the outer reaches of their stellar disks. The rotating body of stars and gas that characterizes a spiral galaxy is generally flat, but the outer regions may deviate from the plane of the disk, like an old record album exposed to too much heat. The warp tends to occur at the outer edges, while the inner part of the stellar disk remains flat. These warps are very difficult to demonstrate conclusively, however, because the outer portions of the stellar disk are extremely faint compared with the bright central region.

Kent Nagano featured at L.A. alumni event

Opera lovers are invited to a special UCSC Alumni Association event this fall in Los Angeles, featuring Grammy Award–winning alumnus Kent Nagano (Porter College ’74).

Recently appointed principal conductor of the Los Angeles Opera by the company’s artistic director Plácido Domingo, Nagano will conduct the Wagnerian classic, Lohengrin. The performance will take place on Saturday, September 15, beginning at 2 p.m., in the Dorothy Chandler Pavilion.

Tickets are $125 or $175 per person and include a reception afterwards honoring Nagano.

For more information or to make reservations, call the association at (800) 933-SLUG.

Coastal erosion linked to El Niño

Erosion of seacliffs, damage to coastal structures, and the comings and goings of beach sand along California’s central coast are all closely linked to the intense winter storms associated with El Niño. Two studies by UCSC researchers reveal the connections between this climatic heavy hitter and the processes that shape California’s coastline.

Postdoctoral researcher Curt Storlazzi and professor of Earth sciences Gary Griggs found that damaging coastal storms are three times more likely to occur during an El Niño winter than in other years. As global warming causes sea levels to rise, storm damage on the coast will only get worse, Griggs said.

In a related study, Griggs and graduate student Cope Willis found that although winter storms during El Niño can erode beaches down to bare rock, the same storms ultimately replenish the beaches by washing tons of fresh sediment from rivers and streams into coastal waters. Their preliminary results show no long-term changes in the amount of sand on central California beaches.

Latino studies program a new department

Campus provost John Simpson has approved the establishment of the Latin American and Latino Studies Department.

The program began as Latin American studies in the 1970s and was renamed in 1994 to reflect the importance of building intellectual bridges with the study of Chicanos and Latino populations within the United States. The new name coincided with a reorganization designed to bolster the study of cross-border issues.

The department is by far the largest and most established program in the U.S. that bridges the fields of Latin American and Latino studies, said department chair Jonathan Fox. “We’re developing the analytical tools needed to prepare our students for the 21st century in California.”

The broader focus allows students to address contemporary issues such as globalization, transnationalization, and the ways in which groups reproduce their regional culture in binational settings. The innovative approach has attracted broad interest from other universities.
Gift from Taiwan boosts East Asian studies

Thanks to an extraordinary gift from a Buddhist foundation in Taiwan, UCSC has become one of the leading resources in the country for the study of Buddhist China.

The gift of more than 9,000 books, CD-ROMs, VCDs, and video- and audiotapes comes to UCSC from the Buddha Education Foundation. The donated materials comprise a rich body of original and reprinted items from the 16th century through present day. The materials will be housed in the University Library.

The gift provides U.S. scholars with access to materials that were once nearly impossible to find without traveling to East Asia. At the core of the collection is a modern reprint of an important 18th-century 165-volume edition of scriptures and commentaries titled The Dragon Treasury.

Art history professor Raoul Birnbaum, who specializes in Buddhist studies, was instrumental in securing the gift for UCSC.

The Collected Drawings on Protecting Life, one of the books donated by the Buddha Education Foundation in Taiwan, features a woodcut by the famed artist Feng Zikai (1889–1975) on its cover.

Accounting firms snap up UCSC students

For UCSC accounting instructor Robert Shepherd, the proof is in the numbers, and the numbers are looking good: Four of the “Big Five” international accounting firms are recruiting UCSC students, and—by early this spring—more than 70 percent of seniors in the business management economics accounting program had jobs lined up after graduation.

“The big national firms are grabbing virtually everybody we’ve got,” said Shepherd, a certified public accountant who has taught accounting at UCSC for 20 years.

As entry-level associates for such household names as PricewaterhouseCoopers and Deloitte & Touche, graduates will be earning an average starting salary of about $50,000—a figure that will likely double after five years of employment with a firm. Most associates will be working as financial advisers in the areas of auditing and taxes, said Shepherd.

“There’s a tremendous learning curve, but students who get on with these national firms are on the fast track,” he said. “These are among the top 25 firms that M.B.A. grads want to work for. They give you an opportunity to stretch and develop. Of course, they’re paying you pretty good money, so they work you, too.” Fifty- and 60-hour work weeks are typical, especially during the busy months of February and March.

The business management economics major, introduced in 1998, is satisfying a strong interest among students—and prospective students, noted Michael Thompson, UCSC’s associate vice chancellor for Outreach, Admissions, and Student Academic Services.

The Big Five firms restrict their recruiting to a few select schools.

UCSC plays role in oak ecosystems study

The UC Natural Reserve System (NRS) has received a $263,600 grant from the David and Lucile Packard Foundation to develop the framework for a long-term research, monitoring, and training program to restore and manage California’s threatened coastal-oak ecosystems.

UCSC faculty members Daniel Press and John Thompson will be part of an extensive nine-month planning effort by UC environmental field scientists and staffs.

More than 3 million acres of California’s oak woodlands and grassland ecosystems have been identified as being at risk. These ecosystems are in decline biologically and are also being lost to residential and agricultural development.

“We’ve had this piecemeal approach for decades,” said Thompson, professor of ecology and evolutionary biology, citing news stories about a fungus threatening oak trees as one example. “The idea here was to take a concerted look.”

An interdisciplinary team of experts will assess the current state of scientific knowledge of California foothill woodland and grassland ecosystems. It will also identify suitable sites—both NRS reserves and non-UC sites—where research, monitoring and training programs can be conducted over the next decade.

Thompson and Press bring two different areas of expertise to the project. Thompson, whose specialty is plant and insect interactions, will be looking at the biological side of the problem. Press, associate professor of environmental studies, will draw on his background in environmental policy, particularly land preservation in California.

Press noted that many of the state’s oak woodlands are in areas that are both desirable and easy to build in. “Any successful efforts are going to require that private landowners face incentives for restoration,” Press said.
Regents reverse stance on affirmative action

Meeting in May, the University of California Board of Regents adopted a resolution that rescinds two anti-affirmative action resolutions the board adopted six years ago. “This is a great day for the University of California and the people of California,” said UC President Richard C. Atkinson after the vote. UCSC Chancellor M.R.C. Greenwood attended the board’s meeting in San Francisco. In a message distributed to the campus community, she said, “I am very pleased to let you know that the Regents of the University of California have voted unanimously to rescind SP-1 and SP-2.”

SP-1 and SP-2, the regental policies that prohibited the use of preferences in university admissions, employment, and contracting practices, were approved in July 1995. While eliminating SP-1 and SP-2, the university is still governed by a similar ban incorporated into the California Constitution through Proposition 209, the state measure passed by California voters in November 1996.

Regent Judith L. Hopkinson, who introduced the resolution, said the action “sends a clear and unequivocal message that people of all backgrounds are welcome at the University of California.”

Consensus on the resolution was reached in part by reaffirming the shared governance role of the UC faculty in determining admissions criteria, including the “two-tier” process through which the campuses admit 50 to 75 percent of an incoming freshman class on the basis of academic achievement alone.

Atkinson earlier requested that the Academic Senate begin this review to develop admissions criteria that allow a more comprehensive, holistic evaluation of applicants. That review is under way and is anticipated to be completed by the end of the year.

Images of cellular protein factories

The workings of a tiny molecular machine crucial to all forms of life are emerging from highly detailed new images obtained by UCSC researchers.

In a paper published by the journal Science in March, the researchers describe the structure of the ribosome, a complex particle just one millionth of an inch in diameter, in sufficient detail to begin to understand how it works.

The images were obtained using a technique called X-ray crystallography. The improved resolution of these new images is the result of fine-tuning some two dozen variables in the group’s experiments.

“This allows us to see what all the key parts are and how they interact,” said Harry Noller, Sinsheimer Professor of Molecular Biology and head of the group that obtained the new images.

Ribosomes are the protein factories of all living cells. They hold the equipment necessary to read the genetic code and translate it into specific protein structures.

The images obtained by Noller’s group show not only the ribosome itself but also messenger RNA and transfer RNAs in the positions they occupy during the process of protein synthesis. They also located the sites where the ribosome interacts with the transfer RNAs.

“We are now in a position to understand the structural rearrangements of the ribosome during protein synthesis,” Noller said.

This achievement has practical significance because many antibiotics work by binding to and disrupting bacterial ribosomes.

Understanding the ribosome’s structure may lead to the development of new and more effective antibiotics.

Astrophysicist is in distinguished company

Joining the likes of Madeleine Albright, Woody Allen, and King Juan Carlos I of Spain, a UCSC astrophysicist has been elected to membership in the American Academy of Arts and Sciences.

Stanford Woosley, professor and chair of astronomy and astrophysics, and other new members will be formally inducted in ceremonies at the academy’s headquarters in Cambridge, Massachusetts, in October.

The American Academy of Arts and Sciences, founded during the American Revolution by John Adams, is one of the oldest honorary societies in the United States. Its purpose is “to cultivate every art and science which may tend to advance the interest, honor, dignity, and happiness of a free, independent and virtuous people.” The academy has about 4,000 members and elects approximately 200 members each year.

Woosley joined the faculty at UCSC in 1975. Woosley’s research centers on supernovae, massive explosions of dying stars. One of his accomplishments has been to construct a mathematical model for how stars explode.
IT’S GETTING WARMER ON PLANET EARTH, an observation even skeptics no longer dispute. Most scientists also agree that the warming trend is at least partly the result of heat-trapping gases released into the atmosphere by human activities—mainly carbon dioxide from the burning of fossil fuels.

The latest projections indicate the average surface temperature of the planet will rise between 2.5 and 10.4 degrees Fahrenheit over the next century. Even at the low end of this range, the consequences are likely to include more severe weather, such as storms and heat waves; more floods and droughts; more coastal erosion from rising seas; and disruptions of agriculture and natural ecosystems.

If the warming is at the high end of the projected range, the effects will be devastating. With sea level rising as much as 3 feet,
many heavily populated coastal areas would become uninhabitable. People living in already warm climates would face crop failures, famines, and droughts. Deaths from tropical diseases and heat stress would increase, and tens of millions of people could be displaced from their homelands.

These projections are based on results from computer models of the global climate. The recent success of these models in representing current climate trends has increased researchers’ confidence in their projections for the future (see “The global outlook,” page 12). But global models paint a picture of Earth’s changing climate in broad brush strokes, leaving out the local details.

Lisa Sloan, an associate professor of Earth sciences at UCSC, is one of the few researchers who are beginning to look at climate change on a regional scale. Using a regional model that she and her students have programmed to represent California’s climate system, Sloan has begun to generate detailed scenarios of what the state’s climate could look like by the year 2050.

Global climate models miss the regional details because they divide the planet’s surface into boxes, called grid cells, that are typically about the size of Colorado, Sloan says.

“A global model would cover California with about ten grid cells, giving you just one temperature value and one rainfall value, for example, for each cell,” she says. “With our regional model, we’ve got about 200 grid cells covering the state now, and we know we can do better in the future.”

This level of resolution enables Sloan to see different climate effects throughout California’s diverse geography, from the Coast Ranges to the Central Valley to the Mojave Desert.

She can now use the regional model to study, for the first time, how California’s climate will respond as rising carbon dioxide levels drive global warming in the decades ahead.

Carbon dioxide is known as a “greenhouse gas” because it traps heat in the atmosphere much the way a glass roof keeps a greenhouse warm. Before the industrial revolution, the amount of carbon dioxide in the atmosphere had remained steady for about 10,000 years. Since 1750, the carbon dioxide level has risen by 31 percent, and most of that increase has occurred in the past century. The atmospheric concentration of this greenhouse gas is now rising at an unprecedented rate, Sloan says.

“We could easily double the carbon dioxide level over preindustrial levels by 2050,” she says.

Using her regional climate model, Sloan finds that doubling atmospheric carbon dioxide results in higher average temperatures every month of the year throughout the state. The extent of the warming varies, however, with the greatest increases in temperature occurring at high elevations in the Sierra Nevada. For example, the average temperature in June in the Sierra Nevada increases by 11 degrees Fahrenheit.

The model also shows rainfall increasing in northern California but staying largely the same in the south, while snow accumulation in the mountains decreases dramatically. In March, for example, an additional 8 inches of rain falls in the central Sierra, while the height of the snowpack at the end of March drops by 13 feet.

And Sacramento in August? The projected increase in average daytime temperatures is about 3 to 3.5 degrees. “And these are average values, not the extremes,” Sloan says. “With a 3-degree rise on average for the month, the temperature increase for the daily extremes could be twice that.”

In other words, those 104-degree highs, not unusual in the Central Valley, could become 110-degree highs.

Sloan emphasizes that these results are not predictions, but they do provide concrete scenarios, based on the best science...
available, of what the future may hold for California. The implications of these scenarios are serious: The changes they describe will affect everything from the water supply to coastal fisheries to the demand for power during the summer. The stability of high-alitude forests and other major ecosystems will also be threatened.

Projecting climate change into the future is fraught with uncertainty, Sloan acknowledges, but it can still be enormously useful. "Decisions have to be made about how to manage things like the water supply and the power grid, and these scenarios offer information about potential impacts on those systems," Sloan says. "If you had a choice between looking through a murky crystal ball and not looking at all, which would you choose?"

Sloan generates her climate scenarios using a sophisticated computer program derived from a weather forecasting model. The model incorporates a huge set of equations describing complex physical processes, such as solar radiation and how it changes during the year, the absorption and reflection of sunlight by land surfaces and clouds, heat transfer, air movements, evaporation of water, and the formation of rain and snow.

Two graduate students, Mark Snyder and Jason Bell, have been working with Sloan to develop and apply the regional model. To make it specific for the area that includes California, the researchers entered reams of data defining such things as the geographic locations of land and sea, elevations, vegetation types, and land uses. And just as California’s climate is driven by global circulation patterns in the atmosphere, Sloan’s regional model is driven by input from a global climate model.

To look at the effects of rising carbon dioxide levels, Sloan and her students run the model under two sets of conditions: first with carbon dioxide set at the level it was in 1750 (280 parts per million, or ppm) and then with carbon dioxide at twice that level (560 ppm), as projected for 2050. This type of comparison, called a sensitivity study, shows how sensitive the climate is to a dramatic change in atmospheric carbon dioxide.

The model calculates dozens of variables, including surface runoff, soil moisture, relative humidity, winds, clouds, snow accumulation, and of course, temperature and precipitation. The researchers can look at the results for each of these variables for every night and every day of an average year, or they can summarize the results as monthly averages or seasonal totals.

Getting the model up and running was no easy task, and Sloan gives Snyder and Bell credit for working out the bugs. Now the researchers can see how the model responds to changes in various conditions. They’ve started with carbon dioxide, but could also look at, for example, the effects of changing land-use patterns.

“What if we had a solid urban corridor running from L.A. to San Diego, or if we doubled the size of the Bay Area? We can run those scenarios and see how the climate would respond,” Sloan says.
Sloan’s work on regional climate change has quickly attracted the interest of other researchers on campus. Rather than just speculating about how global warming will affect California, she and her students are producing quantitative results based on statistically rigorous procedures. Those results are a gold mine for researchers interested in studying the various ramifications of climate change.

Sloan now has potential collaborators in five UCSC departments in two academic divisions. Many of these connections were made as a result of her affiliation with UCSC’s Center for the Dynamics and Evolution of the Land-Sea Interface (C.DELSI), which helps promote cross-disciplinary research (see “A dynamic center,” page 13).

Brent Haddad, a professor of environmental studies and an expert on water policy, is among those who connected with Sloan through C.DELSI. According to Haddad, Sloan’s research is providing the kind of information that policy makers and resource managers will need to decide how to deal with the effects of climate change.

“California is especially vulnerable to climate change because we depend on the snowpack as a natural reservoir to provide our late-summer water supply,” Haddad says. With more rain and less snow, the state could face increased flooding in the winter and water shortages in the summer, he says. Haddad plans to combine Sloan’s projections for rainfall and snow accumulation with maps of water districts and water rights to see how different regions of the state will be affected.

“California has the most engineered water-delivery system in the world, and there is a very complex series of property rights and contracts that determines where the water goes,” Haddad says. “In these scenarios, there may not be enough water to go around at certain times of the year.”

Sloan’s work and her collaborators’ efforts to study the ecological and social consequences of climate change come at a crucial time, says Earth sciences professor James Zachos.

“We’re really under the gun now. We know the climate is changing and we’re on the steep side of the curve,” Zachos says. “When you talk about climate change on a global scale, it’s hard for most people to absorb the reality of it. Right now there’s little political will to do anything substantial about it, but maybe that will change when people can see what the impacts will be in their own backyards.”

**“California is especially vulnerable to climate change because we depend on the snowpack as a natural reservoir to provide our late-summer water supply.” —Brent Haddad**

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**Climate response to doubling of atmospheric carbon dioxide**

Computer projections show changes in California’s climate due to doubling carbon dioxide over preindustrial levels (as expected by 2050). Average June temperatures are higher throughout the state. Total rainfall in March increases in northern California, with little change in the south. And the height of the snowpack at the end of March drops dramatically.
The global outlook

The Intergovernmental Panel on Climate Change (IPCC) issued its third report on the global climate in January 2001. The IPCC, sponsored by the United Nations, is the premier international body on climate change and involves hundreds of scientists from many countries. These are a few of their findings on the current state of Earth’s climate:

- The global average surface temperature increased by about 1.1 degrees Fahrenheit during the past century.
- Snow cover has decreased, glaciers are retreating and disappearing, and the polar ice caps are shrinking.
- Sea level has risen and ocean temperatures have increased.
- Most of the warming observed over the past 50 years is “very likely” due to increased concentrations of greenhouse gases in the atmosphere resulting from human activities.

The IPCC took various scenarios for future emissions of greenhouse gases and used them to run several different global climate models. The resulting projections for the global climate in the year 2100 include:

- Global average surface temperature (including oceans) will increase by 2.5 to 10.4 degrees Fahrenheit.
- The warming will be most intense over land areas, which will heat up much faster than the oceans.
- Extreme weather events, including droughts and floods, will increase.
- Snow cover and the extent of glaciers and ice caps will continue to decrease.
- Sea level will rise by as much as 3 feet.
- The effects of greenhouse-gas emissions will persist for many centuries, even if they level off.

The panel also identified likely consequences of climate change, including:

- Irreversible damage to natural systems, such as coral reefs, mangroves, boreal and tropical forests, and prairie wetlands.
- Reduced crop yields in most tropical and subtropical regions.
- Increases in tropical diseases and deaths from heat stress.

The IPCC further notes the potential for large-scale and possibly irreversible changes in Earth systems, such as a significant change in ocean circulation or melting of the Greenland Ice Sheet. The likelihood of such changes is probably low, but their impacts would be drastic and widespread.

The IPCC’s report is available online at www.ipcc.ch.

While Sloan’s scenarios show how California’s climate may change, additional analysis is needed to understand the implications of those changes. Sloan and other UCSC researchers plan to use the output from the regional climate model in a wide range of investigations, some of which follow:

**Power management.**

The state’s power grid, already faltering, will face new stresses in the years to come. Higher temperatures will increase the demand for air conditioning, while changes in the water supply will affect the capacity to generate hydroelectric power. Sloan plans to analyze these potential impacts, helping power managers prepare for the future.

**Water quality.**

Precipitation and surface runoff are key factors affecting water quality, says Russell Flegal, professor and chair of environmental toxicology. Flegal says he is eager to see how the results from Sloan’s climate model apply to his research on contaminants in San Francisco Bay and elsewhere.

**Marine ecosystems.**

A highly productive marine ecosystem lies off California’s coast, a classic example of a coastal upwelling regime. The world’s most productive fisheries and foraging areas for marine birds and mammals occur in such places, where cold, nutrient-rich water wells up from the depths. But no one knows how global warming will affect this process.

“It’s a difficult question, but regional modeling can help us get a handle on it,” says Raphael Kudela, an assistant professor of...
In one study, she saw a population decline under warmer and drier conditions due to plant-eating insects.

“It’s not just the physiology of the plant that matters; interactions with other species also play a large role,” Fox says. Such interactions involve not only insects that feed on plants, but also insect pollinators and competition from exotic plant species, says ecologist Michael Loik.

“Most plant species have beneficial partners, such as pollinators, that they depend on, but it’s not clear if the partners will migrate together when climate conditions change,” Loik says. “And if the timing of flowering changes, the plant may flower before its insect pollinator has hatched.”

**Fire.** Loik is involved in several projects looking at the responses of different ecosystems to climate change. One of his concerns is the potential impact on fire regimes. Periodic fire is a natural component of many California ecosystems, but its frequency or intensity may change. Increased winter rainfall may promote faster growth of vegetation, while the summers may be hotter and drier.

“That could mean larger or more intense fires, or more frequent fires,” Loik says.

**Endangered species.** On the terrestrial side of the coastline, biologist Laurel Fox is studying two rare plant species growing at the Fort Ord Natural Reserve: sand gilia and Monterey spine flower. In both species, rainfall profoundly influences seed germination, seedling survival, and reproduction, Fox says.

“We’re now constructing population projection models so we can look at the potential consequences of climate change,” she says. In research with other species, however, Fox has found that unexpected factors may influence survival as conditions change.

**Water availability.** Andrew Fisher, an associate professor of Earth sciences, is interested in how climate change, urban development, and other factors affect the “baseflow” of streams.

“On the Central Coast, baseflow is what makes the streams run in summer and early fall—it’s all groundwater coming from the aquifers,” Fisher says. “Those are the lowest flows of the year, and in many cases they are the most critical in terms of stream habitat. Whether you are concerned about endangered salmon runs or riparian vegetation, these small, late-season flows are very important.”

**A dynamic center**

The Institute of Geophysics and Planetary Physics, a multicumampus research unit of the University of California, expanded in 1999 to include a branch on the UCSC campus. At UCSC, the institute encompasses several interdisciplinary research centers, one of which has served as a catalyst for Lisa Sloan’s work on regional climate change.

Initially, the plan for the Center for Dynamics and Evolution of the Land-Sea Interface (C.DELSI) was to focus on climate and hydrologic processes at the continental margin, says C.DELSI director James Zachos, a professor of Earth sciences.

“Then we realized that the climate impacts virtually every other system—weathering, nutrient transport, ocean upwelling, and biological systems—and it all feeds back into the climate because these systems are all coupled,” Zachos says.

The center’s core research areas now include the dynamics of the climate, the ocean, and the atmosphere; biogeochemical processes; and ecosystem dynamics. The center brings together researchers from diverse fields and helps them get funding for interdisciplinary research projects.

C.DELSI’s regional focus on California gives it a distinct niche in research on climate change, Zachos says.

“Other institutions have many more people involved in research on climate change, but they’re working on global scales,” he says. “The regional perspective has been missing, and many scientific and funding organizations are now calling for more effort in this area.”
That was the assignment for sociologist Marcia Millman, whose new book explores the links between real-life love stories and what we see on the big screen. What is it that makes films like Titanic, The Bridges of Madison County, and Casablanca resonate so strongly with audiences? According to Millman, these films reflect plotlines that turn up over and over again in real life: stories of first love, sacrifice, rescue, postponement, and more.

“Many people think Hollywood movies give audiences unrealistic views of love, but I think people love movies because they reflect our own experiences and can help us understand our choices,” says Millman, a professor of sociology at UCSC whose previous books are about medical errors, money and love, and women’s obsession with weight.

In The Seven Stories of Love (New York: William Morrow, 2001), Millman explores the major romantic scenarios that play out in films, novels, and real life. She identifies seven distinct plots and explains the unconscious elements and origins of each. Based in part on 15 years Millman spent teaching the UCSC course The Sociology of Love, the book presents plots drawn from real-life interviews, as well as art, to show how people tend to make choices about their romantic partners without being aware of the factors shaping their actions. The Seven Stories of Love is a highly readable book that bridges the fields of psychology and sociology.

“I noticed the connection between the romantic histories I was gathering in research interviews and the plots of contemporary and classic movies and novels,” recalls Millman, who watched and read hundreds of love stories. “That’s when I gained a clearer sense of each plot and its variations.” In subsequent interviews, Millman found a strong link between repetitive love scenarios and certain formative experiences from childhood.

Although Millman writes about seven love plots, readers invariably find one story that resonates more strongly for them. That process of identifying one’s own personal story can help readers gain insight into their own patterns of behavior and can help them build their own “happy endings,” says Millman.

Romantic scenarios in real life and in fiction, from Pride and Prejudice to Dirty Dancing, are driven by the wish to turn early losses into victories, says Millman.

“Without realizing it, we relive disguised versions of our childhood scenarios in order to give them a happier ending,” she says.

While some people grow and resolve their problems through love, others have difficulty achieving satisfying romantic connections because they keep repeating the same defeat instead of overcoming it. By understanding their basic story and learning to exercise control over it instead of helplessly following its course, readers can finally choose the right partner or make an existing love relationship more rewarding.

Millman’s seven stories of love follow.
1. First Love

This story is about a lover who helps us separate from our parents and establish our own independent identities, which is why adolescent girls flocked to Titanic and Dirty Dancing. Pining for a first love years later is a signal that something is missing in life, and it often accompanies a desire to recapture our youth.

2. Pygmalion

The Mentor and the Protégée: My Fair Lady, the most famous modern Pygmalion story, focuses on the controlling male teacher, but the protégée also has an agenda: a desire to be recognized and nurtured by a parental figure even as she wants to gain his knowledge and power for herself. Can relationships that start out distinctly unequal have a happy ending? It can be difficult if the “teacher’s” need for admiration and control conflicts with the “student’s” need to grow.

3. Obsessive Love

Millman examines real-life scenarios and several examples from popular culture, including Fatal Attraction, and concludes that an obsessive relationship is doomed unless the one who loves more can shift some emotional energy to other interests and people.

4. The Downstairs Woman and the Upstairs Man

This rags-to-riches plot, familiar to fans of Pretty Woman, Jane Eyre, and Pride and Prejudice, features a smart but poor and unconnected woman who reaches beyond her social status to gain the attention of a powerful and influential man. Initially cool to a woman so beneath him, the man ends up defying convention and committing to her. Women drawn to this scenario had fathers who criticized or abused them, making them feel worthless and unprotected. They repeat this story not to suffer but to triumph—to be desired instead of ignored, and to prove that they are the equal of any man.

5. Sacrifice

Guilt Overwhelms Desire: People who live out this plot don’t believe they can have what they want without harming another or paying a terrible price. This scenario raises self-esteem through renunciation rather than happiness. Classic examples are Casablanca, The End of the Affair, and The Bridges of Madison County.

6. Rescue

Doing What Your Mother Could Not: The woman who is drawn to rescue scenarios often had a father who was sick, weak, or absent. Although the woman believes her love can help her wounded lover reach his full potential, the key element of this story is the woman’s ultimate wish to restore a strong lover/father so he will rescue her in return. The story of Beauty and the Beast contains many subtle aspects of the rescue plot.

7. The Courage to Love

Overcoming Postponement and Avoidance: Probably the universal favorite, this love story is about the willingness to take a risk for love—and having the faith things will work out, as fans of Sleepless in Seattle will recall. People who live out this scenario fall in love only after they are forced to confront the reality of time and mortality. The courage to love actually provides a sense of immortality, while people who avoid or postpone love usually discover that their lives have gone by unlived.

—Jennifer McNulty

Movies reflect real-life tales of love and heartbreak
An internationally respected professor of English and comparative literature, Wlad Godzich came to UCSC from the University of Geneva in Switzerland. He is the author of several critically acclaimed books on literature and language, including *The Culture of Literacy*.

Wlad Godzich, completing his first year as dean of UCSC’s Division of Humanities, is naturally curious—about any number of subjects. Once a decade, for example, he takes a university-level course in human anatomy because “humanists can’t comment on the ethics of modern medicine if they don’t truly understand the latest developments in the field.” He is at his most passionate, however, discussing the state of humanities scholarship in higher education. In the interview that follows, he describes the political and economic forces that have reduced humanities offerings on U.S. campuses. And he makes the case for reversing that trend, arguing that literary scholars, historians, philosophers, and other humanists offer perspectives that can help society confront some of its most daunting challenges. —Jim Burns
Do you accept the view that humanities in American higher education is in a state of crisis?

Yes. If we go back to, say, the late 1950s, humanities represented 40 percent of the classroom enrollments on most campuses. If we jump forward to the mid-1990s, we see that the humanities represent on most campuses only about 20 percent of enrollments. So this is a very, very drastic diminution over time.

In addition, the current humanities enrollments, in large measure, consist of the important innovations that were born in the 1960s and '70s—ethnic-study programs, women's studies, new departments of an interdisciplinary nature. These programs were not part of the American university in the 1950s. So once you factor that in, all that is left of what was the humanities in the late 1950s is roughly about 10 percent of the classroom enrollments on most campuses. This is a very dramatic change.

How would you explain this decline?

The humanities were central in the creation of universities in the United States, and humanities departments were the first that most universities had, especially the oldest ones on the East Coast. It was in American universities that you had a sequence of courses in Western civilization that were developed in the 1930s, '40s, and '50s. These courses were interdisciplinary in orientation, and they prepared students for the specialization of their last two years, where they would perhaps go on to earn a prelaw or a premed degree to prepare them both for academic and professional life.

In those days, university administrators also maintained a ratio of four humanities faculty to one natural sciences faculty for a less lofty reason: It was more expensive to train a natural scientist. For a scientist, you have to have labs, you have to have equipment that becomes obsolete. The equipment of a humanist is cumulative. You buy a book and 500 years later, if you have handled it properly, you can still use it.

Things began to change under the impetus of the Cold War and especially with the Sputnik launch in 1957. The federal government began to be very involved in higher education. It began to provide funds for research, primarily in the sciences. The gap began to grow, then, between the funding that was received for the sciences and that which was received for the humanities.

The turbulence of the 1960s also contributed to a decline of the humanities. Humanists were embracing concepts that were extremely controversial at that time, having to do with racial equality, pacifism, women's rights, the attitude toward work, the future of the family, the environment, you name it, it was all suddenly thrust in the forefront. Very often it was humanists who were carrying the banner. That made administrators, who supported these humanists, very nervous. The administrators were criticized by legislators, by public officials, by their own boards of trustees, or they were simply punished by having their budgets cut.

The economic recession of the 1970s also played a role in reducing humanities offerings in higher education. The period of high inflation that concluded that decade pushed many students—and even more university administrators—toward what became known as the “New Vocationalism,” a utilitarian conception of the university as a production site for workers rather than a place where people learn.

So you began to have a policy of benign neglect applied to the humanities. Essentially humanities budgets began to be frozen, and they remained pretty much frozen all the way into the '80s. This was of course a period when American universities were growing, so, as the humanities budgets remained constant, the growth was transferred to other divisions within the university.

What are the ramifications of this reduced support?

The downside is the loss to the society at large, especially now, when there is such major turbulence in the area of values. We need to adapt to the transformations brought upon us by technology, globalization, the breaking up of
Humanities

continued

the traditional family. Bear in mind that until 1950 or so no one even knew that there was such a human being as a teenager. This is an invention of the past 40 or 50 years. This is something that would have come as a total surprise to a Victorian, for example, that you could have some new human being called a teenager, wielding increasingly important economic and political power—becoming an arbiter of cultural trends. So that popular music, rock and roll, certain kinds of movies, are geared toward that population.

These are just a few of the issues, the transformations, that would benefit greatly from the input of humanists.

How can humanists help us consider such transformations?

Let’s ask ourselves a very simple question: What are the humanities about? The humanities are fundamentally about what makes us human. It’s not that our essence has been fixed once and for all. The history of humankind is our constant revision, refinement, and redetermination of what it means to be human.

We know that until 100 to 150 years ago, it was still heretical for many people to consider that women were human beings, endowed with reason. That’s why they didn’t have legal rights. It’s only slowly that they have acquired those rights, in some countries they still don’t have those rights, and certain countries are retreating from this, such as Afghanistan at the present moment. But humanists have made women’s rights a part of their agenda.

Today, who are we allowing to define the essence of humanity? Biologists, who tell us that if we let them they will clone human beings and engage in the industrial production of human beings? Or economists, who tell us that they know what motivates us, that they know what dictates and controls our behavior?

What first impressions have you formed about UCSC’s ability to participate in this sort of inquiry?

Well, it’s important to note that UCSC, as a campus, was born and has developed precisely during this period of turmoil nationally for humanities. And, the retirement in recent years of many of our division’s founding faculty has further affected the quality and quantity of humanities offerings at UCSC.

It is our division’s goal to arrest this decline, refocus the work of the division, and recapture the campuswide role that humanities scholarship should play in this new century.

I am, therefore, very pleased to have so many remarkable individuals in a number of departments already addressing some of society’s most important issues.

The History of Consciousness Department, for example, deals with the kind of cultural, historical, and political issues—in an interdisciplinary way—that cannot be dealt with elsewhere in academia. And the Women’s Studies Department on this campus is quite a remarkable endeavor, which combines very rigorous intellectual training with social activism. The internships that the students in women’s studies conduct are the vital line for so many of the community organizations in this county and in the surrounding region.

In fact, we have, in all of our humanities departments, a kind of an interdisciplinary spirit, a willingness to engage across boundaries here, and a desire to ask the kinds of questions it would be difficult to ask in other places.

It’s very, very difficult on a larger campus—let’s say Berkeley for example—to come up with a new program. When you talk to deans or to higher administrators there, they speak of their frustration at being able to get something past the faculty. Here, there is much greater willingness to try things out; people are much more open. This is another reason I think that one can be optimistic about the future of humanities at UCSC.
In your time here, are there particular research activities that have caught your eye?

We have a whole range of fascinating work that is being done in the History Department. We have research on what I would call, broadly, the democratization process around the world. We have a number of historians who are interested in understanding how processes of inclusion—of including different strata of society, different age groups, gender groups—have evolved. For example, one of our historians, Gail Hershatter, works a great deal in China, trying to understand how the Cultural Revolution affected women, how these women now understand their position in relation to this very large culture, and how that transformation has helped control the population growth in China and is leading to a different kind of Chinese society.

Mark Cioc in the History Department has just finished a book on the history of the Rhine River. This is the first significant work on the environmental history of a European river to be written by an American. This river is particularly important to European history because it crosses a number of countries and has been a very significant boundary. Its history is not just natural history, but it is the history of the dams and the bridges and of fights and competing interests.

UCSC has many other exceptional humanists. People like Helene Moglen in the Literature Department, who has just published a book on the origins of the novel. The standard theory of the origin of the novel is that it was linked to the rise of the bourgeoisie and required a certain kind of realism. You had to actually describe lives as they were led. She looks at the early history of the novel and shows that there’s actually a tension between this realistic element and an element of fantasy.

Or like Chris Connery in literature, who is writing a history of the Pacific Ocean: What have people thought of the Pacific, how have they imagined it, and how have those thoughts changed over time?

How do you see UCSC’s new Institute for Humanities Research evolving?

The institute was created in 1999 to support humanities faculty and graduate student research. It is also the home of the Center for Cultural Studies, one of the nation’s premier centers of interdisciplinary research, and a number of other focused research activities.

The institute is a very important part of the future of the humanities on this campus, and we hope it will have broader influence as well. It is already becoming a place where research agendas for the future are being identified. One of the major responsibilities of this institute is to ensure that we simply don’t fall back into the tried and the true, but identify new domains in which humanists ought to begin to work.

Let me give you an example of this kind of inquiry. We are beginning to examine how the domination of images over written language is determining the nature of our experience. What kinds of values are linked to this change?

Compare what’s happening today to the changes brought about by the introduction of the textbook. Before you had textbooks you had to learn from one master. The textbook, on the other hand, was the distillation of the knowledge of several masters. But in order to learn from several masters, readers of those early textbooks had to accept the notion that they could learn from somebody whom they had never met. So, textbooks not only made knowledge available to more people, their very acceptance as a source of knowledge promoted a certain amount of equality between human beings.

In fact, the people who invented textbooks—the Dutch in the 16th century—didn’t think that this would lead to democracy. But 60 to 70 years later, they realized that this print culture contained within it a seed of human equality—and that literacy was a way of enforcing equality.

So, how is today’s digital culture, in which images dominate printed language, changing human values? How is the Internet, which is making available an abundance of information, transforming us? We need to ask ourselves these kinds of questions. And who is going to ask these questions if not humanists?◆
Standing Up for Workers

UCSC economist

Lori Kletzer

has coauthored a compelling proposal to help workers who lose their jobs through no fault of their own.
As activists take the debate over free trade into the streets of Seattle, Washington, D.C., and Quebec, UCSC economist Lori Kletzer is acknowledging a fact that few proponents of free trade admit publicly: As we move into a globally integrated international economy, some people will lose their jobs.

Kletzer is an advocate of further trade liberalization but only when it is accompanied by measures that address the costs borne by some workers. “We need more support for workers who lose their jobs, especially those who take a pay cut on their next job,” she says.

Watching people lose their jobs to trade, technology, and downsizing prompted Kletzer to tackle the painful subject of U.S. worker dislocations during a recent stint as a visiting fellow at the Institute for International Economics (IIE). The result is a compelling proposal to provide up to two years of financial help to workers who lose their jobs through no fault of their own and who go on to get a new job that pays less than their previous job. Called wage insurance, the proposal recognizes that the emerging global economy has negative effects on some workers, and it broadens the safety net to include workers who have been dislocated for any reason.

Coauthored with Robert E. Litan, vice president and director of the Economic Studies Program at the Brookings Institution, Kletzer’s paper has attracted support from a broad spectrum of government policy makers, free-trade proponents, and commentators, including Carla A. Hills, the United States Trade Representative who served under then-President George Bush. Even Alan Greenspan has expressed interest in the idea.

“Trade liberalization is a focal point for anxiety about American jobs, and public opinion reflects that,” says Kletzer, referring to a poll by the Pew Research Center for People and the Press that found that 78 percent of respondents said “protecting the jobs of American workers” should be the top priority in shaping U.S. trade policy.

If the U.S. is to recapture its leadership role promoting international trade liberalization, advocates of free trade must address widespread public concern about job loss, says Kletzer, an associate professor of economics at UCSC. The policy brief, “A Prescription to Relieve Worker Anxiety,” was published simultaneously in March by IIE and the Brookings Institution.

“The benefits of free trade are clear, but proponents of free trade have failed to acknowledge that as we move into a globally integrated international economy, some people will lose their jobs,” says Kletzer.

Trade-related job losses are concentrated in manufacturing industries where import competition is strong, including the automobile, steel, textile, apparel, computing, and electronics industries. But the loss of any manufacturing job is costly: Displaced manufacturing workers suffer an average 17 percent drop in wages when they become reemployed, says Kletzer.

“That’s a lot,” says Kletzer, but the average 17 percent drop obscures two even more compelling figures: Thirty-four percent of displaced manufacturing workers earn as much or more on their new job, while 25 percent experience reemployment earnings losses of 30 percent or more.

“What I found is that some workers do okay, and an equal number just take it on the chin,” notes Kletzer. “So I’m saying, let’s not worry about those who do as well or better. Let’s concentrate on the ones who are suffering. This proposal fills a policy gap by helping workers after they get a new job.”

The idea of wage insurance has been around for about 15 years, but Kletzer is the first economist who has analyzed displacement figures and identified the relatively small portion of workers who experience the greatest need for assistance. That finding enabled Kletzer and Litan to conclude that a wage insurance program tailored to serve those workers would cost much less than expected: If workers received 50 percent of their earnings loss, the program would cost from $2.9 billion to $3.8 billion a year, depending on maximum annual assistance levels.

Key elements of the Kletzer-Litan proposal are as follows:

- Workers would receive no benefits until they begin a new job.
- Benefits could range from 30 percent to 70 percent of the total reemployment earnings loss.
- Benefits would not exceed an annual cap for each worker.
- To be eligible, workers must have been displaced from a full-time job they had held for a minimum of two years.

Although some people oppose the proposal on the grounds that it would create a new government program, many policy makers and pundits recognize that efforts to promote free trade have stalled since massive public protests disrupted the World Trade Organization’s meeting in Seattle in December 1999.

Referring to the lost momentum on trade policy, Washington Post columnist David S. Broder wrote that Kletzer and Litan’s proposal “hints at the kind of open-mindedness that will be needed to build broader political support for free trade.”

Kletzer wants to broaden the scope of the discussion. “Refusing to acknowledge the costs of free trade is simply untenable,” she says. “The politics of free trade require us to acknowledge that there are costs. We have to move to a more balanced dialogue.” —Jennifer McNulty

The brief is available on the web at 207.238.152.36/policybriefs/NEWS01-2.HTM
Alumni scholarship recipient is realizing her dreams

"Overcoming all obstacles, achieving educational dreams."

T hose words are printed on an Alumni Association plaque that hangs over Carrie Weech’s computer, providing daily inspiration as she handles the conflicting demands of a full course load at UCSC, single parenthood, and advanced carpal tunnel syndrome.

Weech was just one of 15 remarkable undergraduates who received Alumni Association Scholarships last year. They were a diverse group in all ways but one: a determination to succeed at UCSC.

Weech began her college career at Cabrillo College, transferred to San Jose State, and ended up dropping out in her junior year to get married and start a family. After several years and a divorce, a mentor suggested that she return to school; she re-enrolled at Cabrillo and subsequently transferred to UCSC as a sociology major.

“When I first got here, I was so scared,” Weech said. “I was thinking, who do I think I am? I’m older: Will people laugh at me? How will I manage my finances?” But Weech took the plunge and quit her job so she could focus on studying. Just then, she found out she’d been awarded $2,500 from the Alumni Association Scholarship Fund. “The award couldn’t have come at a better time. It made me feel like I belong here,” said Weech.

She certainly does. Sociology professor Dana Takagi, who supervised Weech’s spring-quarter internship in children’s mental health, notes her remarkable “zest for learning. In my 14 years here, I’ve rarely seen her level of motivation.”

Weech is thinking about a career in law or social work, “something that will give me the power to advocate for those who don’t have a voice.”

Help other students achieve their educational dreams by making a donation to the Alumni Association Scholarship Fund. Call (800) 933-SLUG or donate online at giveto.ucsc.edu; click on Give to UCSC Online.

Alumni scholarship recipients are realizing their dreams at UCSC.
Come to the Alumni Vintners Wine Tasting

Feast your senses on fine wines and dining at the 12th annual Alumni Vintners Wine Tasting and Auction on Saturday, July 28, at the Elena Baskin Visual Arts Center courtyard on campus. The 5 p.m. event offers superb wines poured by alumni vintners.

Past participants have included Bargetto Winery, Bonny Doon Vineyard, Domaine Chandon, Flowers Vineyard and Winery, Glen Ellen Winery, Husch Vineyards, Mirrasou Winery, Radcliffe Cellars, Patz and Hall Wine Company, Roudon-Smith Winery, Saintsbury, Santa Cruz Mountain Vineyard, and Zayante Vineyards.

Guests enjoy a panoramic view of Monterey Bay, hors d’oeuvres, live jazz, and the prospect of fantastic bargains at the silent auction, which benefits the UCSC Alumni Association Scholarship Fund. Wines, dining, and other sought-after items are offered. This year’s highlight is a five-night stay in Paris in a charming flat near Sacre Coeur. Last year’s silent auction generated close to $10,000 for the fund.

To R.S.V.P. or for more information, call the Alumni Association at (800) 933-SLUG.

What does your perfect reunion look like?

Alumni volunteers, supported by the Alumni Association staff, have, in recent years, inspired reunions for members of the Pioneer Class, former staff of City on a Hill, African American alumni, Chicano and Latino alumni, and more.

Now you can help the Alumni Association create the reunion you want to attend by becoming a reunion volunteer. Alumni Association staff can develop mailing lists for your group, produce and mail invitations, take reservations, find a site, provide seed funding, and offer advice about how to maximize reunion participation.

Reunions generally take place during Banana Slug Spring Fair campus open house and reunion weekend, tentatively scheduled for April 20–21, 2002. Alumni from the classes of ’97, ’92, ’87, ’82, ’77, and ’72 will be invited back to campus that weekend to celebrate their 5- through 30-year reunions. Planning for these and other reunions begins now.

To become a reunion volunteer, contact the Alumni Association by phone at (800) 933-SLUG or via e-mail at alumni@cats.ucsc.edu.

All-UC Alumni Career Conference

Keynote speaker; workshops; exhibits; networking opportunities

Cost: $50 for Alumni Association members; $70, all others

Registration deadline (postmark date): August 17. Add $15 for registration postmarked after this date. Register online at www.ucalumni.net, or contact the UCSC Alumni Association toll-free at (800) 933-SLUG. E-mail: alumni@cats.ucsc.edu

Reunited: Nearly 350 alumni and friends attended the 2001 All-Alumni Reunion Luncheon held during Banana Slug Spring Fair. Pictured above enjoying conversation over lunch are (l–r) Kresge associate provost Conn Hallinan, literature professor Paul Kruenitz, and alumna Gary Merrill (Kresge ’74).
Cowell College

'69 Michael TWOMBLY was “last seen entering a Buddhist monastery after cashing in his SEP IRA.”

'70 Tom HASKELL received the 2000 Achievement Award for the state of Iowa from the Missouri Valley Adult Education Association; he is now employed as an associate director of Buena Vista University’s Council Bluffs Center.

'72 Adilah BARNES will tour her one-woman show “I Am That I Am: Woman, Black” in Rotterdam, Holland, this fall.

'76 Kathryn REASONER is on a one-year sabbatical in Japan, where she’s teaching and doing research in arts management and cultural policy. Ron RUSSELL is president of a company that is developing electronic instrumentation for underwater use.

'77 Kevin EISENBERG is making wine for fun and periodically injuring himself playing competitive basketball and indoor soccer; at work he shares “the wisdom of western civilization.”

'83 Beth BLEVINS and her husband, Steve Hirsch, are pleased to announce the birth of their second child, Emily Rose Blevins Hirsch; the family moved recently to Ashton, Md.

'86 Seiko UETA is living in Tozoori, Japan, where she is married to a dentist and managing the dental clinic; they have two children.

'87 James CALLEROS has been promoted to auditing supervisor for Northwest Administrators, a third-party benefits firm in Daly City, Calif.; he welcomes all communications from Bay Area alumni who share his interest in art, literature, and French culture; his e-mail is jm3320@aol.com.

Vivien GREENE lives in New York and is a curator at the Guggenheim Museum; she is completing her Ph.D. in art history.

Jennifer HORNE and her husband quit their software sales jobs in Silicon Valley to take a one-year world journey.

'Sequoia College

'91 Elisa GORDON has completed a fellowship in clinical medical ethics at the MacLean Center at the University of Chicago.

'92 Jason CROUTHAMEL and his wife, Grace Coolidge, are receiving their Ph.D.s at Indiana University and have accepted a dual hire as professors at Grand Valley State University in Michigan. Christopher MONDAY has been living, traveling, studying, writing, and doing research in Russia for the last four years, as well as working on a Ph.D. in economics.

'93 Michelle EUGENI is teaching seventh grade in San Jose, learning to play piano, working on Spanish, and saving for a sailing adventure with David GEILHUFFE (Cowell ’93).

'94 In March, Jason Sinclair LONG was cast to perform in the Blue Man Group; he is training/performing in New York and then will permanently join an existing BMG show (in Boston, Chicago, or Las Vegas). Elizabeth WALLER received an M.A. in education from UCSC in 1996 and for the last four years has been teaching English at Mission San Jose High School, where she is chairperson of the English Department, a member of the School Site Council, and the speech/debate coach.

'95 Dara Ruth PAPO is doing case management for people living with HIV or AIDS.

'96 After completing her master’s degree in English at San Francisco State University and earning her teaching certificate in English as a second language from the College of Notre Dame in Belmont, Janeen MALATESTA is studying Spanish in Spain.

Stevenson College

'69 Linda Kay TARPLEY Hale has just completed her 31st year of teaching for a better world at the high school in Sonoma, Calif.

'70 Jonathan GREEN is president-elect of the American Academy of Physician Assistants in Occupational Medicine and takes office as president in July. Virginia MCKINLEY continues to serve as vice president for academic affairs and dean of the college at Warren Wilson College in Asheville, N.C.

'73 Nina SUNTZEFF Zagaris received an M.A. in museum studies from John F. Kennedy University in Orinda, Calif., and is working as a grant writer.

'71 Chuck COLEMAN would love to hear from old friends; he can be reached by e-mail at ChuckNWeHo@aol.com.

'74 Walt BOYES has begun a two-year term as vice president for publications of the Instrumentation, Systems, and Automation Society and is the ex officio chairman of a publishing company; he has two books coming out this year, teaches web-based seminars in marketing, and has been a columnist for Flow Control magazine and The Industrial Marketing Practitioner for several years. Richard CEDERSTROM graduated from Western States Chiropractic College in 1994 with a doctor of chiropractic degree.

'75 John JANGWONG is a clinical case manager in psychiatry at UC San Francisco/San Francisco General Hospital.

'76 Joseph BUSH is associate dean and faculty member in clinical psychology at the Fielding Institute in Santa Barbara; he is doing research in children’s adjustment to chronic illness with the Starbright Foundation. Anne (Cindy) COSCARELLI is a clinical psychologist, researcher, and UCLA faculty member; she directs the Rhonda Fleming Mann Resource Center for Women with Cancer at UCLA; she recently invited Rabbi Ed FEINSTEIN (Stevenson ’75), a cancer survivor who is active in developing cancer-support programs in the L.A. Jewish community, to present a lecture.

'78 Karl BROWN has earned an M.S. in software engineering from Golden Gate University in San Francisco. Kathleen DAVIS Harris earned a teaching credential from Western Washington University in 1999 and took a job as an enrichment advisor for gifted students in grades four through six; she loves being the mom of three young children. Julie KOSTERLITZ covers economics and finance issues for the National Journal; her first child, Emma Justine, was born in 2000.

'80 Jack ABBOTT is an interactive multimedia consultant with fun long-term clients like the San Diego 200, San Diego Padres, City of San Diego, BART, and the Gorilla Foundation. Beverly BIGBEE has a chiropractic office in Honolulu and would love to hear from fellow alumni at beynail1@earthlink.net.

'81 Karen LAUCK Rafter is living in Concord, Calif., raising two teenage boys, and working for the IT division of Kaiser Permanente.

'82 Sally MacKAIN has been on the psychology faculty at the University of North Carolina at Wilmington for 10 years, teaching clinical psychology and researching the treatment of the severely mentally ill in prisons and in the community; she’s been married for 13 years to Bob Cutting, and they have two boys.

'84 After spending five years teaching English and traveling the world, Mitchell MARIOTT got married and is now selling subscriptions to the online classroom and university Classroom Connect.

'86 Daniel MAULLER travels the world as a tour director but still is based out of Chicago.

'88 After practicing law in Chicago and Detroit, Katie HARRIS Rivera is now a full-time mom, married to Kurt Rivera, a local television anchor/reporter. Michael SAPUNOR is working on water resource management issues in Santa Cruz County and playing
O Sister!

Gillian Welch (B.A. art, Porter College ’90) follows up two successful albums with a popular movie soundtrack.

Hollywood glamour was nowhere to be found when singer Gillian Welch stepped before the camera for her cameo role in the movie O Brother, Where Art Thou? Just getting there had been hard enough: On tour in Manhattan, she played until about 2 in the morning, boarded a plane for Mississippi at 6 a.m., then was driven to sweltering Yazoo City, Mississippi at 6 a.m., boarded a plane for Mississippi at 6 a.m., and was told the circles under her makeup had a similar attitude. “All the woman did was darken the circles under my eyes. That’s all I got for my big-screen debut.”

Welch, who played a major role in the 2000 movie’s often-haunting soundtrack, had a minor screen part, portraying a rural woman asking for a record by “The Soggy Bottom Boys,” the film’s protagonists. “My little cameo in the movie was a first—and probably last—for me.”

Welch’s unique sound, a blending of various musical influences, especially bluegrass and traditional country music, made her a natural for O Brother. The Coen Brothers’ movie was set in the 1930s South and billed as a retelling of Homer’s Odyssey. In addition to performing on the soundtrack, she served as the film’s associate music producer. (T-Bone Burnett, who produced Welch’s first two albums and is also known for his work with Los Lobos and Counting Crows, was the movie’s music producer.)

The old-fashioned sound—no recording equipment made after 1948 was used—struck a chord with a public more accustomed to pop-country music, propelling the soundtrack to the top of the country charts. “It’s just completely surpassed any expectations that anybody had,” said Welch.

Welch’s career as a singer-musician has been an odyssey of sorts. The artist who sang the moonshiner’s lament, “Tear My Stillhouse Down,” in her 1996 debut album, Revival, grew up in Los Angeles in a show-business family. (Her parents worked on television’s Carol Burnett Show.) She learned to play the guitar, drums, piano, and ukulele, and listened to everything from her parents’ hootenanny music to James Taylor and the Beatles.

It was during her time at UCSC, though, that she was first drawn to the distinctive sound of bluegrass music. After trying her hand at performing in the Bay Area, Welch attended the Berklee College of Music in Boston, where she met David Rawlings, her singing and songwriting partner ever since.

Now living in Nashville, she has released a second album, Hell Among the Yearlings, and is working on her third, Time (The Revelator), due out July 31. Welch’s style of music, as she puts it, “sort of defies classification.” While she has one foot in the bluegrass world, she also gets airplay on college and alternative radio. “Our stuff turns up in funny places,” she said, recalling that one punk-rock station plays her “blood-and-guts gospel songs.”

Country music radio didn’t quite know what to do with the O Brother, Where Art Thou? soundtrack. “When they first released the album, there was no talk about anybody playing it on country music stations,” Welch said. Then the soundtrack became Billboard’s top country music album, but country stations still weren’t playing it. “It made them look bad, so they eventually started playing it.” Welch doesn’t consider herself part of country music’s modern mainstream, but she’s optimistic that the soundtrack’s success will spawn wider interest in traditional and acoustic music. The veteran musicians who worked on the soundtrack “are getting calls left and right,” she said. “It’s been such a great thing for the music community I’m involved with. It’s already having an influence on the next batch of albums coming out of this town.”

“This town,” Nashville, is where Welch feels at home these days. “From Santa Cruz to Nashville was not very difficult for me. I have such respect for so much of the music which has been made here,” she says. While working on her latest album, Welch has been steeped in Nashville’s tradition, recording in the restored RCA Studio B, where the likes of Elvis Presley, Roy Orbison, and the Everly Brothers once made musical history.

While Welch has no plans for more acting, movie soundtracks are another story. Her music has been part of many films, including Hope Floats and Ulee’s Gold, and she was told early in her career to expect a lot of movie work. “People have always thought our songs were cinematic,” she says.

Welch recently collaborated with Willie Nelson on “I’m Not Afraid to Die,” which she wrote with David Rawlings, for the independent film The Journeymen. “I’m a big fan of Willie’s, so that was a big deal.” The song is typical of her style: gritty, and sometimes dealing with death, but not gloomy:

Forget my sins up on the wind, My hobo soul will ride, I’m not afraid to die. I’m not afraid to die.

—Louise Gilmore Donahue
guitar in a Santa Cruz–based band, the Frequent Flyers.

89 After two years at Microsoft working as a usability engineer, Jay ESKENAZI is now the usability manager at Expedia.com. Lisa LEVINE graduated from San Jose State University with a master’s in social work and is now working as a medical social worker providing care management services to people with HIV and AIDS.

91 Jennifer YEARLEY received her D.V.M. from Washington State University in May and is going into small-animal practice in Keene, N.H.

92 Anthony MONTALBANO is a professor of English at Southwest Texas State University. After living in Seattle for six years, Zile Wu Rowley moved to New York City with her husband, Malcolm ROWLEY, who works for an Internet company; their first child, Thelonious, was born in February 2000. Timothy WEINER graduated from law school in May 2000, passed the California Bar Exam, and was sworn to the California Bar in December 2000; he is currently working with the Los Angeles County District Attorney’s Office.

93 John SCHWEITZER recently worked as the key grip on two feature films—Haiku Tunnel and Teknolust—which he hopes will come out this year.

94 Tara PAINTER Malec received an M.S. in clinical psychology and is working as a research associate at the Psychological Corporation.

97 Sarah Anne RUSSELL is in her third year of medical school at UC San Diego School of Medicine, and she is manager of the UCSD student-run free clinic.

98 Andrea VAN NOTE was planning to graduate from San Francisco State with a master’s in counseling in May and marry Adam King in October; friends can reach her at dre46@bananaslug.com.

00 David RICHTER completed the Summer Intensive Language Program in Arabic at the Monterey Institute of International Studies in 2000.

Crown College

72 Richard HILL has been named the new city manager of Capitola, Calif. In 1999, Lynne VALEK earned a Ph.D. in human and organizational systems from the Fielding Institute; she teaches organizational studies at the California School of Professional Psychology in Fresno and works as an organization consultant.

74 Stephen EDBERG is in his 22nd year at the Jet Propulsion Lab, working on the Cassini spacecraft mission to Saturn and developing curriculum materials in space science.

75 Lori JOHNS is a family nurse practitioner providing acute care in the emergency room; she is also a major in the California Army Reserve National Guard.

76 John LAUFER had twins and has founded a company, Buzz Tools. Yvonne RAUCH received her Ph.D. in English in 1997 from the University of Oregon; she is now working in a small rural school in eastern Oregon, developing interdisciplinary curriculum in language arts and science and doing staff development in reading and writing.

78 LizAnne WHITING Jensen and her husband, Kenneth JENSEN (Stevenson ’73), own a handmade weather vane company, West Coast Weather Vanes; one of their weather vanes appeared in an episode of the X-Files in fall 2000.

79 Chris METZLER is a professor of geology and oceanography at Mira Costa College in San Diego County; he is currently chair of the Physical Sciences Department.

81 Cyndi ASHBroOK is a family practice physician at Contra Costa County Regional Medical Center teaching family practice residents-in-training; she is married and has two daughters.

82 Deanna JUSTICE Reynolds is a hematopathologist in group practice on the Texas Gulf Coast; she is happily married with two daughters, ages nine months and six years.

83 Don SLEETER is working on developing software for analyzing DNA sequences; he and his wife, Kim WISEMAN (Stevenson ’80), live in the San Francisco Bay Area, have two small children, and are “as happy as can be.”

84 David CRAGO has been promoted to the rank of commander in the U.S. Public Health Service; he runs a drug program at a federal prison is Colorado and is married with three children.

86 After receiving a teaching credential from San Jose State University and teaching science in Hawaii public schools, Leland “Lee” OLSON is pursuing an M.S. in biblical studies at Calvary Theological Seminary; he is married with two children.

87 Michael McKay is married with a one-year-old son; he is enjoying card playing and researching medieval games.

88 Roy BRIDGMAN is working as a biologist for Impact Sciences in Oakland and “swilling beer in San Francisco.”

91 Ellen REITERMAN has moved from San Diego to Berkeley, where she is a preschool teacher at Monteverde School.

92 Andrea SILVER Palermo joined a private pediatric practice in Atlantic City, N.J., and recently gave birth to her first child, Sydney Anne.

93 Tiffany FAHS Felicienne is a consulting technical recruiter and the owner of Nerd Search; she is a mother of three and living happily in Oakland, Calif.

94 After receiving a J.D. from the University of the Pacific’s McGeorge School of Law, Benjamin HARVEY has been named associate attorney at the Sacramento-based Drohny Law Project; he assists clients with probate, estate administration, and estate planning. Ulysses HILLARD completed an M.S. in civil engineering at the University of Washington and now works in Berkeley as an engineering hydrologist.

95 Sarah ERVING is going to Brooklyn Law School and has an internship with the Puerto Rican Legal Defense and Education Fund. Merci LOBNER and her fiancé, Karl DeBarraicua, live in Loomis, Calif., and have a daughter, Sophia, born in June 2000.

96 Jeremy MARLEY is teaching in Marquette, Mich., and working toward an M.A. in education.

Virginia YOUNG married Brad Fisher in July 2000; they live in Napa, Calif., where she is an attorney with the firm of Coombs & Dunlap.

97 Ilya REEVES worked for the California Department of Fish and Game on the Ocean Salmon Project; he is now applying to law school with the intention of practicing environmental and maritime law.

98 Francisco QUITERO has been teaching mathematics in Watsonville, Calif., for the past two years and loving his job.

00 Frances BARRIOS has been named director of community services for Planned Parenthood Mar Monte; she oversees the agency’s outreach and education activities for Santa Cruz and Monterey Counties; she began working at Planned Parenthood as a UCSC intern.

Merrill College


76 Michael BRINT has been appointed dean of the College of Arts and Sciences and professor in the Political Science Department at California Lutheran University in Thousand Oaks.

78 Jean Walton WOLFF edited an anthology, Long Baptisms; she lives in Capitola, Calif.

79 Beth GOLDFADEN has an M.S.W. from San Jose State University and works as a clinical social worker for the National Center for Posttraumatic Stress Disorder in Menlo Park, Calif.

81 Kat EPPERSON GALICK earned a master’s degree and has worked for the last 20 years as a juvenile counselor with the Department of Youth Services; she and her husband, a police sergeant, have three children and spend their free time building a cabin in the woods.
'84 Mark BOEHLER’s company, Roche Group, was awarded the 2000 Presidential Green Chemistry Challenge Award in recognition of process improvements that considerably reduce emissions in the production of ganciclovir, the active ingredient in Cytovene, which is used to treat cytomegalovirus retinitis in patients with compromised immune systems. Jess GRANT wrote a master’s thesis at Evergreen State College on legal repression of radical groups (Earth First, Brown Berets), which resulted in repeal of the state of Washington’s archaic anarchy and sabotage statutes.

'86 Alfred KWOK has been named an assistant professor of physics and astronomy at Pomona College; he uses spectroscopy to do optics research. Edward LOPEZ is teaching at the Wilderness School in Daly City/Pacifica, Calif.; he’d love to reconnect with fellow “moat rats.”

'87 Christie EVERY has been casting TV print and film shoots in northern California since 1992 and is interested in producing and shooting documentaries; she is active in local pro-choice, arts, and San Francisco community issues and can be reached at (415) 474-1642. Holger LEUE’s photos have been published in more than 50 books and travel guides worldwide. Gerald (Jeryl) VILLHAUER is self-employed as a contractor designing custom databases for a wide variety of clients; his hobbies include photography, scuba diving, and hiking; he is not married.

'89 Miko TOKUHAMA is senior attorney of the Immigration Team at the Legal Aid Society of San Diego; he is also serving as chair of the San Diego Chapter of the American Immigration Lawyers Association.

'90 David WOOD recently joined the Silicon Valley office of Orrick, Herrington & Sutcliffe LLP in the corporate law practice. Jessica MURRAY received her teaching credential and a master’s in education at UCSC; she works at a junior high in Santa Cruz. Stephanie PALMERI teaches seventh and eighth grade at a Spanish-immersion school and has an eight-year-old daughter, Angelica; she also teaches salsa dancing at the Mexican Heritage Plaza and dances with the Rica Salsa Dance troupe.

Wendy SKILLMAN graduated from New England School of Law in Boston and was planning to take the California Bar Exam.

'92 After completing an M.B.A. in London, Juli BARRON has returned to the Bay Area and is doing marketing for Gap online; friends may contact her at JuliBarron@aol.com. Charles HARDER is general counsel of the software company Load Media in Los Angeles; he and Kathleen Hirose, also an attorney, were planning to marry in May. Wendy ROBINSON survived her first year as a classroom teacher and rewarded herself with a two-week rafting trip in Alaska. Dmitria SOKOLOW is living in Portland, Ore., teaching fifth grade, and seeing more of Portland’s beautiful outdoors; friends can contact her at Lluvia@spiretech.com. Aaron VALDES is a home-based therapist for Latino families with trauma, reunification, and other mental health concerns; he also coordinates a counseling center for teens and others at-risk in the community. Tamara WHITE Van Hooser has started a new job as a kindergarten teacher in Hillsboro, Ore., she and her husband, Chris Van Hooser, have a two-year-old son, William Christopher.

'93 Michael HEMBREE planned to complete an M.B.A. at San Jose State University in fall 2000. Dan ZIVKOVIC joined a start-up in Pleasanton, Calif., Xing Corporation, building a new electronic checking system.

'99 Ryan ALLEY is making exciting new videos and learning new software for video editing and manipulation; he’s missing UCSC. Veronica LOPEZ is working in a group home with severely emotionally disturbed teenage girls. Renee SHARP is in a graduate program in physical anthropology at San Francisco State University.

'00 Melissa MONAHAN Chirco got married in Santa Cruz and is currently working in the genetics field in Menlo Park.

Porter College

'72 David MARSH was promoted to full professor of geography at Bucknell University in Lewisburg, Penn.; his areas of specialization are geomorphology, cartography, GIS and spatial statistics, human impact on the environment, environment and society, and environmental perception.

'74 Donna BUMPUS Blakemore was appointed director of development for the San Francisco Ballet in November 2000. Teresa McNEIL MacLean is on the development team for a new charter school, a site council member at another school, and the music and poetry teacher at a third; in addition, she volunteers at her daughter’s school and has at least one solo exhibit of her artwork each year.

'76 Gene KRAHAM is a physician’s assistant with a family practice in Chandler, Okla.

'77 Catherine PETERS Graham writes film reviews and feature stories on popular culture for the Santa Cruz Sentinel. Laura MARELLO has written six books—four novels, a collection of stories, and a collection of novels; she’s been teaching creative writing at different universities since 1978.

'78 Jeffrey GLICKSON Briar is receiving an award from the Celebration Foundation of Oregon to support his work as a composer; his one-man show, “Beethoven Speaks,” is being translated into French and German and will be touring Europe and Asia in 2001–03. Nick ROBINSON is a librarian at the Public Health Library at UC Berkeley.

'79 In addition to showing their Irish wolfhounds, Peter BROWN and his wife are helping Greyhound Pets of America rescue retired racing greyhounds. Tara SMITH spent the last 10 years in Boston and New Orleans and is now living in the Northwest with her daughter and poet husband and building an expressive arts therapy career. Under the nom de plume of Alma Marceau, Jacques RIFKIND recently published an erotic novel, Loathing; he continues his studies of checkered beetles, with a chapter contribution in Monteverde: Ecology and Conservation of a Tropical Cloud Forest; he lives with Patricia GUM (Porter ’81).

'84 Sarah RINGLER has been teaching middle school in Watsonville and “keeping democracy alive in Seattle, Washington, D.C., and Santa Cruz.”

'86 Jeanne-Marie JASKO has been working as a web designer/coder around the Bay Area; she and Rob REBBE (Kresge ’85), a network administrator in San Francisco, planned to marry in spring 2001 and honeymoon in New Zealand.

'87 Mary OSBORN is studying special effects for TV and film, 3D-modeling, and animation at the Academy of Art College in San Francisco; she is still playing pool and won the 1997 California Women’s State 9-Ball Championship.

'88 Kathleen Bartlett ABOOD is a member of the Santa Cruz City Public Art Committee and the San Lorenzo Urban River Plan Task Force.

'89 Putting his politics degree to good use, Alexander CLEMENS has been named vice president for public affairs at Reputation, a San Francisco communications firm, and is busy working to alter public opinion at San Francisco City Hall.

'90 Burke NELSON is attending Loyola Law School in Los Angeles; he and his wife, Amy Liston, a psychologist and UCSC grad, have a one-year-old son, Noah.

'91 Mark CUNNINGHAM has been working overseas on a new hotel project and writes, “my UCSC linguistics experience is a valuable resource for me in Japan (thank you Professor Jun Ko Joo).”

Stephen MIRRIONE earned an Oscar for film editing on the movie Traffic. Lynn SPAULDING received a master’s degree in marriage and family counseling and art therapy from the College of Notre Dame in Belmont; she is now a licensed marriage and family therapist. Kathleen MADDEN Yee received her M.F.A. in nonfic-
tion writing from Penn State in 1997; she and her husband, Randy YEE (Porter '88), have a son, Jonas, born in 2000. **92** After completing a master's degree in French literature at NYU, Karen LAFFERTY returned home to San Diego, where she has been teaching French and English at Mt. Carmel High School for the past seven years. **93** Burton EUBANK is a certified water operator for the Inverness Water System and a captain with the Inverness Fire Department; he is single father of a seven-year-old boy, Zephyr. **95** Monica DE LA GARZA is a graduate student in museum studies at John F. Kennedy University. Denise SCHURKE is a web site producer and artist. Jeremy “Unicycle Man” SHAFER is a professional organist and juggler; he has come out with his first book, *Origami to Astonish and Amuse* (St. Martin’s Press, 2001). Amy CARLSON Silvey received her M.A. in museum studies from San Francisco State University in 1998; she is currently working for a nonprofit arts foundation in Los Angeles.

**98** Amanda LNN is in her third year at Boston University School of Law. Heather TIDRICK has had various jobs teaching English; she was a substitute teacher of American studies at ELTE University in Budapest in 1998–99 and a volunteer resident teacher at Jamyang Choling Institute in Dharamsala, India, later in 1999. **99** Bruce WILLEY works as a writer/editor for the *Good Times*, a weekly newspaper in Santa Cruz.

**00** Kyla SANKEY was freezing in all the snow at Oberlin College in Ohio this past winter and hopes to enter the M.Ed. program at Case Western Reserve in the fall.

### Kresge College

**’76** Ernestine McHUGH has been promoted to associate professor of anthropology and religion at the University of Rochester, where she teaches in the Humanities Department of the Eastman School of Music; her book *Love and Honor in the Himalayas* was published by the University of Pennsylvania Press in May 2001. Marjorie STUART writes of the profound way in which her year at UCSC affected her life and that of her good friend Henrietta FINGOLD Bensussen (College Eight ’76); she wonders “how many other older’ women, who experienced UCSC in the 1970s are still knocking around, still blooming a little late, still growing and developing”; her e-mail address is absoup@goldrush.com. **78** Greg FREEMAN toured Germany in June 2000 as member of the music group Checksum. **83** Kevin ERGIH has been appointed director of the graduate program in Oriental medicine at Touro College in New York. **84** Sande HANDLEY Greene and her husband, Bob Beauurdy, operate a bed-and-breakfast on Maui; she works with women with eating disorders and is editing an anthology on women and body image; she can be reached at oceanbreeze@maui.net. **86** Leslie CUCUEL has been working as a medical assistant in the field of high-risk pregnancy for the past seven years; she is planning to move back to Santa Cruz this year. **87** Joshua WEISSEL is a talent manager at Pro and Con Production. **88** Michelle HENDERSON has been promoted from police officer to inspector (a.k.a. detective); she is assigned to the crime-scene investigations unit, which collects and examines evidence and reconstructs the events of a crime. **90** Selena HUDSON has been living in Santa Cruz for the last four years with her husband, Franklin DLOTT (Kresge ’90), and their two children, Haven and Phoebe; she imports stone grain mills and volunteers at the Santa Cruz Waldorf School. **91** Richard DeMARCO is living and working in Pittsburgh, Penn., where he is an applications specialist for Cellomics, a biotechnology company focusing on drug-discovery applications, and he and his wife recently had twin boys, Alex and Eric. Lisa SOCCIO is working on her Ph.D. in visual and cultural studies in Rochester, N.Y.; her dissertation is titled “Nothing’s Shocking: On the Persistence of Avant-Gardism in Alternative Music.” **92** Jonathan BENAK will be practicing family and urgent care medicine as a physician assistant in a new rural clinic in Victor, Idaho. **93** Suzanne HERRERA published her first novel, *Mango Elephants in the Sun*, about her Peace Corps experiences in Cameroon, West Africa. **94** Suzanne BEATTIE got dual citizenship with Ireland after graduating; she has taught and performed tribal belly dance in Morocco, Spain, Italy, France, and Ireland. **95** Shelley BATES was accepted into a master’s program in writing popular fiction at Seton Hill College in Pennsylvania; she currently works at Compaq as a marketing communications editor. **96** Justine KRAGEN is living with Steve MCDONALD (Oakes ’95); they play in a band called Vermouth with two other alums, Ann YOSHIZAWA (Porter ’94) and Jaime HEILPERN (Stevenson ’94). Monica WHALEN is working on her teaching credential at CSU Los Angeles. **97** Catherine GERVEIS and her husband, Steve, took a four-and-a-half-month journey across the northern U.S., hiking and writing; they have “settled in Maine to cook and write until the wind pushes us somewhere else.” After working almost three years in an emergency animal hospital, Kimberly WALTER left to have her daughter; she was expecting another child in fall 2000.

**98** Elizabeth LUCKETT recently starred in her first independent feature film; she is pursuing acting in San Francisco, as well as dancing and singing in a band in her spare time. **99** Stuart ROSENSTEIN is the program coordinator at the UCSC Gay, Lesbian, Bisexual, Transgender Resource Center; he was awarded an 2000 Ally to Gay Youth award by the Santa Cruz County Task Force for Gay, Lesbian, Bisexual, Transgendered and Questioning Youth.

### Oakes College

**’75** David PAINE completed his Ph.D. in educational leadership from the University of La Verne; he is now director of Curriculum and Instructional Services for the Live Oak School District in Santa Cruz, where he was previously principal of Green Acres Elementary School.

**’80** Maria Rosario ESPINOZA is finishing a B.S. in special education; she is divorced from Adam LEVY (Oakes ’80); they have four children. Virginia MUSSEH Haberkamp got married in July 2000 and was planning to return to grad school for a year to complete her counseling credential. **81** Gary KOVNAIT is teaching biology full time at Los Angeles Valley College and hoping to begin Ph.D. studies this fall. **87** Sarah INGERSOLL is executive director of a new nonprofit, the National Campaign Against Youth Violence, which was established to engage the resources of the private sector in promoting safe youth development. **90** Elizabeth MARGOLD is working for GLOBE, a science education program at the White House that focuses on K–12 environmental science education and hands-on observations of the environment. **94** Kiersten ELLIOT completed her M.Ed. at Penn State in 1997 and now works at Northwestern University near Chicago; she planned to marry her high school sweetheart in 2001. Nicole GOLDBERG was married in

'96 Laura MOSS is a science lead teacher and the sixth-grade department chair; she is performing in various productions, including Guys & Dolls at Mountain Community Theater.

College Eight

'74 E. Gerard MANNION handles complex insurance cases on behalf of consumers and enjoys “kicking the butt of insurance companies for the little guy”; he was president of the San Francisco Travel Lawyers Association and president of the Lawyers Club of San Francisco.

'76 Deirdre BARRETT is pursuing a teaching credential in Santa Barbara and would like to network with other alums.

'77 Graham BICE is responsible for physical planning and development of the UC MBEST Center, located at the former Fort Ord.

'80 Donn HURD is president of the UC Alumni Group of Northern New Mexico; his e-mail is dhurd@mail.com. Joel NEW is the settlement coordinator for a large personal-injury law firm in San Francisco.

'81 Patrick CAMPBELL is an M.D. with a full-time private practice in Redding, Calif.; he achieved provider recognition from the American Diabetes Association in 2000, and he is adopting an 11-year-old boy from Russia. Yolanda HENRY is living in Santa Cruz and has a job she loves providing social services to low-income and recent immigrants in the lower Ocean Street and Beach Flats neighborhoods.

'83 Noli FARWELL is doing technical mapping for an environmental consulting firm.

'85 Melissa (Missy) HIPPARD is currently working on a Ph.D. in sociology at Colorado State University in addition to raising a daughter, two cats, and three chickens. Last year Daniel WEISS was a UC Regents guest lecturer for two weeks at UCSC in the Politics Department, and he enjoyed the students, teachers, and campus very much.

'87 Lawrence COATES's first novel, The Blossom Festival (University of Nevada Press, 1999), won the 1999 Western States Book Award for fiction; he teaches at Southern Utah University. Thomas SAUCEDA is developing and maintaining the New Zealand collection at the Arboretum at UCSC, as well as sailing and traveling.

'89 On the heels of a recent promotion at Stormy Leather, Rachel SCHWARZ is helping with the opening of a new retail store in the Castro district in San Francisco; she has a freelance web design business as well, with clients ranging from the San Francisco dance club Bandage-A-Go-Go to White Oak Orchards nursery.

'90 Catherine BAYER lives in Bonny Doon; she is a teacher during the school year and does stitching in the costume shops of Shakespeare Santa Cruz and the Cabrillo Stage in the summer.

'92 Kate BARKER lives in Castro Valley, Calif., and teaches third grade in the San Lorenzo School District, where she also runs the after-school tutorial program. After five years as education coordinator for Hurricane Island Outdoor Bound School, Daniel PUTNAM is now living in Tansen, Nepal, as a Peace Corps volunteer.

'93 Mark AMEND married Amy Bochenstiel in 1999, and they live on the central Oregon coast; he works for the Oregon Department of Fish and Wildlife, mapping rockfish habitat. Marvin SLEEPER received a B.S. in nursing from Syracuse University in 1998 and is now an operating-room nurse at Vail Valley Medical Center in Vail, Colo.

'96 Don UY-BARRETA finished an M.S. in economics and is working full time for Franklin Templeton Investments; he has lectured at UC Berkeley Extension and teaches economics at UCSC Extension.

'97 Barret PFEIFFER is studying comparative genomics between drosophila; his article, “The Genome Sequence of Drosophila Melanogaster,” was published in the March 24, 2000, issue of Science.

'98 Jyothi ACHARYA completed her multiple-subject teaching credential at San Diego State University and is teaching third grade in Fremont, Calif.

'99 After finishing a year of service with AmeriCorps, Patrick CHANDLER was anticipating taking a position on Governor Davis’s staff in December 2000. Melissa Lynne McINTIRE and her fiancé, Jim REYNOLDS (Merrill ‘00), live in Seattle, where Melissa works for Washington Mutual Bank.

'00 Sean MILLER is diligently serving California governor Gray Davis.

Graduate Studies

'81 Timothy BYRNE (Ph.D., Earth sciences) is head of the Department of Geology and Geophysics at the University of Connecticut, where his research is focused on paleoseismic zones in Japan and Taiwan.

'88 Eugene SHEEHAN (Ph.D., psychology) recently became dean of the College of Education at the University of Northern Colorado.

'89 The U.S. Agricultural Research Service (ARS) has awarded Kathryn BARRY Stelljes (cert., science communication; B.A., environmental studies ’88), a public affairs specialist, the agency’s 2000 Excellence in Information award; she reports the research results from more than 200 scientists at 16 laboratories in the western states, with a particular focus on the complex interactions among ranchers, environmentalists, scientists, and others with a vested interest in U.S. range lands.

'91 Laura CUNNINGHAM (cert., science communication) is working as a biologist and scientific illustrator and living in Death Valley National Park with her husband, a park ranger; she invites readers to visit their educational web site at cluster4.biosc.utexas.edu/deathvalley. Wolfgang ROSENBERG (cert., theater arts) was the 2000–01 president of the UCSC Lifelong Learners, a group of retirees living in the Santa Cruz area.

'95 After teaching the Cowell and Stevenson core courses for several years and teaching freshman humanities core at Stanford, Valerie ROSS (Ph.D., literature; B.A., literature ’88) has been hired as the new associate director for the humanities at Stanford University’s Center for Teaching and Learning.

'96 James AROYAN (Ph.D., physics) is a consulting physicist working in the computer touchscreen industry; his doctoral research in marine mammal bioacoustic simulation methods has been published as a chapter in the book Hearing in Whales and Dolphins (Springer-Verlag, 2000).

'99 Monika THOMPSON (M.S., applied economics) has joined Merrill Lynch, where she is specializing in financial planning, tax-sensitive investments, estate planning, financial services for businesses, and retirement planning. Sherrie TUCKER (Ph.D., history of consciousness) has published a book, titled Swing Shift: “All-Girl” Bands of the 1940s (Duke University Press, 2000).

In Memoriam

Charles PROSSER (Ph.D., astronomy ’91), who was working as a postdoctoral fellow at the National Optical Astronomy Observatory, died on August 15, 1998.

Elicia SEDGWICK (Cowell ’94), who worked as a probation officer for the Santa Cruz County Juvenile Probation Department, died at her home in Santa Cruz April 28, 2001; she was 29.

Teena Joell VALLIANT (Merrill ’95) succumbed to cancer on February 29, 2000.
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