Strawberry fields for better
As the Center for Agroecology & Sustainable Food Systems celebrates its 50th anniversary, we take a look at how its research and fieldwork have revolutionized the cultivation of one of California’s most valuable crops—strawberries.

Alumni Weekend program
Alumni Weekend is April 28–30, 2017. Now, more than ever, it feels right to come home. Check out the full program of events and join fellow alumni for mingling, reminiscing, learning, and lingering.

Flash point
Portraying intimate moments to some of the most defiant in California history, the extraordinary photographic archive of Pirkle Jones and Ruth-Marion Baruch, recently given to UC Santa Cruz, provides students and researchers with a rare opportunity to engage with the images.

Lights, camera, social action
UC Santa Cruz’s Social Documentation Program, now celebrating its 10th anniversary, is producing socially conscious films that bear witness, address injustice, and shine a light on neglected subjects.
THE BUZZ

Here are a few recent social media highlights. Join us!

UC Santa Cruz advances to #27 on U.S. News & World Report’s Best Global University Rankings! (Tied with New York University)

Today UC Santa Cruz breaks ground on restoring the historic Quarry Amphitheater. Since 1967 the Quarry had long been known as the heart of the campus, hosting concerts, speakers, and graduations. It’s been closed since 2006 due to safety concerns, but now, thanks to the $8 million project largely supported by the Student Fee Advisory Committee, the Quarry looks to be reopened in the fall of 2017.

Albert Thelab I have no doubt that they are just getting better and better. Proud of you.

Brett Nano The quality of research being done at UCSC is stupendous, given its student body size. The campus is one of the most beautiful in the world to study.

Carlos A. Leon-Bocanegra Jr. Our Alma Mater keeps getting better and better!!! 😊

Josue Cane UCSC... why did our time have to end there???

Barry Koskie I remember walking through the forest in the rain. Sounds and smells were amazing. College 8 1979.

Linda Peterson I have fond memories of walking in the rain back to the dorms after the library closed for the night.

Andi Grossham ForReal I’m so lucky to have gone to UCSC as an undergrad. A wonderful experience.

Keep up with UC Santa Cruz on our social channels, where the conversation is abuzz 24/7. Find us on Facebook (UC Santa Cruz), Instagram (ucsc), Snapchat (ucusantacruz), Twitter (ucsc), and LinkedIn.

To see a full list of upcoming UC Santa Cruz events, visit events.ucsc.edu.

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YAY! UC Santa Cruz!

 красивый лучше!!! Mater keeps getting better and better!

Carlos A. Leon-Bocanegra Jr.

Better and better!!!

Mater keeps getting better and better!

UCSC...

why did our time have to end there???

Josue Cane UCSC...
Harry Noller, the Sinsheimer Professor of Molecular Biology at UC Santa Cruz, was the winner of a $3 million Breakthrough Prize in Life Sciences for revealing how the complex molecular machines called ribosomes translate genetic code and build the proteins in all living cells.

The award was presented at a star-studded ceremony in December hosted by Academy Award-winning actor Morgan Freeman at NASA Ames Research Center in Silicon Valley. The Breakthrough Prizes were founded in 2013 by Silicon Valley entrepreneur Sergey Brin and Anne Wojcicki, Mark Zuckerberg and entrepreneurs Sergey Brin and Anne Wojcicki, and founded in 2013 by Silicon Valley entrepreneur Sergey Brin and Anne Wojcicki.

Noller’s research group was the first to solve the complete structure of a ribosome, publishing landmark papers in 1999 and 2001. More recent work in his lab has shown how the ribosome actually works to carry out protein synthesis. This research has practical applications because many antibiotics work by blocking the activity of bacterial ribosomes. Understanding the structure of the ribosome has enabled the development of novel antibiotics that hold promise for use against germs that have developed resistance to current drugs.

Noller’s discoveries also shed light on fundamental questions about the origins of life. Ribosomes are ancient structures that provide the link between the genetic instructions encoded in DNA and RNA molecules and the proteins that carry out most of the activities of living cells.

Each ribosome is composed of both proteins and RNA molecules interlaced together. When Noller first proposed in the 1970s that the RNA component forms the ribosome’s key functions, the idea met stiff resistance because only proteins were thought capable of catalyzing biochemical reactions. But he turned out to be right.

“This was a huge paradigm shift. It turned our understanding of molecular biology upside down,” said Noller, a professor emeritus of molecular biology and development biology.

Pedestrian paradise?
Imagine an urban neighborhood where most of the cars drive themselves. What would it be like to be a pedestrian?

Actually, pretty good, according to Adam Millard-Ball, assistant professor of environmental studies. In fact, pedestrians might end up with the run of the place.

In his study, “Pedestrians, Autonomous Vehicles and Cities,” Millard-Ball looks at the prospect of urban areas where a majority of vehicles are “autonomous” or self-driving. It’s a phenomenon that’s not as far off as one might think.

“Autonomous vehicles have the potential to transform travel behavior,” Millard-Ball says. He uses game theory to analyze the interactions between pedestrians and self-driving vehicles, with a focus on yielding at crosswalks.

Because autonomous vehicles are by design risk-averse, Millard-Ball’s model suggests that pedestrians will be able to act with impunity, and he thinks autonomous vehicles may facilitate a shift toward pedestrian-oriented urban neighborhoods. However, Millard-Ball also finds that the adoption of autonomous vehicles may be hampered by their strategic disadvantage that slows them down in urban traffic.

Ocean’s impression
A liquid ocean lying deep beneath Pluto’s frozen surface is the best explanation for features revealed by NASA’s New Horizons spacecraft, according to a new analysis. The idea that Pluto has a subsurface ocean is not new, but the study provides the most detailed investigation yet of its likely role in the evolution of key features such as the vast, low-lying plain known as Sputnik Planitia. Sputnik Planitia, which forms one side of the famous heart-shaped feature seen in the first New Horizons images, is suspiciously well-aligned with Pluto’s tidal axis. The likelihood that this is just a coincidence is only 5 percent, so the alignment suggests that extra mass in that location interacted with tidal forces between Pluto and its moon Charon to reorient Pluto, putting Sputnik Planitia directly opposite the side-facing Charon. But a deep basin seems unlikely to provide the extra mass needed to cause that kind of reorientation.

“It’s a big, elliptical hole in the ground, so the extra weight must be hiding somewhere beneath the surface. And an ocean is a natural way to get that,” said Francis Nimmo, professor of Earth and planetary sciences.

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But for the Bureau of Land Management and the Calpine energy company, the serene patch of blue that sits amid a volcanic landscape was a promising geothermal energy site. For more than 30 years, the Pit River tribe—including the young LeBeau and his family—protested the proposal, and, last year, a court ruled the energy-company leases had been made without proper environmental review or tribal consultation.

“That (the prolonged fight) was what influenced me,” said LeBeau, 20, who is a member of the Illinaw Band of the Pit River Nation. The experience, he said, “really pushed me to say I want to stop that.”

Recently, LeBeau (Stevenson ’18, environmental studies) was given a $10,000 award as part of the Morongo Band of Mission Indians’ Rodney T. Mathews Jr. scholarship program. His plan is to earn a Ph.D. in order to help tribal communities with environmental and land-use issues.

A novel concept

In What Becomes Us, a new novel by UC Santa Cruz literature professor Micah Perks, twin fetuses tell the story of a pregnant woman who abandons her controlling husband in Santa Cruz, moves to a small upstate New York town, falls in love with a Chilean man, and becomes obsessed with a historical figure who wrote one of the first captivity narratives about survival in the wilderness. The longtime codirector of the UC Santa Cruz Creative Writing Program explained how she came up with the idea of having twin fetuses narrate the story.

“I originally wanted a big storytelling voice, but I didn’t want the voice to be anonymous,” Perks recalled. “I liked the idea of this big, Whitmanesque voice coming from a tiny being inside the main character—a little like the position of the author.”

“I love twins, and I love all the utopian possibilities with twins,” she added. “And the ‘we’ voice now seems essential to what the book is about: the tension between individual desires and the desire for community.”

Doing the math

A pilot program in online adaptive learning at UC Santa Cruz has led to higher placement in math courses for newly admitted freshman students—and a commitment to instruct students in math in ways that adapt to their own proficiencies.

Of the more than 722 entering students who completed math placement via online assessment during the summer of 2015 and made use of adaptive learning software to review and reassess, 84 percent showed marked improvement that enabled them to qualify for higher math courses.

Many students who had placed into Calculus (Math 3) or Calculus after working through online adaptive instruction. Others who had initially placed into more advanced courses than College Algebra also improved their placement, enabling them to make more rapid progress toward their academic goals. All of this was accomplished without worsening overall pass rates in these courses.

Reef madness

Yarn has come alive at UC Santa Cruz with the visit of a traveling sculpture exhibit called Crochet Coral Reef: CO2CA-CO2LA Ocean, a world-renowned art and science project by Margaret and Christine Wertheim of the Institute For Figuring.

The exhibition, on view at the Mary Porter Sesnon Art Gallery until May 6, responds to the environmental crisis of global warming and the escalating problem of oceanic plastic trash. Residing at the intersection of mathematics, marine biology, handcraft, and community art practice, Crochet Coral Reef: CO2CA-CO2LA Ocean highlights not only the damage humans do to the Earth’s environment, but also our power for positive action.

In addition, UC Santa Cruz students and community members are busily crocheting the UC Santa Cruz Satellite Reef as part of the Crochet Coral Reef project’s worldwide reefing effort, one of the largest participatory science and art endeavors in the world.

The UC Santa Cruz Satellite Reef will be exhibited at the Seymour Marine Discovery Center starting May 4, 2017.
Strawberry fields for better

As the Center for Agroecology & Sustainable Food Systems celebrates its 50th anniversary, we take a look at how its research and fieldwork have revolutionized the cultivation of one of California’s most valuable crops—strawberries.

Jim Cochran was standing on his Swanton Valley farm, pondering the organic strawberry plants at his feet, when his new neighbor, Steve Gliessman, approached. Cochran was a maverick farmer who was fascinated by European intellectual history and Gliessman, recently returned from a stint farming and teaching in Mexico, was hired to expand the academic reach of the program. He turned the farm into an outdoor laboratory and classroom for teaching and studying the new science of agroecology.

He and other researchers began some of the first formal research on agroecological practices, including crop rotation and natural pest control, as a way to avoid agriculture’s increasing dependence on chemicals, an unsustainable system to their way of thinking.

“It was a nonconventional faculty that was barely tolerated by campus,” Press says, striding toward the university’s now-30-acre farm with its lush cover crops, blueberry canes, and humped rows of strawberries. “At best we were considered loopy and irrelevant. At worst, we were considered dangerous, subversive, and possibly illegal.”

All that would change.

Over an old barbed wire fence, the two men began talking about soil diseases, crop rotations, and how every expert and grower in California believed it was impossible to successfully grow organic strawberries.

Little did the two men know, but that 1986 conversation would start a revolution in strawberry farming that would prove the naysayers wrong and also launch one of the signature achievements of UC Santa Cruz’s Center for Agroecology & Sustainable Food Systems (CASFS), which this year celebrates its 50th anniversary.

Today, organic berries fill cases in stores like Safeway and Costco, and the number of acres of organically grown strawberries in California has risen from just 134 in 1997 to 2,989 in 2016. The men’s meeting would also spark UC Santa Cruz’s reputation as the mothership of organic agriculture, a standing that continues with campus researchers still delving into new ways to fight agricultural disease and pests without using chemicals.

“It’s important to remember,” says Daniel Press, an environmental studies professor and executive director of CASFS, “that we had no business doing this.”

 Seeds of change

Every story should begin at its roots. Seeds of change: The experiment

Strawberries are the princess-and-the-pea of crops. While economic royalty, strawberries also easily fall prey to a wide variety of insects and soil-borne pathogens, especially when they are raised in the same fields year after year.

Most growers used chemicals to protect the finicky plants, including the fumigant methyl bromide, which wiped out soil diseases so effectively berries could be raised on the same plot of land without interruption. But environmental and health concerns caused a phase-out and ban of the fumigant with a deadline of 2017.

Cochran, who’d been sickened by an accidental pesticide exposure while working for a farmworker-owned strawberry cooperative, decided to give organic berry farming a try in 1983. Surrounded by a crew of eager students, Chadwick soon created a beautiful organic garden on a hillside near Merrill College using what he called the biodynamic/French intensive method, which involved natural fertilizer and a lot of shovel work.

In the 1970s, students asked for a larger plot of land and were given 17 hidden acres on the lower part of campus. Chadwick had left by then, but acolytes continued his work. They plowed the soil with a pair of brother-and-sister draft horses. They planted rows of cypress as a windbreak and put up teepees for a burgeoning apprenticeship program.

By the early ‘80s, public concern over the impacts of conventional agriculture was on the rise, and Gliessman, recently returned from a stint farming and teaching in Mexico, was hired to expand the academic reach of the program. He turned the farm into an outdoor laboratory and classroom for teaching and studying the new science of agroecology.

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Growing farmers and the food movement for 50 years

In its five decades, the Center for Agroecology & Sustainable Food Systems has cultivated a community of thought leaders who are redefining organic farming.

Helping farmers internationally

Mexican and Nicaraguan coffee farmers are living better thanks to the nonprofit Community Agroecology Network, founded by emeritus professor Steve Gliessman and his wife, Robbie Jaffe. Beans are roasted and sold at prices that help growers, local sustainable agriculture, and women’s economic power.

Training apprentices

More than 1,500 Ecological Horticulture apprentices have gone on to establish their own organic farms, oversee food policies, and head similar programs.

Improving organic farming

A consortium of more than 50 growers, researchers, and others is working to improve organic farming. CAL-CORE’s projects include developing crop rotation systems that are financially and environmentally sustainable and finding ways to suppress soil-borne diseases and pests without chemicals.

Developing novel approaches

Our researchers did the earliest testing for the use of sex pheromones in stopping the codling moth, which does tremendous damage to apple crops. What was once considered a radical innovation is now used in organic and conventional apple orchards globally.

Creating farmers

CASFS instructors have taught organic farming and gardening skills to thousands of students, culminating in a 700-page training guide available online.
Three years later, he was standing in his field scratching his head over his plants when Gliessman came along. By 1987, the two men had set up a series of experimental plots on three acres of North Coast land, a project funded by UC’s newly established Sustainable Agriculture Research and Education Program designed to meet the needs of small-scale farmers, farmworkers, and alternative-farming systems.

“Steve said, ‘Let’s set up a demonstration project and try to understand the soil biology and insect ecology here,’ and that was brilliant,” Cochran remembers, “because it really provided the scientific underpinnings that would be able to transform the industry.” For instance, the conventionally grown strawberries would be sprayed with a miticide to rid the plot of the destructive two-spotted spider mite, while a host of beneficial predator mites would be killed in the organic berries to fight the same pest and the results recorded.

When the strawberries began suffering because repeated plantings caused soil-borne pathogens to rise, the two men experimented with crop rotations, discovering, for instance, that broccoli helped get rid of the disease organisms that so damaged the berries. Over time, the organic strawberries thrived. The conventional berries seemed slightly larger but the organic fruit tasted great, the yield was high, and Cochran made money because he could sell the organic berries for a higher price. People began to notice.

“In fact, it was going so well, people accused us of falsifying data,” says Gliessman who said it took six years of analyzing and resubmitting data before his first study was finally published by a scientific journal. Gliessman and other UC Santa Cruz researchers took their work into the farming community, and, because demand for organic produce was growing and the deadline to phase out methyl bromide was set, growers listened. Today, thanks to many of the methods pioneered by Cochran, Gliessman, and other UC Santa Cruz researchers, more than 10 percent of the state’s multi-billion-dollar strawberry crop is organic, according to the California Strawberry Commission.

A friend of Shennan’s, a Dutch plant pathologist, saw the listless strawberry field and described a process called Anaerobic Soil Disinfestation, or ASD, that seemed a promising solution but said no one seemed willing to test it. Shennan began thinking.

She turned to her colleague, associate researcher Joji Muramoto, and asked him to help set up a small ASD experiment on the UC Santa Cruz Farm. ASD involves putting a carbon source like chopped cover crops or rice bran or even molasses into the soil. The ground is then irrigated and covered with plastic, which sparks decomposition by soil microbes that can thrive without oxygen, producing various organic acids that are toxic to the pathogens. It’s tricky business, needing the right temperature, water, and soil amendment to work.

“It took us a few years to figure out how to do it,” Muramoto says of
Alumni Shabbat Services and Dinner
5:30 – 7:30 p.m.
Stevenson Event Center
Alumni, current students, staff, and faculty welcome. Services 5–6 p.m., followed by a traditional Shabbat dinner.
Recent Grad Mixer
7–9 p.m.
Tupper Room, 110 Casper St., Santa Cruz
An annual mixer for recent graduates, sponsored by the Senior Class Council. Current seniors are invited, and they look forward to hearing about your experiences after UC Santa Cruz. Complimentary appetizers and a no-host bar.
Alumni Weekend Keynote Address
9:30 a.m. – 12 p.m.
Casa Grande, Buyellow Ballroom
Santa Cruz Beach Boardwalk
Keynote address $30
Keynote/Kick-off party combos: $40
Carmen Perez (Rainier College, physical education). Justice reform activist and organizer, executive director of juicy justice nonprofit The Gathering for Justice, and one of the national co-chairs of the Women’s March on Washington.
Brunch at Baskin
9:30 a.m. – 12 p.m.
Baskin Alumni Advisory Council and Baskin School of Engineering will give a presentation followed by brunch and guided tours of the lab.
Econ. Alumni Reception
10–11 a.m., Engineering 2, Room 499
After a brief introduction and short presentation, enjoy a continental breakfast in the conference room while mingling with other alumni and Economics Department faculty, staff, and current students.
Cowell Celebrates 30 Years of Sammy the Slug
10 a.m. – 12 p.m.
Cowell Presentor’s House
Enjoy a slice of cake and celebrate the 30 year anniversary of the design of Sammy the Slug! View original and new student art and reminiscence near the years of Slug pride!
Merrill Society Breakfast
10 a.m. – 12 p.m.
Charles E. Merrill Lounge
Merrill alumni and Merrill alumni. Light breakfast buffet.
International Photo Contest
Showcase and Alumni Reception 10 a.m. – 12 p.m.
Humanities, Room 259
The Office of International Affairs invites you to mingle with fellow alumni and current students while viewing photos showcasing photography from both our returned study abroad students as well as that of our international students and scholars. All photos are centered on the theme “Cultural Expressions.”
Banana Slug Kid Zone
10 a.m. – 12 p.m.
Upper Baskin Lawn
Family-friendly zone with craft booths, games, and snacks.
Teach-In Rejuvenate Now: Neuroplasticity at UC Santa Cruz 1–3:30 p.m.
Kresge Mellon Lecture Hall
Join us for a special talk by Professor Lindsey Helmick, Camilla Forsberg, and Dylan Kim to learn about the latest research taking place at the Institute for the Biology of Stem Cells (IBSTC) at UC Santa Cruz. 
Have a gourmet lunch-in-a-box complemented with fruit, cheese, and dessert in a commemorative gift box. $20 per box, $35 for a group of two. 

To attend the annual Alumni Mixer, please RSVP to AlumniWeekend@ucsc.edu.

For more information and to register, visit: ALUMNIWEEKEND.UCSC.EDU
Rachel Carson’s Silent Spring
Screening Mixer
4–6 p.m. Rachel Carson College Provost’s House
Enjoy light refreshments and discussion following the film screening of Rachel Carson’s Silent Spring (4–6 p.m., Rachel Carson College, Room 248).

Alumni Photo Exhibit Opening Reception
Social Sciences 1, 2nd Floor lobby
Unveiling of a permanent photo project that connects current alumni with UC Santa Cruz alumni and stories from the themes of its colleges.

Tour of the UC Santa Cruz Farm
8–9 a.m. Tour starts at the Cowell Ranch Hay Barn
Guided tour of the UC Santa Cruz Farm, describing current research, education, and work.

Molecular, Cell and Developmental Biology Alumni Reunion
5–5:30 p.m.
Organizations patio
Reconnect with fellow alumni and faculty at a low-key outdoor reception with wine, beer, and snacks. Join us in congratulating biologist Harry Noller on winning the Breakthrough Prize, and hear what’s new in the field and in our program. (For more on Noller, see page 4.)

An Immersion into Dickensian Cocktails
4–6:30 p.m.
Shakespearean Lounge
Wine and food industry professional and UC Santa Cruz alumni panelists Bethany Davies will discuss the history and preparation of a number of beverages and other supplies.

Alumni Vintner and Brewer Reception
6–8 p.m. / $35 Cowell Ranch Hay Barn
This year we’re expanding our annual wine reception to include some fun craft brewing! UC Santa Cruz alumni have partnered the art of beverage making with you, your family, and taste a wide variety, along with appetizers.

Graduate Student Alumni and Current Graduate Student Networking Mixer
6–8 p.m. Graduate Student Commons
Panel discussion and networking for the Careers and Resources for Entrepreneurship for Graduate Students and the Graduate Student Alumni Leaders panels (11:30 a.m., Humanities, Room 209) and current graduate students in the opportunity to engage further with the panels.

Alumni Vintner and Brewer Reception
4:30–5:30 p.m. Tour start at the Cowell Ranch Hay Barn
Take a tour of the UC Santa Cruz Farm led by Center for Agroecology & Sustainable Food Systems (CASFS) director Daniel Press. Learn about the research, education, and public service work of CASFS.

Kerr Hall Kegger
5–7 p.m. Kerr Hall main patio
In Rachel Carson College’s earlier days, there were weekly “keggers” at Kerr Hall. Join us for a revival of the tradition! Share experiences and good times with Rachel Carson College (formerly College Eight) alumni on the Kerr Hall patio, with beer vanished from local Santa Cruz-area breweries.

Rachel Carson College Alumni Weekend Posters Session
5–7 p.m.
Kerr Hall
View sustainability-violated projects by students in Rachel Carson College’s sustainability studies minor, the new Environmental Lab, and the Impact Design, Engineering and Sustainability through Student Services (IDESS) program.

Los Mejicas 45th Reunion
6–11 p.m.
Stevenson Event Center
“Once a Mejicas, always a Mejicas” is the tagline that reflects the bond created across generations by all who have participated in Grupo Folklorico Los Mejicas over the past 45 years. Come home, Mejicas, to celebrate your 45th anniversary!

Monitor Mash Dinner
6:30–8:30 p.m. / $25 University Center, Bhojwani Dining Room and Ringold Room
 Spend an evening with the bright students of UC Santa Cruz to talk about their career goals, life journeys, and more while sharing your personal stories of success and failure in the “real world.” And share your personal stories of success and failure in the “real world.” And enjoy a delicious meal.

Oakes Alumni Club
11 a.m.–1 p.m. / $30 Oakes Provost’s House
Enjoy a casual brunch, including mimosas, and catch up with other alumni.

Alumni Vintner and Brewer Reception
11 a.m.–12 p.m. Oakes Provost’s House
Please bring your family and/or friends to the Alumni Vintner and Brewer Reception and enjoy an afternoon of camaraderie and good times.

Digital Arts and New Media M.F.A. Exhibit
12–5 p.m.
Digital Arts Research Center
An exhibition of the work of students graduating from the Digital Arts and New Media (DAMM) M.F.A. program.

Dizikes Concert
12:30–1:45 p.m.
Cowell Lawn
Everyone is welcome to come dance the afternoon away!

Crown Keynote Speaker
1:30–2 p.m.
Muir Cultural Center
Entrepreneur and former UC Santa Cruz Foundation Trustee John D’Errico will give a talk on innovation and entrepreneurship, followed by a reception with refreshments and light appetizers.

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Pesticide predicament for strawberry growers
The powerful fungitid methyl bromide was retired from California’s strawberry fields at the end of last year after more than 20 years of fierce debate over its effects on farm workers and the environment. According to research published by UC Santa Cruz professor and food studies expert Julie Guthman, these debates often pit the health and well-being of farm workers against the economic viability of growers while overlooking the constraints and availability of farmland. Guthman has spent the past several years immersed—literally and figuratively—in the field to better understand the challenges the strawberry industry faces in a post-methyl bromide world. Strawberry growers in California have long depended on methyl bromide, the most effective chemical to control soil-borne pathogens and weeds. Its widespread use has helped make strawberry one of California’s most lucrative agricultural products, with annual sales totaling $2.5 billion.

But methyl bromide is also hazardous to humans and the environment. Because of its documented impact on the ozone layer, the Montreal Protocol mandated a global phase-out as part of its 1987 pact to reduce ozone-depleting substances. Despite U.S. promises to stop importing and producing the substance, California farmers long continued its use thanks to what’s known as a “critical use exemption.”

Because of these exemptions, the California strawberry industry is still heavily dependent on methyl bromide, and the Chemical Use agriculture.

Many growers are experimenting with organics, Guthman says, but it is still not an economic option for some, because transitioning involves avoiding the application of disallowed substances for three years while not receiving the price premium for organics. Furthermore, agricultural land is costly and scarce, Guthman notes, especially on California’s Central Coast where growers compete with developers for prime real estate ideal for growing strawberries. In short, Guthman finds the strawberry industry is a real bind. Her next book will explore the historical origins of the predicament and will look at how the factors undermining the industry’s success have changed over time.

“The looking back, I can see how each thing I did led to the next, but the whole thing never could have been planned,” says Glassbrenner. “I always tell my students that as ideal as they want it to be, if it’s good to do it. Don’t be afraid to take a risk. Hold onto it and then go for it.”

On the farm
Rod Koda’s 23-acre strawberry farm near Watsonville has a million-dollar view of the Monterey Bay. He’s worked this plot of land since 1986, following in the footsteps of his late father-in-law, Kuni Shinta.

In 2006, he heard Shennan and Muramoto give a presentation on ASD and decided to give the technique a try on his own nine acres of organic fruit. The process, he says, netted $800 to 1,000 more trays of strawberries per acre—although with rising costs and falling prices, organic farming in California still be a complicated business.

Meanwhile, UC Santa Cruz researchers are still at work trying to help farmers like Koda find more, and still profitable, alternatives to chemical use in agriculture.

“Looking back, I can see how each thing I did led to the next, but the whole thing never could have been planned,” says Glassbrenner. “I always tell my students that as ideal as they like it, the right thing to do, you should do it. Don’t be afraid to take a risk. Hold onto it and then go for it.”
FLASH POINT

A gift of a major photography collection provides rare opportunities to engage with powerful, poignant images

Portraying intimate moments to some of the most defiant in California history, the extraordinary photographic archive of husband-and-wife team Pirkle Jones and Ruth-Marion Baruch is a treasure box for scholars, students, historians, photographers, and community members alike.

The archive, given to UC Santa Cruz last year, consists of photographs documenting the people, landscape, and politics of California in the mid-20th century, capturing images of the state at a time of tremendous social change.

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Lower right, opposite page: Woman in a black dress that’s too tight. This page, above: A sale made, a customer sits and a saleswoman stands writing up the sale. At left: Three girls having fun with hats. These photos are from the series Illusion for Sale, San Francisco, by Ruth-Marion Baruch, 1961. With this series, Baruch offers “a clandestine, but sympathetic study of very intimate, yet universally experienced moments of exploring personal identity,” said Mary deVries, the archivist who is processing the collection.

“Some of Jones and Baruch’s best-known photographic series include Berryessa Valley (1956), Haight Ashbury...”

“The fact that this collection came to the UC Santa Cruz Library and not to a private museum is significant,” said Elisabeth Remak-Honnef, head of Special Collections and Archives. “We are able to provide students and researchers with an unusually rare opportunity to personally engage with the images they wish to see and study.”

Unlike museums, where you can only see materials on exhibit, the entire collection is available to the general public. People may come in and request individual photographs to be looked at in the reading room.

“This very personal experience is quite special in the world of major photography collections,” Remak-Honnef said.
The gift includes more than 12,000 photographic prints, 25,000 negatives, and thousands of transparencies created by the photographers over the course of their careers, as well as a selection of prints by such colleagues and collaborators as Dorothea Lange, Brett and Edward Weston, Ansel Adams, and Minor White.

Project archivist Mary deVries is working with student assistants to process the materials and make them easily accessible to researchers.

The work of Jones (1914–2009) and Baruch (1922–97) has been exhibited at museums throughout the country and abroad. The library plans to loan items to the de Young Museum in San Francisco for its upcoming Summer of Love exhibition, and to traveling exhibits in 2018.

“The stories Ruth-Marion and Pirkle captured from the 1940s through the 1970s are just as relevant today as when they were created—our society is grappling with the same social, political, racial, and environmental issues,” said Remak-Honnef. “Students and researchers are eager to engage with these issues, and appreciation for such beautiful photographs is timeless.”

Donated by the Marin Community Foundation, the Pirkle Jones and Ruth-Marion Baruch Collection is the largest single gift in the campus’s history, with an estimated value of $32 million.

For more information, visit guides.library.ucsc.edu/speccoll.
UC Santa Cruz’s Social Documentation Program, now celebrating its 10th anniversary, is producing socially conscious films that bear witness, address injustice, and shine a light on neglected subjects.

- A Saudi woman filmmaker travels through her native country, overcoming many obstacles to tell the story of a thrill-seeking joyrider in Riyadh. She takes footage of the city on the fly, using her iPhone. Unable to meet with her male subject in person because of gender segregation rules, she hires a cameraman to shoot him instead.

- The teenage sons and daughters of undocumented immigrants visit Mexico for the first time since being secreted across the border as young children.

- A filmmaker travels to Rio de Janeiro and discovers that the city has not kept its promise to clean up the staggering pollution in Guanabara Bay in advance of the 2016 summer Olympic Games. These bold, human stories often go untold, but UC Santa Cruz’s unique Film and Digital Media Department’s Social Documentation Program, affectionately known as “SocDoc,” is stepping into the breach, producing socially conscious films that bear witness, address injustice, and shine a bright light on neglected subjects.

Rich, fully formed characters help the filmmakers tell stories that cross borders, challenge preconceptions, and combine the personal with the political.

In the process, this innovative two-year program has created a bumper crop of edgy, talented, well-trained documentary filmmakers who are already winning prizes and hitting the festival circuit. This year marks the 10th anniversary of its first graduating class.
Students come from a wide variety of disciplines. Often, they bring with them the richness of their own cultures. SocDoc has attracted students from as far away as Argentina and Colombia. One recent student was a Fulbright scholar from Iceland.

These student moviemakers have a great sense of how to make a new UC Santa Cruz Arts Dean Susan Solt. “You can’t look at SocDoc without appreciating what the filmmaker has to engage with: immersing yourself in the topic, gaining the knowledge, and then making it live as a work of art—grounded, of course, in truth, reality, and a mission,” she said.

SocDoc’s student filmmakers embody the ideal of the “citizen artist, creative people who loom large in the world, contributing and making a difference, shedding a light on problems and providing insight,” Solt said.

The program now offers a master’s degree, but is transitioning into an M.F.A. program. Faculty hope the change will be complete within this academic year.

The evolution from M.A. to M.F.A. is significant for a few reasons. First, M.F.A. programs have a unique focus on the arts; SocDoc was founded in the Social Sciences, but moved over to the Arts Division and Film and Digital Media in 2011. Second, the M.F.A. allows SocDoc graduates to teach at the college and university level if they wish.

“Most universities will not even consider an applicant who does not hold an M.F.A.,” noted Film and Digital Media Chair Irene Gustafson.

Bearing witness
SocDoc is custom-made for documentary filmmakers that wish to immerse themselves in their topics and make artful, thoughtful films. Students work hard to capture the glorious messiness of real lives and situations.

“You know, a lot of people think you can just capture what is going on in the world by pointing a camera at it,” said B. Ruby Rich, a highly regarded professor in the SocDoc Program and a respected critic and film scholar. “But you can easily be misled. You have to know why you are pointing the camera, you have to be prepared, and know why you’re there.”

That’s why SocDoc is all about “context, immersion, and deep knowledge,” she said. “Preparation is so important. We don’t want students to arrive raw, a blank sheet, when they start their films. We want them to be as knowledgeable as can be. Sure, they’re learning film production, but they’re also taking classes in social science and research methodologies. All of that goes on in the first year before they even set foot in the place where they will be filming.”

One student filmmaker, Alex Lorgel Flores, researched immigration history and U.S. politics before pursuing his project about undocumented students in California who are known as “Dreamers,” after the Development, Relief, and Education for Alien Minors (DREAM) Act. He followed a group of Dreamers in their late teens and early 20s as they ventured back to Mexico to visit relatives.

Other filmmakers have intensive real-world preparation for their projects before they even enter the program. Before enrolling, 2011 graduate Bridgette Auger had been living in Damascus, Syria, for two years, working as a still photographer for the United Nations and covering the country’s responses to the Syrian refugee crisis. “I spent my days traveling around the country speaking with Iraqis about their experiences,” Auger said.

Auger’s student film, ElShelleh (The Gap), is about ten musicians who resettled in El Cajon, California. “They were happy to be safe, but were frustrated because they were educated and talented musicians wasting away working at gas stations and 99-cent stores,” Auger said. The story was bittersweet; the men continued to support each other and make music as they adjusted to their new lives. As she made the film, program professors “helped me learn to articulate the visual ideas in my head,” said Auger, who was the recipient of a prestigious fellowship at the Bay Area Video Coalition in 2016.

Tales from the field
Professors advise their students in every step, from the theoretical aspects of filmmaking to the art of editing. But the professors also give these budding filmmakers advice drawn from life.

“One of my favorite aphorisms is that production is a carefully managed series of narrowly avoided catastrophes,” said Taylor. “I say that, of course, with tongue in cheek. But it is also true. If you get through a documentary production intact and alive and have something even relatively good, you have beaten the odds. So many things can go wrong. If you do in thinking something will go wrong, you can deal with the setbacks and it will be unexpected, and figure out ways to make them part of the story.”

For instance, while shooting her widely praised 2009 documentary, New Muslim Cool, which is about a hip-hop duo consisting of Hispanic Muslim brothers, she had to contend with an FBI raid on some of the characters’ homes. That incident changed the arc of the story that Taylor thought she was telling, but in the end it deepened and enriched the film.

Life after SocDoc
All of this training and life experience has real-world applications. So many students move on to impressive documentary filmmaking careers that Rich finds herself “constantly updating” the SocDoc list of outstanding alumni and their achievements.

Rich spoke with obvious pride when she mentioned that the prestigious Margaret Mead Film Festival, held every fall in New York City, has featured the work of one or two SocDoc alums without fail ever since it started showcasing the films of emerging documentarians. One recent success story, 2007 graduate Juan Mejia, directed Upendo, a student film about the forced displacement of black communities in Colombia.

“I entered the program more as an anthropologist, really,” said Mejia. “I had some basic media experience but not that much. At SocDoc I really honed my skills, but there was also an intensive theoretical process. We learned a lot about how to make responsible and complex documentaries. You can still be committed politically to a story and tell it in a complex way,” Mejia said.

Juan Mejia filming the charcoal market in Ravin Djab, Haiti, very close to the Dominican border city of Jimani. Mejia’s postgraduation work includes a feature documentary about the forced deportation of Dominicans called Death by a Thousand Cuts, which examines the murder of a forest ranger on the Dominican/Haitian border. More than just the tale of a killing, the movie is also a story of transnational aspirations and a thriving timber industry in an area that is being bulldozed.

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Not all students go on to documentary filmmaking careers. “It is a mix,” Gustafson said.

“Our model is to train people to be good enough at production basics that they can work with producers, editors, or work in sound.”

A career as a documentary filmmaker is not an easy one. Technology and online distribution have lowered the barrier of entry and the cost of equipment while creating a glut of content. But SocDoc trains its students to stand out from the masses of aspiring filmmakers. Besides, said Rich, “there is a hunger for new voices. Our students bring real passion to their work.”

The Film and Digital Media Department presents an exhibition of these films from the master’s program in Social Documentation annually in June at the DeMar Theatre at UC Santa Cruz. For more information about SocDoc, visit film.ucsc.edu/socdoc.
The Campaign for UC Santa Cruz is entering its final months having surpassed its target of $300 million and focusing on building resources for unmet priorities all across campus. The campaign will draw to a close June 30. “This moment is filled with potential for our campus and for advancing what we do,” said Chancellor George Blumenthal. “We are inviting everyone who cares about UC Santa Cruz to become a part of the campaign in the coming months. Important work all across campus is benefiting from the philanthropy of our friends and alumni.”

The campaign is the first campuswide effort to build a culture of giving in support of students, faculty, and campus programs. More than 57,000 donors—many of them alumni—have made gifts to the university since the campaign launch in 2009 and going public in the fall of 2013. “We are excited to see what additional progress we can make before we close the campaign,” said Keith Brant, vice chancellor for University Relations. “Initiatives in genomics, the renovation of the Science and Engineering Library, and launching a new graduate program in coastal science and policy are among priority areas before the close. We hope everyone who has been considering a gift will seize the opportunity to become a part of this historic campaign and the future of our campus.”

IN OTHER CAMPAIGN NEWS:

COLLIGAN CHAIR IN PEDIATRIC GENOMICS
John “Bud” and Rebecca Colligan have established the Colligan Presidential Chair in Pediatric Genomics with matching funds from the University of California Office of the President. The endowed chair will support a distinguished member of the UC Santa Cruz faculty whose research involves pediatric genomics. The UC Santa Cruz Genomics Institute is working to unlock genomic information to make possible targeted treatment of diseases, including a focus on pediatric cancer through its Treehouse Childhood Cancer Initiative.

QUARRY RENOVATION UNDERWAY
Construction is underway on restoration and expansion of the iconic Quarry Amphitheater in the heart of campus. The project is being funded with nearly $6.4 million in existing student fee reserves and more than $1.6 million in gifts from alumni, parents, faculty, staff, and others. The venue was closed in 2006 after falling into disrepair. Completion of the first phase of the project, which will allow it to be reopened for use as a gathering and event space, is projected for fall 2017.

SUPPORT FOR UNDERGRADUATE RESEARCH
The San Francisco–based Koret Foundation is supporting a Student Success Initiative at UC Santa Cruz with a $1 million grant for the new Koret Undergraduate Research Scholarships. The grant will fund 50 stipends of $1,500 for students in any discipline. It will also provide program and mentoring support for student research projects. UC Santa Cruz is one of 12 Koret University Partners.

Thank you to all who joined Giving Day 2017! Visit givingday.ucsc.edu for event news.

Axel Alonso: Diversity’s superhero
Cowell ‘87, sociology

As editor-in-chief of Marvel Comics, Axel Alonso oversees a world of superheroes, villains, and megalomaniacs who want to take over the world. His team of editors and writers puts out 63 to 72 comic books each month, and in 2015, Marvel Comics reportedly made $254 million from sales of its comics and trade paperbacks. But for Alonso the business of turning colorful graphic stories on flimsy paper stock is also about reflecting a diverse and changing world. During his five-year tenure as the head of the editorial division of the famous comic-book company, the 50-year-old Alonso has overseen the creation of a Muslim superhero, a female Thor, a biracial Spider-Man, and Korean American Hulk, among others. He has signed National Book Award winner and MacArthur genius Ta-Nehisi Coates to pen the latest Black Panther series and made sure his editors and writers include people of diverse backgrounds, religions, and genders.

Alonso, whose immigrant parents were from Mexico and England and who is married to a woman of Korean descent, believes diversity needs to be seen in the pages of Marvel comics. “It’s very important to me that readers of all types can see their reflection in the characters,” he says from his office in Midtown Manhattan.

It’s also important that comic books say something about life. “One of our guiding mantras is that you should reflect the world outside your window,” Alonso says. “What are people talking about? What are they worried about? Our stories strive to address these things through allegory and metaphor. We want to speak to the human condition.”
Jennifer Andaluz: Providing the stepping stones to college
Oakes ’94, American studies

The photo on Jennifer Andaluz’s phone shows four teenage girls smiling confidently in front of Columbia University after winning a national engineering competition.

If statistics are to be believed, none of the girls—all from low-income, minority families—would likely attend a university like Columbia. But Andaluz doesn’t believe in those kinds of predictions. In fact, a San Jose charter school network she cofounded 16 years ago called Downtown College Prep (DCP) is intended to disrupt that kind of data.

The DCP program, designed for middle and high school students from low-income backgrounds, has seen 96 percent of its graduates go on to college. Almost 90 percent persist in college after two years and 64 percent finish a four-year degree, Andaluz reports.

“The first thing we do at DCP is believe our kids can do amazing things,” says Andaluz, a former teacher who founded the school after seeing kids being graduated without the academic skills needed for college.

“They say, “that belief is backed up by high-quality instruction and college knowledge, the stepping stones kids need to succeed.”

Niketa Calame: Acting with purpose
Oakes ’02, theater arts

When Niketa Calame was 5 her mom put a microphone in her hand. It was, says Calame, as if she had suddenly come alive.

Calame would go on to voice the character of “young Nala” in Disney’s animated film The Lion King, act on stage, sing in choirs, appear in commercials, and make documentary films.

But being an African American woman in Hollywood and suffering from Type 1 diabetes, Calame did not always have a smooth path. There were times, she says, when she had difficulty keeping her confidence because the entertainment industry did not see the beauty of her dark skin, and the constant vigilance she needs in the face of a disease that makes even small decisions a matter of life and death is wearing.

But Calame, 36, is undaunted.

“I was lucky enough to find my purpose at a young age, and I feel like when you live and walk your purpose, the ups and downs, the triumphs and failures, are not as trying,” she says.

Her purpose took her to the Actors Studio Drama School in New York, where she earned her M.F.A. It took her to TV shows and roles like Squeak in The Color Purple at the Celebration Theatre in Los Angeles. It also has taken her to her job as an assistant director at IV I I Studios in Southern California, where she makes IMPACT brand films and feature documentaries, including the studio’s latest movie, Boxing for Christ, about a woman who runs a gym dedicated to keeping at-risk youth off the streets.

And it took her to a role as a spokeswoman for the American Diabetes Association and to a mentoring program where she is preparing for work as a community college professor.

“I’m consistently working and getting paid to be an artist,” Calame says. “To me, that’s success.”

Alan Lovewell: Fishing for change
Cowell ’05, art

For a guy who grew up fishing, Alan Lovewell was frustrated by his inability to easily get fresh seafood that wasn’t mislabeled or harvested by some huge corporation using unsustainable fishing practices.

So he decided to do something about it. Today the 34-year-old runs Real Good Fish, a company headquartered in Moss Landing that connects small-scale fishermen directly with consumers through weekly deliveries of seafood that range from fresh-caught Dungeness crab to wild salmon and sand dabs.

“The idea is that we want healthier oceans and to eat healthier food so we have to have closer ties” between consumers and suppliers, said Lovewell sitting in his sun-drenched office at the Moss Landing Harbor, the raucous bark of seals serving as background music.

Four years after it began, Real Good Fish now delivers fresh seafood caught by about three dozen fishermen to about 1,100 clients in Central California. Weekly emails that include fisherman’s stories, catch information, and recipes have created a kind of mini marine community.

Lovewell also has taken that idea a step further through a program called Bay 2 Tray. Under the project, fishermen are not only brought into classrooms from Monterey to Oakland to talk about their profession, but also their catches end up on the schools’ cafeteria trays.

Last year, Lovewell was named one of 12 Champions of Change for Sustainable Seafood by the White House for his work.

“The realization I had was that, if we don’t first empower coastal communities to take control of themselves in a sustainable manner, there is no way we will have healthy, sustainable fisheries on a global level,” Lovewell says.

PHOTOS: ANDALUZ BY MANDY CHASE; CALAME BY LEAH HUEBNER; LOVEWELL BY C. LAGATU-Ta
When James Duncan discovered dance and UC Santa Cruz, he was already a broadcast engineer with a geography degree from UC Berkeley. After attending a performance of Yugoslavian folk dance, he was inspired to study dance even though he was 30 years old and had no previous experience. He audited the modern dance class offered through UC Santa Cruz’s Office of Physical Education, Recreation & Sports (OPERS), then continued with jazz, folk, and ballet classes. He went on to perform with the Santa Cruz Ballet Theater, Ariel Dance Company, and the Santa Clara Ballet.

James is including a gift in his will to establish an endowment for dance instruction so that the program can thrive in perpetuity. “UC Santa Cruz,” says James, “represents everything I value.” Whatever your passion, you can help it live on through generations of students who will benefit from your vision. Find out how to include UC Santa Cruz in your estate planning.
Professor Enrico Ramirez-Ruiz knows the secret to turning stars into gold. All it takes is a little math. And a completely new way of looking at the universe. nontraditional.ucsc.edu