calpoly
MAGAZINE

JUICED
ALUM SQUEEZE THE MOST OUT OF THEIR EDUCATION

SUMMER 2007
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MUSIC PROFESSOR
CRAIG RUSSELL NAMED
CSU WANG AWARD WINNER

CRAIG RUSSELL, a composer, music historian, and master of guitar and lute, has been named as one of the five recipients of the prestigious California State University Wang Family Excellence Award.

Russell has long been recognized at Cal Poly and throughout the CSU system as an outstanding teacher. Almost legendary, his teaching spans the musical field from introductory survey classes, to Mozart and 60s pop, creating new appreciation and inspiring students to take music seriously.

Trained in classical guitar at the University of New Mexico, Russell earned his doctorate in musicology from the University of North Carolina before his groundbreaking work highlighting the forgotten musical heritage of 17th and 18th century Mexican and Californian culture. His original compositions have been recorded and performed nationally as well as at international festivals.

The Wang award, which includes $20,000 for each annual winner, was established in fall 1998, when former CSU Trustee Stanley T. Wang provided $1 million to reward outstanding faculty and administrators.

STUDENTS REAP
NATIONAL RECOGNITION

CAL POLY JOURNALISM STUDENTS are garnering national and statewide awards for exceptional work.

The Mustang Daily was recognized by the California Collegiate Media Association, winning two first-place awards for advertising and third place for its online addition in the Best Use of Multimedia category.

Mustang Daily reporter Ryan Chartrand won second place for the Best Arts and Entertainment Story. Frank Stranzl took second for Best Sports Column. James Glenn placed second for Best Cartoon, while Caitlin Donnell placed third for Best News Page Design.

In addition, the Mustang Daily won several awards at the recent College Newspaper Business and Advertising Managers national convention in Portland, Ore.

Cal Poly business senior Elizabeth Carmo was named Advertising Sales Representative of the Year for newspapers with a combined weekly circulation of less than 40,000. Shay Swetch, an art and design major, was named Designer of the Year for the same circulation category.

The paper also won first place for Best Sales Incentive Plan and third place awards for Best Training Program and Best Special Section.

Cal Poly journalism students are not the only ones getting attention. The following students have brought honor to their colleges and departments.

• College of Education graduate student Heather Iwata has received the Outstanding Graduate Student Award from the American College Personnel Association’s Commission for Student Involvement.

• Cal Poly’s American Society of Mechanical Engineers continued their winning streak as the nation’s leading student chapter at the recent American Society of Mechanical Engineers, Ingersoll-Rand Regional Conference in Reno, Nev. The group was named top chapter for the 10th straight year and placed second in the Student Design Competition.

• A team of Cal Poly construction management students earned first place in the Mechanical Contractors Association of America’s annual competition held in Orlando, Florida. Team members include Derrick Fellows, Randy Ayures, Frank Ormonde, Ross Fenton and team captain Mya Krikorian.
NEW ALUMNI ONLINE
COMMUNITY TO ROLL OUT THIS FALL

THE CAL POLY ALUMNI ONLINE COMMUNITY is almost a virtual reality, heading for a fall roll out!

Then you will be only a click away from looking up that WOW team leader who introduced you to the SLO Farmers Market, viewing photos of your old roommate’s kids, or networking with your former lab partner to find a new job.

Want to reconnect with the buddies who worked on the Rose Parade float with you? Or how about checking out how the rugby team is doing this year?

Sign up for an alumni event in your area?

Know about job openings at your company or business and want to give fellow alums an inside line on career prospects?

Finally take that trip to Italy, as part of a group tour with your fellow Mustangs?

The community will also allow you to receive customized updates about your old department, club, or activity. That news will be waiting for you every time you log on.

THE COMMUNITY WILL BE FREE AND OPEN TO ALL MUSTANG ALUMNI

Members can also create their own interest group pages and bulletin boards – all within the protected security of the community.

And, of course, you will be able to do all this and more with full control over how much – or how little – of your personal information is displayed.

The community will be free and open to all Mustang alumni.

Future plans also call for special guest memberships for faculty, staff and retirees – so alumni can stay in touch with favorite professors and former Cal Poly mentors.

Watch the Alumni Web site at www.alumni.calpoly.edu for more details on the alumni online community and its coming launch.

The University will be sending user IDs and one-time passwords to alumni via e-mail later this year. To be among the first to get your User ID and password, make sure we have your current contact information. Update your information on the Alumni Web site at http://www.alumni.calpoly.edu/network/update_address.html.

FATHER OF HOLLYWOOD

TRAVEL THE WORLD, and it’s unlikely you will escape its influence. It’s been loved, hated and everything in between. Hollywood is more of an idea for most people, but the physical place had a colorful beginning. You can read about it in a new book, “The Father of Hollywood,” by Gaelyn Whitley Keith (OCB ’74). The author is the great-granddaughter of HJ Whitley, a developer and businessman credited as the main driving force behind the creation of one of the world’s most famous communities.

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ENGINEERING PROFESSORS AWARDED NSF GRANTS

CAL POLY ENGINEERING PROFESSORS working on two separate projects have received grants from the prestigious National Science Foundation.

Materials engineering Associate Professor Trevor Harding and his colleagues from the University of Michigan and Lawrence Technological University received an $850,000 grant for their project entitled "A Holistic Assessment of the Ethical Development of Engineering Undergraduates."

Harding and his partners will survey more than 4,000 engineering students from 20 universities over the next four years to gauge what curricular and extra-curricular activities have the greatest influence on ethical development.

Jianbiao Pan, an assistant professor in industrial engineering, and electrical engineering professors Albert Liddicoat and James Harris were awarded $199,030 for their proposal entitled "Enhancing Student Learning Through State-of-the-Art Systems Level Design and Implementation."

The award is designated an NSF course, curriculum, and laboratory improvement grant. They will build a "pipeline" in the computer engineering curriculum at Cal Poly to engage students in project-based learning. □

GEORGE SOARES NAMED ADVOCATE OF THE YEAR

CAL POLY has named alumnus George Soares (AGB '66), a well-known attorney and agriculturalist, as its 2007 Advocate of the Year. Soares was honored at a California State University ceremony in Sacramento March 19.

A former Cal Poly student body president, he earned his law degree at the University of the Pacific McGeorge School of Law. A Sacramento resident, he owns and operates a dairy and farming business in Hanford and is the founder and managing partner in the law firm of Kahn, Soares & Conway.

Before entering private practice, Soares served as principal consultant to the California State Assembly from 1972 to 1978.

"George has been a longtime friend of Cal Poly and the CSU and has been a strong advocate of many issues related to support of the university, the system, higher education and his true passion – agriculture," said Sandra Gardebring Ogren, Cal Poly's vice president for University Advancement.

Born in the tiny San Luis Obispo County town of Harmony, Soares was raised in the California Central Valley. He has successfully built his legal and lobbying practice into the dominant force in the realm of agriculture. He has engineered the creation of 20 state commissions to govern commodities from avocados to walnuts – groups which help determine the shape, size and quantity of fruits and vegetables sold throughout the state.

Currently, Soares serves on the Cal Poly Foundation Board of Directors and is the chair of the CSU Commission on Agriculture. He is the recipient of numerous honors. In 1986 he was named an honorary lifetime member of the California Agricultural Aircraft Association. In 1987, he was named the Honored Alumnus from the Cal Poly’s College of Agriculture, Food and Environmental Sciences.

He served on the Board of Directors of the Agricultural Education Foundation from 1990 through 1999 and has served on the San Joaquin College of Law Agricultural Advisory Board since 1996. He is an honorary lifetime member of the Western Crop Protection Association and received the Outstanding Service Award from the American Crop Protection Association in 2000. □
CALIFORNIA WORKFORCE NEEDS DISCUSSED

A HIGHLY SKILLED science, technology, engineering and mathematics (STEM) workforce is critical to California’s continued economic vitality.

In many quarters there is concern that California will not be able to meet its future STEM workforce needs if the state continues to enroll and graduate college and university students at present rates.

For that reason, Cal Poly and the California State University System have made it a priority to support efforts to expand participation by K-University students in STEM disciplines.

President Warren Baker shared an update on the CSU’s efforts to help address this challenge at a May 19, 2007, California Space Authority forum in Los Angeles, convened to further the development of a regional STEM Collaborative Action Plan (STEMCAP).

State Superintendent of Public Instruction Jack O’Connell and Boeing Company Senior Vice President for Internal Services Rick Stephens were other featured speakers at the CSA forum.

In his remarks Baker reviewed two major CSU STEM education initiatives: the CSU Math and Science Teacher Initiative, which has a goal of doubling the number of teachers prepared annually by the CSU in math and science fields, and the CSU Professional Science Master’s Initiative, which prepares students to assume leadership roles in California high tech industries.

Baker emphasized that the CSU’s STEM initiatives are a major priority of the system. They seek to identify best practices that are “scalable, forge collaborative initiatives with the K-12, community college and private sectors, and prepare more graduates for work as educators, practitioners and managers in STEM fields.”

The STEMCAP initiative is supported by a WIRED (Workforce Innovation in Regional Economic Development) grant from the U.S. Department of Labor.

PLAN YOUR GIVING ONLINE

ALUMNI AND FRIENDS have a new place to learn the many ways to support Cal Poly through thoughtful estate planning.

The Planned Giving and Endowments office has created a new web site, www.plannedgiving.calpoly.edu, which contains examples and descriptions of how making a gift to Cal Poly can be easier than imagined.

From naming Cal Poly in your will to designating the University as a retirement plan beneficiary, making a future gift can be a simple way of supporting your department, creating a scholarship or honoring a mentor.

Other planned gifts can actually provide income. The easy-to-use online calculator can show how to turn an underperforming asset into a reliable income stream, also allowing you to also make a gift to Cal Poly.

The Planned Giving Web site can help you consider your charitable priorities. For more information, call the Planned Giving and Endowments office at 1-800-549-2666.

RECORD AMOUNT RAISED FOR WHEELCHAIR FOUNDATION

THE CAL POLY WHEELCHAIR FOUNDATION recently raised $48,000 at its Sixth Annual Gift of Mobility Benefit. Proceeds from the event brought the team’s annual fundraising total to more than $80,000, exceeding their original goal of $66,000.

The group will deliver more than 1,000 wheelchairs to Argentina in early September.

They chose Argentina because according to estimates, only 45 percent of the population has adequate healthcare. This year’s distribution will include a large delivery in Buenos Aires and personal distributions to homes in rural areas. The team also plans to deliver personal items such as toothbrushes, shoes, socks and blankets to area orphanages.

The Cal Poly Chapter of the Wheelchair Foundation was founded in April 2001 to provide students with an opportunity to apply their education to a beneficial cause. The first student chapter of the Wheelchair Foundation in the nation, it has received four President’s Community-Based Learning and Service Awards.
THREE ALUMS AND LOCAL ENTREPRENEUR CREATE RECIPE FOR SUCCESS

BY JO ANN LLOYD

ONE SIMPLE IDEA, two simple words, hundreds of locations, thousands of employees, and millions of satisfied customers.

Blend in one entrepreneur and three Cal Poly alumni.

The Jamba Juice recipe for success was clear from the beginning. The first store — known then as the Juice Club — opened in April 1990 on Foothill Boulevard near campus, thanks to the combined efforts of Kevin Peters ('91 BUS) and Joe Vergara (BUS), who joined Kirk Perron a tenacious young San Luis Obispo entrepreneur and former Cuesta College student, who had the idea to open that first Juice Club.

Though Perron had the requisite vision and determination, he realized he needed help planning menus, creating drink recipes and blending the icy fruit drinks. So he hired Vergara, then manager of another local fruit juice store.

Peters was hired to help open and run the first store, eventually documenting the systems and training personnel for expansion.

The explosive growth that resulted is now legendary. So how does the original team explain the sweet success of Banana Berry, Berry Lime Sublime, Peach Pleasure, Razzmatazz and Strawberries Wild?

"Our visions were pretty grand, but our initial focus was on the first store," Peters said.

Dedication, attention to detail and a passion for people were also key factors. "From the first store, from the very start, everything mattered – from the cleanliness of the store to the shape of the poured smoothie. There was a fanaticism on every level," he remembers.

Then, as soon as expansion was considered, the trio hung up a map of the United States to plot potential sites.

And it wasn't long before customers were clamoring for more locations. Tourists began asking for stores in their hometowns. Fast-food executives starting arriving in groups, and the competitors started popping up.

The company, still known as the Juice Club, began to franchise in 1992, and the response was phenomenal. "We were giving presentations in huge ballrooms," Peters recalls. "People were flocking to hear how they could open a Juice Club. We went from simply recruiting good people to a strict process of qualifying and disqualifying the many interested parties."

The Juice Club needed more staff members to handle the burgeoning business, and Linda Ozawa-Olds (MBA '92) was brought on board, eventually rising to vice president of marketing.

"What attracted me to Juice Club was not only the concept, but the people," Ozawa-Olds said. "After a three-hour interview with Kirk, then meeting Kevin and Joe, I knew this was where I wanted to be!"

But in 1994, the franchising stopped when the Juice Club hit the radar screens of venture capitalists — including Howard Schultz, chairman of Starbucks, and John Mackey, chairman and CEO of Whole Foods Market. Perron recruited both to serve on the board of directors.

A search for a new name and a new "brand" began. Although the Juice Club was a trademarked name, it was composed of words that were not totally proprietary, Peters explained. Numerous competitors with the word "juice" in their names were diluting the Juice Club brand. It was decided that a new name and logo were needed to help differentiate it.

continued on next page...
The visual icon, the trademark Jamba Juice whirl, came first. "During a brainstorming session, we were discussing the actual whirl created inside a blender as a smoothie is being made," said Ozawa-Olds. "If you saw the whirl, you knew the smoothie was just right."

This image was conveyed to an agency in Seattle, which developed the now-familiar logo.

Creating a new name proved a bit more complicated. "After hiring professionals, hearing rounds of names that didn't resonate with us, and spending thousands of dollars, we decided to take matters into our own hands," Ozawa-Olds said.

Perron, Ozawa-Olds and Peters each went to a different section in Cal Poly's Kennedy Library, agreeing to meet three hours later with lists of potential names.

"I ended up in the languages section looking up the word 'celebrate.' I had the word 'jama' on my list, and 'jambalaya' and 'jamboree,'" Ozawa-Olds recalls.

Perron also had a j-word on his list - 'jambu,' a type of fruit. "Eventually I came up with 'Jamba,' and the word stuck," Ozawa-Olds said.

It now appeared that all the details were in place.

"But we still had a big job ahead of us," said Perron. "We had to grow Jamba Juice into a brand of many choices: breakfast, lunch, dinner, snack. We had to carve a niche in the marketplace and get people to understand that a smoothie is a healthy alternative to fast food."

No problem for the hard-working team. Today, Jamba Juice has some 600 locations throughout the United States and plans to go international.

A part of American pop culture, it has even appeared in a skit on "Saturday Night Live" and on an episode of "The Sopranos." Perron himself has been featured on "Oprah" and in a concept to purchase, allowing the blank-check company to use its resources to capitalize on the new concept's potential. Jamba was that concept - and, roughly speaking, it became public upon the successful merger of the two companies."

Perron and Peters now have varying degrees of involvement with the company. Perron, who left a few years ago, acts as a consultant for Jamba Juice and served on its board. He is currently spending much of his time traveling. Peters left Jamba Juice in 2001. The San Francisco resident now runs the business side of one of the West Coast's largest private residential interior-design firms.

Ozawa-Olds and Vergara, now both living on the Central Coast, were partners until recently, in 10 Jamba Juice franchises from Paso Robles to Camarillo.

One thing hasn't changed, though. The four original partners still have the same respect and admiration for each other they had when the Juice Club was just starting out.

"Kirk, Kevin, and Joe were my partners in crime," Ozawa-Olds said. "They pushed me, pulled me, appreciated me and loved me. Together we shared a passion and a vision that had kept us united through good and bad times."

The Cal Poly alumna is also quick to credit Perron's vision and leadership.

"It was Kirk's initial vision, focus and determination that took us beyond one store," Ozawa-Olds said. "Jamba Juice would have never gotten off the ground if it weren't for Kirk and his ability to build a strong team."
BEING A COLLEGE PRESIDENT sometimes feels like you're being nibbled to death by goldfish.

That's one thing the president of the University of North Texas has learned in the position she has held for nearly a year.

"Change can be threatening to people, and they nibble at you," Gretchen Bataille (ENGL '66, EDU '67) says with a laugh. "On the plus side, you can make a difference. You can make changes. What you do in this position has a positive influence on countless individuals."

Bataille has learned many lessons outside the classroom over the years. One of her favorites is "take advantage of every opportunity," something she learned during her years at Cal Poly.

"I knew what I wanted to be in my senior year, when I helped a professor teach her class," Bataille said. "The 'learn by doing philosophy' applies to all disciplines. It was a great prelude to a teaching career."

Not surprisingly however, it was the challenging experiences that defined her character and perspective.

"In every speech, I talk about leadership and ethics – the need for an ethical framework for what you're doing," she said. "Do the right thing, even if it causes you grief at the time. I learned that while chairing the Iowa Civil Rights Commission."

Bataille served on the commission during the late 1970s when many students received basketball scholarships, nearly all of them male. The reason? Girl basketball programs in Iowa played "half-court" six-person games – not the standard, full-court five-person games that boys played. Bataille and the commission decided that girls needed to start playing full-court in order to be competitive.

After a firestorm of controversy, the state's governor did not reappoint Bataille to the commission. But her position for equality was validated years later, when she was thanked by an assistant coach at Washington State University – a young woman from Iowa who went to college on a basketball scholarship. "Although unpopular at the time, our actions made her future possible," said Bataille.

Bataille has made the most of her opportunities – her professional accomplishments are almost too numerous to mention. She served as chief academic officer for the 16-campus UNC system and as interim chancellor for the system's North Carolina School of the Arts.

She helped create the American Indian Institute at Arizona State University and has written numerous books and articles on Native American literature. An accomplished public speaker, she recently gave a keynote address at Bogazici University in Istanbul, Turkey.

"Gretchen's contributions to higher education bring honor to both of the colleges where she earned her degrees – the College of Education and the College of Liberal Arts," said COE Dean Bonnie Konopak. "Her willingness to take risks for what she believes and her love of learning both formally and informally is a great model for our students."
SKATEPARKS
KILLER CONCRETE BOWLS AND GNARLY VERTICAL WALLS

BY PAT KETCHUM
TWO CAL POLY LANDSCAPE ARCHITECT GRADS are bringing killer concrete bowls and gnarly vertical walls to communities all over the world.

Zack Wormhoudt (LA '93) and Craig Waltz (LA '04) are paving the way for one of the fastest growing sports among teenagers - skateboarding.

Skateboard parks designed by their company now grace cities as far away as the port of Penzance in England and the city of Tel-Aviv in Israel. Their newest one is closer to home - the Mike Fox Skatepark, a $1.3-million, 15,000-square-foot facility along the San Lorenzo River in Santa Cruz. Though Wormhoudt and Waltz share an alma mater, an obsession with surfing, and even their hometown, the pair didn't meet as students at Cal Poly or even on the beaches of Santa Cruz.

A phone call set the wheels in motion for their partnership in 2006. Wormhoudt, who had been designing skate and bike parks for nearly a decade alongside his father, picked up the phone one day.

On the other end was Waltz, armed with a senior project he knew would grab Wormhoudt's attention, a comprehensive video and skate park design that earned him an A-plus at Cal Poly. As he hoped, it landed him the job of his dreams on the design team that has crafted nearly 100 public and private parks worldwide.

According to Wormhoudt, city governments are starting to realize that skateboarding is a great sport for contemporary youth, just like soccer, baseball and football. "Also, if a city doesn't have a skate park, then the city becomes a skate park," he said.

Benches, planters, curbs, walls, and even the steps of city hall became choice turf for "boarders" in the late '70s when acrobatic sidewalk surfing was born. This posed a hazard to pedestrians and vehicles.

Today, the crooked grinds, kick-flips, wall-rides and indy grabs that are performed at official sporting events such as the X-Games pose no danger to the public - thanks to the vision and safety consciousness of designers like Wormhoudt and Waltz, as well as laws adopted by California in 1998 that eliminated much of the liability for municipalities that operate public skate parks.

"Most skateboarders are graceful athletes who defy the old stereotype of aggressive urban guerilla," Wormhoudt explains. "The perception of them is changing, along with laws that make public parks a viable investment for a community."

The sport's climb to respectability may even get a jump start soon. According to recent speculation on blogs, skateboarding may even follow the path of its extreme sport cousin, snowboarding, and become an Olympic event.
The new Engineering Plaza was designed to serve as the heart of Cal Poly's world-renowned engineering programs. With its distinctive Fibonacci spiral, the plaza is set between the new Engineering IV building and the Bonderson Student Projects Center. For a limited time, the College of Engineering is offering an opportunity to purchase a personalized, laser-etched paving tile in the new plaza.
ALEX G. SPANOS STADIUM

The Alex G. Spanos Stadium makes for an impressive sight on a warm Central Coast evening. Several thousand seats were newly added to the renovated west side, bringing the total capacity to more than 10,000 fans. Seating begins four feet above the playing field and rises to skyboxes at 37 feet. Elevator towers at each end, traditional tile roofing and a stucco finish lend an early California Mission feel.

More than 75 percent of the $20 million cost for the renovation was funded by private contributions, including a generous commitment from Alex G. Spanos, business entrepreneur and owner of the San Diego Chargers.
Construction continues on Poly Canyon Village, the newest student housing project, scheduled to open fall 2008. It will house some 2,700 students, with 1,900 parking spaces, commercial areas for retail and food service, and a recreation center.

Bella Montana, a 69-unit residential development for faculty and staff, is nearly complete. The homes are a short walk from campus. Ten different floor plans are available. More information can be found at www.bellamontanahomes.com.
AFTER TWO DECADES OF PLANNING and over a year in construction, the Performing Arts Center on the Cal Poly campus has become home to one of the world’s finest pipe organs, the Opus 129.

The one-of-a-kind instrument, located in Harman Hall, was the dream of local music enthusiasts. It became a reality through a generous gift from Bert and Candee Forbes, along with the efforts of community members and pipe organ professionals at C.B. Fisk Inc. of Gloucester, Mass.

The late Charles Fisk founded his company in 1961, the first American to leave behind the 20th-century electro-pneumatic pipe organ and return to the historic and time-honored mechanical or tracker action — the kind that inspired so many great composers.

Today, in addition to the instruments at Cal Poly, Stanford University and Pomona College, Fisk organs are found in 22 other states, as well as Switzerland and Japan.

With the distinctive exterior lines of the Christopher Cohan Center inspiring the architecture of the Opus 129, the facade is adorned by polished, burnished tin pipes, ranging from the size of a pencil to 32 feet tall, according to Cal Poly Music Professor Emeritus Clifton Swanson.

The power of a pipe organ this size — 2,767 pipes in total — can generate a pitch so low that it’s almost beyond the range of hearing and can actually cause walls to shake.

Closely replicating the traditional 17th and 18th century European pipe organs, the tracker action used in the Opus 129 creates a direct flow of air from the blowers to the air chests. The keyboard and pedal board are directly connected to the pipes by carbon fiber rods, opening and closing the air supply as needed. The simplicity of this process allows for superior longevity, due to the lack of an elaborate electro-pneumatic system with components that wear out.

Although many less traditional organs are built with curved pedal boards — so the organist doesn’t have to stretch so far when playing — the pedal board on the Opus 129 is flat, a characteristic of organs made in former centuries.

Historically, most instruments were designed with a style of music in mind, such as German, French or Italian. However, the Opus 129 and many other modern pipe organs are created intentionally as an international blend of styles, Swanson explained.

The Opus 129 opens up opportunities for a wider range of repertoires and performing groups for Cal Poly and San Luis Obispo. “Sometimes perceived as strictly a recital instrument, it will accompany orchestra performances and choral music concerts,” said Swanson.

For more information, visit www.pacslp.org. □
IT'S A MYSTERY MAKING HEADLINES across the United States this year: What's killing America's bees?

The topic might seem arcane, until you consider that one-third of the nation's crops — and their growers — depend on honeybees for pollination and production. In California, for example, the No. 1 export crop is almonds.

Almond orchards require two active hives per acre during spring blossom. While collecting almond nectar, the bees pollinate the almond trees. No bees, no almond crop. With 600,000 acres of almonds under cultivation in California, that's a lot of bees needed — approximately a million beehives.

Just ask Cal Poly Professor Scott Jeffreys, who teaches commercial beekeeping in the Horticulture and Crop Science Department and runs the year-round Cal Poly honey student enterprise project.

The professor and his students move Cal Poly's multiple bee hives around campus throughout the year to locations such as the avocado and citrus orchards, in addition to the department's various seed crop fields.

When they're not wrangling herds of insects and harvesting honey, Jeffreys and his students are working on ways to save the bees.

The commercial honeybee industry has had a one-two punch over the last several years, the professor explains, including increasing attacks by the Varroa destructor mite, a parasite that attaches to the bee's body and can vector up to 20 different honeybee viruses.

It would be like having a tick "the size of a Chihuahua" on you, according to Jeffreys.

At the same time, more hives across the nation have been hit by American Foul Brood, a bacteria with a nasty spore form...
PROFESSOR, STUDENTS WORK TO SAVE THE HUMBLE HONEYBEE

that is difficult to control. Infected hives have to be burned to kill the spore.

Hives also have been hit by Colony Collapse Disorder, causing bees to flee their homes and simply disappear. There's also the emergence of the small hive beetle, which originated in Africa. It tunnels through a bee hive and turns honey into "a stinky, unusable mess," Jeffrey said.

Another factor cited as beleaguering the bees is loss of wildflower habitat, due to urban encroachment and systematic pesticide use.

Beekeepers and entomologists have known about all of these threats for the past 15 years, but it's only been in the past year that the mystery die-off - or just plain vanishing - has affected hundreds of thousands of hives and their honeybees.

"It's pretty grim," said Jeffrey, who worked in the commercial bee industry at the Kona Queen Company in Hawaii - one of the larger commercial bee operations in the United States - before coming to Cal Poly. "It's fair to say the entire commercial bee industry is on its knees."

Meanwhile, on campus, Jeffrey and his students are harvesting honey, pollinating crops with their bees, and focusing on keeping disease and parasites at bay.

They also are breeding naturally disease and mite-tolerant queen bees. The Cal Poly queens and bees have been chemical free for the past three years. They are bred and cared for without the use of antibiotics, pesticides or any other chemicals. Jeffrey is convinced that's the best survival strategy.

Honeybees bred to be tolerant of the Varroa mite will smell and detect capped larvae or pupae infected with a fertile mite. The bees then cannibalize the larvae, tossing it and the mite out of the hive, Jeffrey said.

Any extra queens not required to establish or continue Cal Poly hives could be sold to commercial beekeepers for $10-$15 each.

Though 2006 was a tough year for the Cal Poly bees, they held their own. And with the heavy rains, and resulting flowers, they found a lot of nectar. "Last year was the best honey year we've ever had," Jeffrey said. "We made seven or eight barrels of honey and we're still bottling and selling the last couple of barrels."

About 10 students work on the Cal Poly honey enterprise project every year. They do everything from harvesting to bottling.

Jeffrey has another 36 students this quarter in his fruit science commercial beekeeping class. These include agriculture business management students, some computer science students, and even the occasional mechanical engineer or graphic artist. "I think the students tell each other about the class. After one class, I tell the students they could be the hit of any dinner party," Jeffrey said with a smile.

Students have to buy their own beekeeper gloves - leather-handed with cloth forearm guards held in place with elastic over the elbow to keep the bees out. The Horticulture and Crop Science Department equips the class with commercial beekeeper helmets and veils to cover faces and necks. That's all that's needed for protective gear.

The first day of class, students head out to the hives, open them up, and learn how to spot the queen. "It's all an outdoor adventure. I tell them the only thing with more adventure is rodeo," Jeffrey said.

"You will get stung. Probably more than once," he warns. "I tell the students, 'If you're allergic to bees, you're in the wrong class.'"

Cal Poly Honey is available in season at the Campus Market. To find out about the Cal Poly beekeeping operations or Cal Poly Honey, contact Jeffrey at sjeffrey@calpoly.edu.
DOES A VEHICLE THAT GETS 2,000 MILES PER GALLON read like a typo with too many zeroes? It's not.

Members of Cal Poly's Super Mileage Club have received national media coverage for their "eco-car" that runs on standard gasoline and achieves almost that level of fuel efficiency - more than 1,900 miles to the gallon!

However, you probably won't see this model on the market anytime soon according to Thomas Heckel and fellow mechanical engineering students David Ulrich, Estevan Negrete, Mike Kerns, Vann Chau, Kevin Fang and brothers Jason and Josh Kempenaar.

And even if it does, comfortable leg room and cargo space will not come standard.

The car is small, weighing approximately 96 pounds. It can seat one person - and only if that person is under 6' feet tall and under 150 pounds. However, it can achieve a top speed of 40 to 45 mph using a Honda 50cc engine.

The students entered the car in the Shell Eco-Car Challenge earlier this year at the California Speedway in Fontana. Seven laps later, a distance of approximately 10 miles on the speedway's inside track, contest officials measured the team's amazing accomplishment. The car was achieving an astonishing 1,902.7 mpg.

To measure mileage, a mark was placed at the top of the 100ml fuel tank. The car was driven, and the engine was then shut off. Officials measured the amount of gas - standard Shell 89 octane - it took to fill up the tank.

How was this incredible mileage accomplished? Besides the weight, there are three significant factors at work, according to Heckel: the engine, the tires and the vehicle's shape.

"Standard engines fire at the same time regardless of the speed," he explained. "The engine was modified to have timing advance, allowing the spark plug to fire at different times in conjunction with the speed of the vehicle. This increases fuel efficiency."

As for the tires, you won't find them at the local auto shop. Measuring 19 inches in diameter and 1.5 inches in width, they are custom made by Michelin for very little rolling resistance. "Combined with the vehicle's aerodynamic shape and weight, these factors allowed the vehicle to cover ground with very little resistance," Heckel said.

To achieve the light weight, the car's frame was built from scratch using a composite material, carbon fiber soaked in epoxy resin. Molds were then used to shape the frame and harden it. To harden the material, an oven was needed, something that was not available on campus.

"C&D Aerospace in Santa Maria really helped us out with this part of the process," said Heckel. "We laid the carbon fiber into the molds at their shop and used the oven. It worked out great."

Surprisingly, nearly everyone can relate to the most challenging aspect of this project - and it was not developing the technology. "Organization was the biggest hurdle, keeping everyone on track and on schedule," admits Heckel. "A lot of deadlines needed to be met."

Many lessons were learned from the experience. One lesson has implications for everyone, according to Heckel. "High-mileage cars are a definite possibility in the near future - it's just a matter of the public wanting them," he said. "If the perception changes, the technology is there to make it happen."

The Super Mileage Club is under the guidance of faculty advisors Joseph Mello, Peter Schuster and John Fabijanic. The current club was started three years ago by the Kempenaars, Ulrich and Nick Wilde. The last active Super Mileage Club at Cal Poly was in 1993.
WHEN A FAST-FOOD restaurant opened in 1986 on the historic Spanish steps in Rome, Carlo Petrini was shocked. Afraid it might signal the death of quality food, local heritage and the culture of eating he loves, he created the antidote — Slow Food International.

Designed to promote the food traditions that are part of the cultural identity of Italy and most other countries, the movement has spread around the globe over the past 20 years, with 140 "convivia" now carrying out the slow food mission in the United States, including a chapter in San Luis Obispo.

Petrini believes that eating is more than just feeding our bodies, according to the founder of Cal Poly’s Sustainable Agriculture Resource Consortium (SARC), Hunter Francis. "Petrini considers eating a cultural act that ideally includes a pleasurable social experience around the table. Moreover, he knows how our food choices impact the way food is grown. Hoping to protect the endangered wealth of traditional farming knowledge, he looks for allies in universities and the food industry to help him preserve this artisan knowledge," Francis said.

One way Petrini has attracted support is hosting the mother of all "foodie" conferences in Turin, Italy. Called "Terra Madre," the international event is held every other year.

In 2006, over 8,000 food producers, educators, and chefs from 150 countries attended, including Francis and San Luis Obispo chef Maegen Loring. Another attendee was Nora Pouillon, the mother of Cal Poly soils science alum Alexis Pouillon. Ms. Pouillon started the first certified organic restaurant — Restaurant Nora — in the United States, in Washington, D.C.

Yak cheese from Tibet, heirloom wheat from Canada, infused herbal teas from Belarus and Ojibwa wild rice were among the myriad exotic offerings to catch their attention at an immense foods market called Salone del Gusto, held next to the conference.

"I kept going back to the Irish cheeses," Loring said longingly, "especially one made from cow’s milk with flecks of seaweed. I could close my eyes and smell the wind from the bluffs and taste the grass in it."
Also providing a feast for the eyes, the conference included an exhibit of food art, such as an oriental dragon made of yellow winter squash.

Acquiring new perspectives and insights into food practices was yet another benefit to the food advocates in attendance. "We learned that the use of veal in dishes - not very ‘PC’ here - originated as a way to make use of the meat of male calves that small farmers just couldn’t sustain. And rose or blush wine actually began as a by-product of red wine production," Loring explained.

Keeping the old ways alive is a major accomplishment of the movement. By the 1970s, artisan cheese making in the United States was virtually dead, Loring said. In the 80s, there were fewer than a dozen people making cheeses in small batches. Now there are hundreds, including many who trained at Cal Poly’s annual cheese-making short course.

The movement helps support cottage industries around the world too, such as the camel-milk cheese makers in Northwest Africa, red rice growers in Madagascar, mulberry gathers in Tajikistan, and more than 1,500 other small food communities around the globe.

And in Switzerland, it helps preserve charming folkways, as well. "All the cows in Switzerland are free range, and the women are the cow callers. It’s not a yodel but more of an operatic singing. It was so haunting, it brought tears to everyone’s eyes," Loring recalled.

Although big agriculture helps feed the world, the proponents of slow food hope that the small, indigenous ways won’t be lost. "Some things are meant to stay small and be cherished," Loring said.

**UPCOMING SLOW FOOD EVENTS**

Although the next Terre Madre won’t be held until Oct. 2008, don’t worry if this article has you hankering for Herat raisins from Afghanistan or Kabompo organic honey from Zambia. Many events are planned around California that will feature local and regional delicacies.

- SARC’s own annual fundraiser in October will include leading voices in the sustainable agriculture movement and samplings of many artisanal and “local-board” treats – foods made with ingredients in season and grown within 100 miles. For more information, go to www.sarc.calpoly.edu.
- In May 2008 the Slow Food Nation conference will be held in San Francisco, “sort of a Terra Madre U.S.,” where the emphasis will be on heritage foods from the West Coast, according to Francis.
- For a list of other upcoming events around the country, go to http://slowfoodusa.org/events/index.html.

**LINKS TO RELATED FOOD INITIATIVES AT CAL POLY AND AROUND THE WORLD**

- SARC at Cal Poly ........................................ www.sarc.calpoly.edu
- Cal Poly Organic Farm .................................. www.calpolyorgfarm.com
- Central Coast Grown ........................................ www.CentralCoastGrown.org
- Center for Urban Agriculture, Goleta, Ca. .......... www.fairviewgardens.org
- Slow Food USA ............................................. www.slowfoodusa.org
- Slow Food .................................................. www.slowfood.com
- Terra Madre .................................................. www.terramadre2006.org
- Globally Important Agricultural Heritage Systems .... www.fao.org/sd
- Restaurant Nora .............................................. www.noras.com
A MATCH MADE IN HEAVEN

BY SCOTT ROARK

NOT MANY PEOPLE KNOW they can double their gifts to Cal Poly without spending an additional dime.

Companies such as Bank of America, Verizon, Lockheed Martin, Adobe and many other firms offer a matching-gift benefit to their employees to inspire charitable giving.

During fiscal year 2006-07, approximately 1,100 Cal Poly alumni, parents and friends made personal contributions to the programs of their choice and then took the extra time to apply for their gifts to be “matched.”

These matching contributions added nearly $258,000 to Cal Poly’s programs, putting the university at the top of the 23-campus California State University system for matching-gift options.

Patrick Edwards (CSM ’75) is one alumnus who took full advantage of this opportunity. During his long career as a pharmaceutical salesman, the resident of San Ramon, Calif., has consistently donated thousands of dollars a year – and received a match for each gift from his employer, Pfizer Inc.

According to Edwards, this is the best way of maximizing his contribution to Cal Poly. “I owe my success in my pharmaceutical career to Cal Poly and in particular to biological sciences Emeritus Professor V.L. Holland, who changed the course of my study to bioscience,” he said.

Check with your company’s human resources office or benefits manager to see if your company participates in a matching-gift program. After that, take a few minutes and go to www.giving.calpoly.edu/matching to complete the matching-gift application form. E-mail the form to lstark@calpoly.edu or call Linda Stark at 805-756-2713 for more information.

Your gift to Cal Poly? A great value. Having that gift matched dollar-for-dollar by your employer? Even better. □
CAL POLY TRAVEL PROGRAM

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JOIN US IN 2008!
PERU – LIMA, CUZCO, & MACHU PICCHU – Jan. 24-31
Experience the lost city of Machu Picchu, ancient Cuzco, historic Lima, and Peru's many ancient and modern cultures that have shaped this extraordinary country.

WATERWAYS OF HOLLAND AND BELGIUM – April 22-30
The beauty, history and culture of Holland and Belgium will be at your fingertips as you cruise the legendary waterways of these countries. You’ll see the heart of one of Europe’s most colorful and fascinating regions.

SICILY – TAORMINA AND MONDELLO – Sept. 26-Oct. 6
The island of Sicily is a cultural crossroads of Mediterranean civilizations. Enjoy its breathtaking natural beauty, cobbled medieval towns, craggy cliffs, and vineyards.

Join our mailing list and learn more, or check our Web site at www.alumni.calpoly.edu. Brochures are available six to eight months prior to departure. Contact Rosey Parks, associate director, Alumni Relations, at rparks@calpoly.edu or call 805-756-5747 with your name, address, phone number and e-mail address.

THINK GROUP TRAVEL IS NOT FOR YOU?
Think again! You'll make new friends and have local cultural experiences. We've been known to join the chef in the kitchen, chat with the townspeople, and visit sites off the beaten path. You'll have a combination of scheduled excursions and free time to explore on your own.
SHOWING MUSTANG PASSION

IN 2006, DURING THE DEDICATION of Mustang Memorial Plaza, Cal Poly paid tribute to the members of the 1960 football team members and supporters who lost their lives on Oct. 29, 1960, in a tragic plane crash in Ohio.

A permanent campus landmark at the south end of the Alex G. Spanos Stadium, the plaza serves as a permanent memorial to the fallen Mustangs - 16 Cal Poly Football Team members, the team manager and a Mustang booster.

The beautiful 15,000-square-feet memorial includes 18 copper pillars standing at the height of each honoree. Arranged in a circle, the pillars represent a football huddle and face inward toward a life-size bronze sculpture, titled “Unbridled Spirit.” The statue, standing at the center of the huddle, symbolizes the unity of the team.

The Alumni Association wants to share this work of art with alumni and friends beyond the Cal Poly campus and is offering a limited-edition, desktop version of “Unbridled Spirit.” Sculpted by acclaimed artist Roy Harris, this sculpture will bring the spirit of this Mustang Memorial to homes and offices.

Only 40 are available, so this is an opportunity to be among the few who own these unique statuettes.

For more information on “Unbridled Spirit,” visit the CPAA Web site at www.alumni.calpoly.edu or call 888-CAL-POLY (225-7659).

PLAN NOW FOR CAL POLY’S HOMECOMING WEEKEND!

MARK YOUR CALENDAR for Nov. 8-11, Cal Poly’s Homecoming and Parents’ Weekend. Homecoming weekend is a time to see what’s new on campus, reconnect with classmates, and meet other alumni and Cal Poly families. On game day, Saturday, Nov. 10, the traditional BBQ Tailgate will be held prior to kick off. During the tailgate, the Cal Poly Alumni Association will host the annual wine tasting, featuring San Luis Obispo-area wineries and Cal Poly cheeses and chocolates.

HOMECOMING WEEKEND SCHEDULE

THURSDAY, NOV. 8
Grand Reunion Opening Reception

FRIDAY, NOV. 9
Grand Reunion Campus Activities
2007 Honored Alumni Awards Banquet

SATURDAY, NOV. 10
CPAA Wine Tasting
Tailgate BBQ
Cal Poly Football: Mustangs vs. North Dakota State

Photo by Rick Smith
KATHERINE DARGAN

KATHERINE DARGAN (NRM '89) IS ON FIRE.

And more than bad puns are needed to describe how her career is heating up: Dargan was recently appointed California's first female fire marshal by Governor Arnold Schwarzenegger.

Dargan started battling fires with the CDF in Santa Cruz County in 1977 and was promoted to fire captain and fire apparatus engineer in San Luis Obispo and Monterey counties shortly after.

Harrowing experiences followed. In the early 1980s, Dargan was battling a horrendous brushfire on the east side of Cuesta Grade, near San Luis Obispo. A fire crew from Monterey ended up at the bottom of the canyon, cut off from all communication, unaware they were completely surrounded by advancing flames.

Dargan and her crew also were surrounded, but in communication with other firefighters. As the inferno raged, her crew parked the engines, hiking down to the canyon's bottom to warn the other crew. Everyone got out of the canyon just in the nick of time. Due to a process called "area ignition," where large areas ignite all at once due to heat build-up, the canyon almost instantly was in flames as the crews hiked back to the engines. The crews then managed to continue safely by using the engines to cut a path through a ring of fire.

Experiences like these shaped Dargan's leadership style, and she admits it was a challenge being a woman in a predominately male culture.

"Be decisive. That's one thing I've learned over the years," she said. "People value individuals who can make decisions and build relationships."

Dargan carried these skills into positions later in her career, which included fire marshal for Napa County and battalion chief for a CDF air attack base in Nevada County.

The 48-year-old Napa resident and mother of three credits much of her career success to her experience at Cal Poly and its trademark approach to instruction.

She remembers natural resources management Professor James Vilkitis in particular, calling him a mentor and advisor. "He was a huge influence on me," said Dargan. "He taught critical thinking with very little memorization. From his 'systems' approach of instruction, I learned to take a situation apart and then restructure it to find solutions."

Dargan plans to incorporate her Cal Poly education and her career experiences as she tackles her new duties. To enhance the fire services training program, she will add professional training and public speaking courses, along with additional courses in fire education and fire prevention. "There's a lot more to our field than just putting out fires," she said.

Additionally, during her four-year term, she would like to bring a variety of land-urban interface issues to the forefront in the coming decade, including watershed and forest management.
DID YOU KNOW that it is possible to support Cal Poly and receive income for life? Consider Mr. and Mrs. Gold, for example. They paid $50,000 for stock some years ago that is now worth $600,000, but the dividend pays just 1 percent annually. Now that they are retired, they would like more income from that investment.

If they sold the stock, they would be exposed to a heavy capital gains tax, reducing the amount available for re-investment. Instead, the couple uses the stock to fund a charitable remainder trust. The stock is sold, and the entire proceeds are invested in a diversified portfolio. The Golds receive 6 percent of the trust’s fair-market value each year for life. Plus, they receive a current income-tax deduction and are able to put in place a significant gift for Cal Poly.

To see how a charitable remainder trust might fit into your long-term goals, visit www.plannedgiving.calpoly.edu for our easy-to-use calculator.

FOR MORE INFORMATION about charitable remainder trusts or supporting Cal Poly through your estate plan, please contact:

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San Luis Obispo, CA 93407-0444
Phone: (805) 756-7125
Toll free: (800) 549-2666
Fax: (805) 756-2711
E-mail: plannedgiving@calpoly.edu
Web: www.plannedgiving.calpoly.edu
Parents, please note: If your son or daughter is no longer at this address, please send his or her current address to alumni-info@calpoly.edu.

Daniel Kinsel (CENG) was one of many Cal Poly students showing support for fellow students at Virginia Tech. Hundreds of students attended memorials on campus to remember the victims. (Photo by Scott Rock)