CONTENTS

DEPARTMENTS

04 UNIVERSITY NEWS
28 ALUMNI NEWS
30 HOT SHOTS

COVER STORY

08 POLYLINK
Cal Poly's online community is now up and running

FEATURES

12 WEIRD AL
Where Rock 'n' Roll meets Fiddler on the Roof

15 FEELING THE CHEMISTRY
Believing is not always seeing

16 NERVE-RATTLING RESEARCH
Emily Taylor loves her snakes

20 WIDE OPEN SPACES
The journey of astronaut Rick Sturckow

23 DR. HARRISON COMES FROM WASHINGTON
Former secret service agent at Cal Poly

24 TAKING SUCCESS DOWNFIELD
A profile of the Snellings

26 CARDINAL RULE:
WORK HARD, PUT YOUR HEART INTO IT
Kristen O'Halloran Cardinal comes home
NATIONAL ACCOLADES FOR ARCHITECTURE AND ENVIRONMENTAL DESIGN PROGRAMS

CAL POLY'S COLLEGE of Architecture and Environmental Design continues to shape exceptional careers. The college received top rankings in various categories in the 2007 DesignIntelligence survey of the nation's best architecture and design schools.

The undergraduate architecture and landscape architecture programs were chosen as "Best in Nation" for 2007 in a poll of Western practitioners. "We are particularly proud of our rankings in this year's DesignIntelligence report because it's based on responses from practitioners who recognize the strong skills of our graduates," said Landscape Architecture Department Head Margarita Hill.

Other top rankings include the landscape architecture program, ranked fifth nationally, moving up one position this year to tie with three other universities. The program also tied for first nationally with Kansas State and the University of Georgia in security design principles and ranked in the top five in computer applications and sustainable design practice.

The architecture program tied for second nationally with Texas A&M in construction methods and ranked third in analysis and planning. The undergraduate architecture program was ranked sixth along with two other universities in an overall ranking.

"This report gives much resonance to the integrity of our pedagogical responsibilities," said Architecture Department Head Henri de Hahn. "Our learn-by-doing philosophy combines common sense and intellectual curiosity, and our graduates are well positioned to become the next team players in a world of increased complexity."

"Perhaps the most important gauge of the effectiveness of CAL POLY's educational programs is how well our graduates do, their success in the real world," said Cal Poly President Warren J. Baker. "We hear that our graduates are doing great things and we take pride in that. Getting a ranking in U.S. News for the 15th straight year reflects the success of our gifted faculty in preparing students with an emphasis on learn by doing."

This year, Cal Poly's College of Engineering was named the No. 1 public engineering program in the nation in the magazine's Best Undergraduate Engineering Programs - for schools whose highest degree is a bachelor's or master's.

A number of College of Engineering programs also ranked high in the Best Undergraduate Engineering Programs in their individual specialty categories. Cal Poly's computer, electrical, industrial/manufacturing and mechanical engineering programs were each ranked as the top program at a public university in their respective specialty categories. Other engineering programs that ranked well are civil and aerospace at No. 2.
ROBOTICS CLUB NO. 1 AT INTERNATIONAL ROBOGAMES

A ROBOT DESIGNED AND BUILT by Cal Poly students recently won the Robo-Magellan Competition at the International RoboGames held in San Francisco.

Dubbed "Spybot," the robot won the event by autonomously navigating an outdoor course with the use of GPS, camera, compass, encoder, and ultrasonic range finder. Spybot completed a nearly perfect last run in just over a minute and a half, clocking in at a record 1:31, substantially lower than the next runner-up time of 2:12.

The total straight-line distance between the course beginning and end was less than 300 feet. However, the route taken by the robots may be significantly longer due to obstacles.

The winning Robotics Club team members included mechanical engineering seniors Scott Barlow from Corona, Tyson Messori from Ventura, Chi-Yeh (William) Hsu from Mountain View, mechanical engineering graduate student Terry Cooke from Los Osos, and computer engineering senior Patrick McCarty from Simi Valley. Chris Clark, assistant professor of computer science, served as faculty advisor to the team.

Held twice each year, the Robo-Magellan competition reflects the growing importance of autonomous navigation for both military and commercial applications. The contest requires entrants to design and build a robot capable of GPS waypoint navigation, obstacle detection and color tracking.

SUPPORT IS HIGH FOR ORFALEA COLLEGE OF BUSINESS

THE ORFALEA COLLEGE OF BUSINESS wound up the academic year on a high note. Fundraising efforts after 11 months were 116 percent above goal.

The college raised 35 of 40 new named scholarship endowments at $25,000 each for incoming freshmen and the first named endowed scholarship of ten at $100,000 each for transfer students. Both types of scholarship gifts are matched one-to-one by Orfalea matching funds.

In addition, accounting firms Ernst & Young, Deloitte and KPMG have pledged to create new term faculty fellowships in accounting at $125,000 each over five years.

CAL POLY CONCRETE CANOE PLACES FIFTH IN THE NATION

CAL POLY SOCIETY OF CIVIL ENGINEERS students paddled to fifth in the Concrete Canoe Competition, a year long contest involving design know-how, project management, engineering expertise, oral and written presentations, endurance, imagination and sheer muscle.

Approximately 220 colleges across the United States competed in the contest, held at the University of Washington on June 14-16. Cal Poly's team was led by civil engineering seniors Jason Kump from Nipomo, John Layous from King City, Jason Marshall from San Luis Obispo, and Skye Orvis from Livermore.

"One of the highlights was winning the design award," said Marshall. "It really represented the time, effort, and teamwork that went into the project. We also won a race for the first time. Our coed sprint team placed first by a tenth of a second—it literally came down to a photo finish."

This was the second year in a row that Cal Poly scored well at the national level, coming in second last year. Cal Poly's winning formula, according to Marshall, includes faculty support, student interest, and the spirit of innovation.
LT. GOVERNOR GARAMENDI COMES TO CAL POLY

CALIFORNIA RISKS DECLINE in its economic competitiveness unless it renews its commitment to education, especially in science, technology, engineering and mathematics (STEM) disciplines, according to Lt. Gov. John Garamendi, who hosted a forum on campus July 17.

Part of the Lt. Governor's "Listening Tour," which includes public university campuses around the state, the event featured panelists who discussed higher education's role in the state's economy, along with some 200 attendees from campus and the community.

"We are fortunate to have a lieutenant governor who understands that education is the pathway to a higher quality of life," said Cal Poly President Warren J. Baker, when he introduced Garamendi, who is a Berkeley graduate with an MBA from Harvard.

Garamendi joined President Baker in cautioning that unless the state improves rates of educational participation and degree completion, it risks a sharp decline in per capita income over the next decade. But he's looking to universities such as Cal Poly to prevent this from happening.

"Cal Poly is a powerhouse for science, technology, research and education - collectively known as STEM," he said, "and how these four elements factor into the state's economy is well known."

Los Osos middle-school teacher Diane Barnhart, one of the panel members, told the forum the first thing that needs to be done to fill the STEM work force pipeline is to "teach the teachers."

Provide teachers with the release time and the resources they need - including intensive content-specific refresher training. In turn they can inspire students to study math and science and become engineers and scientists, she said.

Panelist and fourth grade teacher Jaime Cuello of Guadalupe immerses his students in a college-bound classroom culture, constantly promoting university attendance to his nine-year-olds, about half of whom are labeled "migrants."

"When they wear that Cal Poly sweatshirt, it tells them 'I can be there,'" he explained.

His classroom is festooned with campus banners and even the pencils are imprinted with school names. Instead of getting an "A," the student receives a "Cal Poly" stamp on his or her paper - or the name of whatever campus they hope to attend.

EXCERPTS FROM THE REMARKS OF THE OTHER PANELISTS FOLLOW:

Julian Crocker, Superintendent of San Luis Obispo County Schools

"We need to have teachers like Diana and Jaime in front of every student in the state. But as long as California stays in the middle of the state rankings in terms of investment in education, this isn't going to happen."

José Ortiz, President of Allan Hancock College

"Our labor market studies showed that there is a need in San Luis Obispo for dental hygienists, so we wanted to develop a program [but lacked the space]. We are partnering with K-12 to provide the classroom space. Our studies show the need..."
THE EVENT FEATURED PANELISTS WHO DISCUSSED HIGHER EDUCATION’S ROLE IN THE STATE’S ECONOMY

for other well-paying jobs in the county, too, such as nurses, medical assistants and truck drivers.”

Kristen Yetter, President of Promega Biosciences
“We need to recognize the importance of the teaching profession and compensate appropriately. We should pick up the pace on innovation, equipment, real-world applications, and bring in national and international scholars to work with our students.”

James Becker, Vice President, Diablo Canyon Power Plant
“We used to hire from the Nuclear Navy, but this source of manpower has dried up since the Cold War ended. The nuclear industry is starting to expand again, so there is a growing opportunity for college students who study nuclear engineering.”

Dave Garth, President of the San Luis Obispo Chamber of Commerce
“The productivity expectations in education should match those of the business world. I’m very worried that students entering the work force today don’t fully appreciate workplace performance standards. It takes a different set of skills to train and manage this new generation.”

Phil Bailey, Dean of Cal Poly's College of Science & Mathematics
“We need a differential funding mechanism for polytechnic higher education programs. The antiquated formulas for funding must be updated. We must invest more in instruction, in facilities for research and in studio classrooms that encourage collaborative learning. We need more state investment in the polytechnic programs.”

Brandon Souza, President of the Cal Poly Associated Students, Inc.
“I agree that students must increase their understanding of workplace demands and that developing a strong work ethic is a high priority for graduates hoping to compete in today’s economy. We also need to continue to invest in education and to engage more students in the STEM areas.”

After listening to the panelists and questions from the audience, Garamendi concluded that California has a serious problem with under funding education. “We heavily fund prisons and seriously under fund education,” he said.

He suggested that perhaps one solution is “to reframe our thinking.” Instead of talking about “education,” we need to make the case for “training our work force.”

HONORARY DEGREES
BENTLY, BONDERSON, AND ORFALEA

THREE HONORARY DEGREES were awarded to outstanding alums and supporters during this year’s Spring Commencement, held last June in Alex G. Spanos Stadium.

Donald E. Bently received an honorary degree of Doctor of Science in recognition of outstanding achievements in business, engineering and sustainable agriculture practices, and service in support of engineering education. Bently is president of the Bently Pressurized Bearing Co. and founder, former chairman and CEO of Bently Nevada Corp., the world’s leading supplier of monitoring instrumentation and services (now part of GE Power Systems).

Paul R. Bonderson Jr. (EL ’75) received an honorary degree of Doctor of Science in recognition of his outstanding achievements in business and engineering and his leadership and support of project-based learning. Bonderson is currently president of Lone Oak Ventures LLC, and the former vice president of engineering and the co-founder of Brocade Communications Systems Inc., a leading provider of infrastructure solutions for Storage Area Networks. He is credited with developing the company’s product strategy, business strategy and business plan.

Paul Orfalea received an honorary degree of Doctor of Humane Letters in recognition of his outstanding achievements as a business leader and entrepreneur, his service to the cause of education and early childhood education, and the inspiring example he has set in overcoming personal adversity to achieve success and make important contributions to society. Orfalea is the founder and former chair of Kinko’s Inc. □
POLY

CAL POLY'S ONLINE COMMUNITY

POLYLINK, CAL POLY'S ONLINE COMMUNITY, IS HERE - A FREE, PRIVATE WEB SITE FOR ALL CAL POLY ALUMNI. JOIN AND YOU WILL BE ONLY A CLICK AWAY FROM RECONNECTING WITH YOUR FRESHMAN WOW TEAM LEADER, SEEING PHOTOS OF YOUR OLD ROOMMATE'S KIDS, OR NETWORKING WITH YOUR FORMER LAB PARTNER TO FIND A NEW JOB. AND THAT'S JUST THE BEGINNING OF THE FUN.

REVISIT CAMPUS
RECONNECT
WITH
REDISCOVER

To: Elise
Subject: Hello
Message: Hi, it's awesome to catch up again after so long. What's new with you?
SET UP YOUR PROFILE PAGE BY OCTOBER 15 AND YOU COULD WIN A FREE IPOD! THEN PASS ALONG THE POLYLINK WEB SITE ADDRESS TO FELLOW MUSTANGS, BECAUSE AS MORE ALUMNI SIGN UP, WE'LL GIVE AWAY MORE IPODS — UNTIL WE'VE GIVEN AWAY SIX IN ALL! THE EARLIER YOU SIGN IN, THE MORE CHANCES YOU HAVE TO WIN. FOR DETAILS ON HOW TO SIGN UP, GO TO PAGE 11.

continued...

FRIENDS
MUSTANG MAGIC

To: Katie
Subject: Re: Hello
Message: I'm taking some time off to snowboard at Mammoth Mountain.

To: Elise
Subject: Re: Re: Hello
Message: Cool! Do you remember that geek in Chem Lab that you wouldn't go out with? Would you believe he just produced COLD FUSION!!!!!
JOIN POLYLINK

WHAT IS POLYLINK?
PolyLink is a secure Cal Poly-sponsored Web community open only to alumni and selected Cal Poly staff. Plans call for expanding membership to all campus employees and junior and senior students in the near future.

WHAT BENEFITS DOES POLYLINK OFFER?
- Mustang to Mustang Career networking. Get the inside track on a new job for yourself, or hire a fellow Mustang who knows the value of learning by doing.
- Pay it forward. Pass along your career-related wisdom to young alumni and – later this year – to current juniors and seniors. Help them write resumes, find internships and their dream jobs.
- Reconnect with your favorite professors, coaches and mentors when faculty and staff join the community in the near future.
- Sign up for alumni events in your area, events on campus – and learn about trips you can take to Italy or Peru with your fellow Mustangs.
- Sign up for customized news on your old department, club, sport or other interest – updates that will be waiting for you every time you log in.
- Create a new group or club on the PolyLink site with fellow alum who share your current interests – whether it’s a mountain-biking group, a baby-sitting co-op for the little Mustangs in your area, or a wine tasting club. You can easily build a group area for your alumni friends within the protected PolyLink community.
- Not an alum? You can still obtain a guest membership to preview selected upcoming Cal Poly events and conveniently buy tickets online with a credit card.

I WENT TO CAL POLY BUT I DIDN’T FINISH MY DEGREE. CAN I STILL USE POLYLINK?
Yes! Cal Poly considers all former students who satisfactorily completed at least one year of coursework to be Cal Poly alumni.

If you don’t see your name on the PolyLink alumni list, go to http://www.alumni.calpoly.edu/network/update_address.html. Enter your contact information and then type “Verify for PolyLink” in the Comments box before you click the Submit button.

It’s important that you enter your e-mail address correctly, because that’s where we’ll send your log-in information. Look for an e-mail with your PolyLink log-in information within 48 hours after you update your contact information at the Web page above.

DO I HAVE TO BE A MEMBER OF THE CAL POLY ALUMNI ASSOCIATION TO USE POLYLINK?
PolyLink is free and open to all Mustang alumni – regardless of whether they are members of the Cal Poly Alumni Association or not. Plans also call for special guest memberships soon for faculty and for retired faculty and staff – so alumni can stay in touch with favorite professors and staff mentors.

HOW DO I SIGN IN TO POLYLINK FOR THE FIRST TIME?
Look on page 11 for easy-to-follow directions.

WHEN I VISIT POLYLINK FOR THE FIRST TIME, WHAT IF I DON’T SEE MY NAME ON THE POLYLINK ALUMNI LIST?
If your name is not on our list, you may be one of our “lost” alumni. Go to http://www.alumni.calpoly.edu/network/update_address.html and enter your contact information.

Then type “Verify for PolyLink” in the Comments box before you click the Submit button. It’s important that you enter your e-mail address correctly, because that’s where we’ll send your log-in information. Look for an e-mail with your PolyLink log-in information within 48 hours after you update your contact information at the Web page above.

CAN I CONTROL HOW MUCH OF MY PERSONAL INFORMATION IS DISPLAYED?
Alumni on record will have their name, last year attended, and primary major listed in the PolyLink community. You will always have full control over whether to display any additional personal information in PolyLink.

ARE THERE ANY RESTRICTIONS ON USING POLYLINK?
Members must agree not to use PolyLink for solicitation or for profit. Read more about terms and conditions of use at www.calpolylink.com/termsandconditions.html

DO YOU HAVE A PRIVACY POLICY?
Yes, see www.calpolylink.com/privacypolicy.html.
HOW DO I COMPLETE THE 'FIRST TIME LOGIN' PROCESS?

**STEP 1:**
GO TO WWW.CALPOLYLINK.COM

- Look for the "First Time Login" link in the gold bar up top, or in smaller gold type in the main log-in box at right.

**STEP 2:**
CLICK ON THE "FIRST TIME LOGIN" LINK.

- You'll see the “Account Lookup” page.

**STEP 3:**
FOLLOW THE INSTRUCTIONS TO TYPE IN YOUR LAST NAME – THEN CLICK THE "FIND" BUTTON.

- You'll see a page with a list of everyone in our alumni records who shares your last name. Find yourself on the list, click the small button next to your name, and then scroll down to the bottom of the list and click the "Next" button.

**STEP 4:**
YOU'LL LAND ON A PAGE THAT ASKS YOU TO VERIFY YOUR IDENTITY. HAVE YOUR FIRST TIME LOGIN ID CODE HANDY.

- The First-Time Login ID Code can be found on this magazine’s mailing label next to your name. If more than one person is listed on the mailing label and both are alums, the Login ID Codes are listed next to each name.

  Type your First Time Login ID Code in the box on the page, and then hit "Verify."

  The first time you log in to the community, you will see your "My Profile" creation page. Check the boxes you find there to set up your personal profile, and determine what information you want displayed to other alumni logged in to PolyLink.

  You will only have to do this once. (If you want to change some of your settings in the future, you can always hit the "My Profile" link in the gray navigation bar on the left or the gold navigation bar at the top to return to your Personal Profile Settings Area).

**STEP 5:**
AS PART OF YOUR FIRST-TIME LOG IN PROCESS, YOU WILL BE ASKED TO CREATE YOUR PERSONAL USERNAME AND PASSWORD.

- These will NOT be displayed to anyone else within the community – they are what you will use from now on to log in to PolyLink.

  You should select a Username and Password that are easy to remember. Write them down and keep them in a secure place close to your computer.

  The last step in your personal profile setup is your Photo Album. You can upload photos on your first log-in, or skip this until later.

  The quickest way to get to your own photo album area anytime is to click on the "My Photos" link in the gold bar at the top of the page.

  Visit the FAQs section (Frequently Asked Questions section) for tips on how to upload photos or hunt for answers to any questions you may have. You will find the FAQ link at the top of the gray navigation bar on the left side of the page.
"WEIRD AL" YANKOVIC (ARCH '80) has been at it for more than a quarter century: making music, making fun of music, making fun of people making music.

The legend of how the Grammy Award-winning-parodist got his start is widely known. His first hit, "My Bologna," was recorded in the bathroom in the Cal Poly Graphic Arts Building, across the hall from KCPR radio, where Yankovic worked as a disc jockey.

Most people also know that he plays a mean polka on his accordion.

And another well-known fact is that he got his nickname during his freshman year in the dorms at Cal Poly. He took it on professionally when he started doing shifts at KCPR. "It seemed appropriate, because I definitely played a lot of weird music," he said.

That, and "Weird Al" has a much snappier ring to it than Alfred Matthew Yankovic.

A lesser known fact, perhaps, is that Yankovic was Lynwood's citywide spelling bee champ in both the fifth and sixth grades, was a straight-A student, and was valedictorian at his high school graduation.

Success in school came pretty easily to Yankovic. And while he enjoyed his days at Cal Poly, he said they would have been a whole lot more fun if he didn't have to go to class or do any homework.

continued...
Success didn't come so easily after graduation. He spent a couple years trying to solicit a record deal. "In the meantime - to pay for my burritos - I worked in the mail room at a radio syndication company in Culver City."

Turns out, though, success was worth the wait - for Yankovic and for his loyal band of followers, who now organize an occasional event - AlCon - dedicated solely to Yankovic. Generally held in a hotel ballroom in the Chicago area, AlCon "happens whenever it happens," Yankovic said. So far, there have been three. In addition to the "Weird Al" look-alike contest, the event includes a trivia contest, talent show and "garage sale" at which they auction off his memorabilia for charity. "One year a baggie of my dryer lint fetched $600," he boasted.

The "King of Parody" has diverse personal musical tastes. "But my favorites are songs about whales and anything with a bagpipe solo." What? Not an accordion?

Yankovic says he likes today's music, "but actually liked last Thursday's a little better."

His favorite musician? His drummer, Jon Schwartz. "He's pretty cool," Yankovic said.

His idol? "This week it's Ra the sun god."

On profanity in music, Yankovic deadpans: "There's not nearly enough. Mind you, I never use any profanity myself, but I think Celine Dion would benefit greatly from going a little gangsta."

His own music runs the gamut from hip hop and rock to polka and pop. He jokes that it wasn't until shortly after his sixth album that he "really started to get serious about this whole show business thing."

Not that he approves of all show business. For instance, he disapproves of the hit TV show "American Idol."

"I think it's terrible that a TV show is dictating who becomes a pop star. Why can't they still create pop stars the old-fashioned way - with radio station payola?"

Yankovic gets the ideas for his songs "by listening to the voices in my head."

His songs don't carry political or social messages. "My main goal is just to be funny and to try to get people not to take themselves too seriously. I suppose it could be argued that a few of my songs make a statement of some sort, but primarily I'm just going for laughs," he said.

And as for the thrill of performing live? "There's no greater thrill than interacting with a live audience, and it's always a big surprise to see what's on the deli tray backstage," he said.

He describes his concerts as "a rock and comedy multimedia extravaganza" with an audience that "ranges from toddlers to geriatrics." Or as one Internet fan said, "Dude you rule. You're like rock 'n' roll meets 'Fiddler on the Roof.'"

Yankovic is on the road again, touring to promote his latest CD, "Straight Outta Lynwood." The tour began in early March in Auckland, New Zealand, then Australia. Now on the North American leg of his tour, he's performing five or six shows a week in about 100 cities to audiences as large as 20,000. The tour includes a performance on Oct. 9 at the Performing Arts Center at Cal Poly.

Although the entertainer's degree from Cal Poly is in architecture, he actually does put it to good use. "I got my degree in architecture so that I would be able to write out all my lyrics in beautiful architectural lettering. Really, you should see the lyric sheets, they're beautiful."

His knowledge of architecture also came in handy, he explained, when he had his bathroom remodeled and he showed the contractor where to put the toilet.

Yankovic lives in Los Angeles with his wife of six years, Suzanne. They have a four-year-old daughter, Nina, a poodle named Bela, and a cockatiel named Bo.

His grand plans for the future include "a nap, and maybe a cheese Danish afterwards." □

(Editors' Note Yankovic will take part in the university's Journalism Week and give a performance in the Performing Arts Center on Oct. 9.)
FEELING THE CHEMISTRY

BELIEVING IS NOT ALWAYS SEEING.

Just ask Dennis Fantin, a Cal Poly chemistry instructor who has been blind since childhood. He has no problem keeping what’s important in sight.

This year, Fantin organized the first-ever “Access Chemistry Project,” an open chemistry lab for blind and partially sighted high school students. The week long venture was the first of its kind in Cal Poly’s history.

Why did he do it? According to Fantin, it was his experiences as a blind student and later as a blind scientist.

Historically these students have missed the opportunity to learn chemistry because the subject has always been taught in highly visual ways. In addition, low societal expectations and exaggerated concerns about safety have been used as excuses to keep blind students out of the lab.

“The project introduced adaptive teaching methods and presented chemical phenomena in ways that took advantage of non-visual senses,” said Fantin.

One experiment involved students building a primary battery. Two beakers filled with solutions of potassium nitrate were placed side by side with paper towels saturated in sodium chloride connecting the two solutions. Students then placed a thin piece of metal, or electrode, in each beaker. A magnesium electrode was submerged in one beaker, a copper electrode in the other. The electrodes were then connected to a low-powered buzzer. Successful students, completing this process entirely by touch and hearing, heard the buzzer sound when the batteries came alive. Smiles usually followed.

Lack of vision may give additional insights related to other senses said Fantin, noting he can walk down a quiet street and avoid parked cars by listening to the reflected sound of his own footsteps, and by hearing subtle changes in the local soundscape.

Students without sight learn to adapt, especially in a lab.

Workshop activities also included the outdoors, kayaking across the Morro Bay estuary and enjoying lunch on the sand spit. Fantin led the group south on a six-mile beach hike on another occasion, enjoying the salt air and keeping the sound of surf firmly to the right.

Fantin earned his Ph.D. in biophysics from UC Berkeley. The Bay Area native calls himself fortunate for having a supportive family and inspiring teachers from middle school through postdoctoral work. “My goal for this project is to give back, providing these aspiring young science students support and guidance to accomplish their dreams,” he said.

Ten high school students from across the nation attended the workshop. It was underwritten by grants from the True North Foundation of Grass Valley, The Jewett Foundation of San Francisco and the College of Science and Mathematics.
It's not easy to rattle Emily Taylor.

With her affinity for cold-blooded creatures, the assistant professor of biological sciences isn't fazed by the commotion in her Cal Poly laboratory.

"Be careful you don't yank off their tails," she hollers to students who scurry off to capture some scaly fugitives.

Lizards on the loose are no big deal for a woman who has 16 pet rattlesnakes in her living room and devotes her life to studying the vipers.

Enduring centuries of notoriety as evil, cunning creatures, rattlesnakes get a bad rap, according to Taylor. And she hopes to change that.

Rattlers could be a keystone species, she explains, because they seem to keep the animals around them in check. She is excited by how much there is to learn about "their amazing immune system, the unique properties of their venom, and their mating habits."

The self-proclaimed "Snakeymama," who bears a coiled serpent tattoo on her ankle, didn't always love snakes. While running cross country in high school, she recalls shuddering as she jumped over a king snake in the trail.

Taylor experienced a radical change of heart as an undergrad student, when a field instructor pulled a snake from under a rock and placed it in her hands.

Her trepidation was instantaneously replaced with adoration. "I felt awe, a reverence I never imagined," Taylor recalls.

Since then, she's left no stone unturned. After devoting a decade to tracking and analyzing rattlesnakes, Taylor believes she's only begun to uncoil the many mysteries of this resilient reptile.

continued...
Thanks to Taylor and her students, the subjects of her current research are fully loaded with the latest technology as they slither around the Carrizo Plain east of San Luis Obispo.

Twenty Northern Pacific rattlesnakes surgically implanted with radio transmitters and mini data loggers are providing a wealth of information.

Such radio telemetry has revolutionized studies of snake ecology. "Can you imagine trying to locate the same snake twice without it?" Taylor says.

Taylor’s students track each snake weekly, recording data on behaviors and keeping a close eye on pregnant females. Specifically they document whether the snake is above or below ground, coiled or straight, and whether it is hanging out with other snakes.

Taylor and her students are also documenting interesting behaviors in other wildlife in the Carrizo Plain, in particular the California ground squirrel, whose bushy tail doesn’t rattle but performs a similar service.

Project logs indicate that rattlers and California ground squirrels share burrows during summer months. Not surprising, since adult ground squirrels are immune to rattlesnake venom, says Taylor.

However, their babies are not immune, prompting remarkable behavior in mothers. When rattlers threaten, the squirrel dilates the vessels in her tail to fill it with warm blood, which is undetectable by humans but apparently "seen as incredibly bright" by the infrared sensors rattlesnakes possess.

“This is basically like waving a huge lighted saber at the snakes that screams 'get outta here now!' Even more crazy is that the squirrels don't dilate their vessels when waving tails at gopher snakes, which are also predators but cannot sense infrared radiation," says Taylor.

One squirrel’s tail-waving behavior was a bonus in the early stages of the Rattlesnake Project. "We noticed the squirrel’s behavior, investigated, and sure enough, there was a rattlesnake coiled up in the squirrel’s burrow. This was fortuitous because it was the final rattler we needed for the study!"

The Rattlesnake Project will continue to keep Taylor, her students – and her husband – busy for years to come.

Taylor’s research partner, Marty Feldner, also happens to be her life partner. The wedding bells rang in late August for the couple, who realized their love for rattlesnakes had evolved into a love for each other.

To the relief of many guests, there were no snakes at the ceremony, except for the ones etched on the wine glasses.
WIDE OPEN SPACES
THE JOURNEY OF RICK STURCKOW

BY SCOTT ROARK
The International Space Station moves away from the Space Shuttle Atlantis as Sturckow and fellow astronauts complete their mission. A pair of solar arrays and starboard truss segments were attached during three spacewalks, giving the station a new “symmetrical” look. (Top L) The Space Station before Sturckow’s mission. (Top R) Sturckow during his days as a test pilot.

IT’S VERY COLD IN SPACE.

At minus 250 F, an unprotected person would be frozen solid in seconds, and in dead silence, since no oxygen exists to transmit sound waves. Things heat up swiftly as the sun peeks above the earth’s horizon, a breathtaking sight from orbit.

In this hostile environment, the Space Shuttle Atlantis approaches the International Space Station approximately 210 miles above the Earth’s surface. Both the shuttle and space station are hurtling around the Earth at approximately 17,500 miles per hour, creating the daunting task of connecting the two vehicles while in orbit. The shuttle’s familiar profile is dwarfed by the station, a complex array of circular modules, antennas and solar panels.

In the shuttle cockpit, Commander Rick Sturckow (ME’84) carefully guides the controls as the station looms into view through the cockpit window. Atlantis slowly glides toward the station during the 90-minute docking procedure, closing the gap at 2,000 feet, then 400, then 100 before finally connecting under a canopy of stars.

NASA mission STS-117, launched on June 8, is well under way.

Before piloting spaceships high above the Earth’s atmosphere, Sturckow was guiding a vehicle a little more down to earth – an off-road truck he built and raced with the Cal Poly Society of Automotive Engineers.

“I came to Cal Poly because of off-road racing. My day job was being a truck mechanic for International Harvester, and I worked weekends on a racing pit crew for famous drivers such as Rick Mears, Roger Mears and Walker Evans,” said Sturckow. “One day at a race, I saw the old Cal Poly SAE truck go bouncing by and thought that’s where I want to be.”

Sturckow grew up on a farm outside Lakeside, Calif., where his family raised turkeys and cattle. Farm life and racing “prepared me well” according to Sturckow, because of the mechanical understanding and ability required at NASA.

Sturckow raced in professional off-road races in Arizona, Nevada, and Baja,
California, during his time at Cal Poly, gaining experience in leadership and project management, along with the fine art of traveling all night before a race and staying mentally sharp when that throttle kicks in.

"Many engineering careers besides mine were positively influenced by the SAE truck project," said Sturckow. "I was more successful as a Marine officer, F/A-18 test pilot and astronaut because of Cal Poly's learn-by-doing philosophy, which enabled students to compete and win in professional racing."

Sturckow had Ron Mullisen to thank for that career as a Marine officer. The mechanical engineering professor encouraged Sturckow to join because of the opportunity to become a jet pilot. The sky was the limit after that.

Sturckow's first journey into the heavens was a historic mission in 1998, behind the throttle of Space Shuttle Endeavour. The shuttle was carrying the first two modules of the International Space Station, later joined together in orbit.

Each circular module is a cozy living space for space-bound astronauts, 45 feet in length, 15 feet in diameter, with windows to admire the breathtaking view. Additional modules were later connected, much like a floating erector set, during subsequent missions. Solar panels provide power. A crew has permanently manned the station since 2000.

Hanging your hat (or helmet) at the space station is a comfortable experience. You don't have to dress up as you float around inside - T-shirts are the norm and shorts are common. You can exercise on the treadmill and shower regularly, but no washing machine exists for laundry.

Food has to be nonperishable - the station does not have a refrigerator - and certain items are off-limits. Tortillas are used since bread can crumble, causing a hazard for the ventilation system as the particles float away. Salt and pepper are in liquid form for the same reason.

Sturckow has piloted two shuttle missions to add modules and perform general station maintenance. Last summer's mission, which he commanded, focused on expanding the station's power source. Astronauts installed two solar panels to power a European module and a Japanese module, both scheduled to be added in October.

The facility and research center is gaining critical information about daily living in space and the long-term effects of weightlessness. The knowledge will be used for a potential manned mission to Mars.

On the technical side, the challenge for Mars is designing a vehicle that is simple and robust enough to operate with no support from Earth for three years, said Sturckow. "I wouldn't be surprised to see Cal Poly engineering graduates involved with the Mars vehicle design and one of them making the first trip."
SECRET SERVICE AGENT, professor and city manager – Steve Harrison has done it all over the years while hanging his hat in Washington, D.C., and Texas. But the California native has come home, accepting a new position as director of government and community relations for Cal Poly.

Harrison lived a career that many only dream about, serving in the Secret Service for 22 years and becoming the first agent to serve on the permanent protective detail of five U.S. presidents. He has conducted investigations into violations of federal law, arrested violators, testified before Congress, and coordinated the security for the 1984 Olympic Games in Los Angeles.

He also protected then-President Ronald Reagan from himself at his Santa Barbara ranch, “holding on to his belt from behind as he used a chainsaw to chop wood on a steep incline,” recalls Harrison with a smile.

After earning his master’s and doctorate in public administration from USC, Harrison taught at St. Edwards University, St. Mary’s University, Texas State University and the Center for American and International Law in Texas. He has authored several articles on law enforcement, organizational culture and total quality management.

Prior to Cal Poly, Harrison served as city administrator for Wimberley, Texas, and city manager for Kyle, Texas.

As director of governmental affairs, Harrison facilitates relationships with members of Congress, the California legislature and local elected officials. He coordinates government relations activities and develops printed and electronic material to keep key leaders informed of university activities.

Harrison is thrilled to begin his position at Cal Poly. “There are a number of opportunities for Cal Poly to capitalize on,” said Harrison. “I can help keep our legislators aware of the unique expertise that Cal Poly brings to the table on many issues of broad societal impact.”

Harrison has two daughters. Megan is a junior at Cal Poly, majors in animal science and plays for the woman’s basketball team. Marissa just started high school at Mission College Prep in San Luis Obispo. His wife, Nina, is still in Texas and will join the family “as soon as we can find the right place to move with our horses,” Harrison said.
FOR SOME PEOPLE, ATHLETIC EVENTS aren't simply a pastime, but a way of life.

Bill Snelling and Phyllis Momtazee-Snelling are certainly in the latter category. They hold season tickets, travel with various Mustang teams, and never miss an opportunity to advocate for Cal Poly's future.

"There's something about cheering for your team," says Phyllis. "It brings people together. This is our family, and I love that about Cal Poly."

The Shell Beach couple saw a way to build an endowment for the future of Cal Poly's men's sports, putting into place a gift that will bolster Mustang teams for generations to come. It's their way of helping take Cal Poly Athletics to the next level.

Bill faced an incredible capital gains tax burden earlier this year but chose to use the opportunity to make a lasting difference.

He and Phyllis established a charitable remainder trust with Cal Poly, providing them income for life and creating the William L. Snelling Endowment for Excellence in Intercollegiate Athletics.

The Snellings were able to secure an income tax deduction to offset the capital gains, enjoy a reliable return on their investment, and support their affection for athletics.

"With the CRT, you receive the benefits of making a significant gift, but you receive payments for the rest of your life," says Bill. "You're investing in the university and its young people."

Bill founded the Bank of Santa Maria in 1977, which subsequently pooled with Mid-State Bank in 1998, allowing him to accumulate a significant amount of Mid-State stock. When the bank finalized its buyout by Rabobank of the Netherlands in May, Bill's appreciated stock would have triggered a significant capital gains tax.

The charitable remainder trust will provide an endowment for men's athletics at Cal Poly, becoming an important resource as the university continues to attract the finest student-athletes, mentor outstanding coaches and provide first-class facilities. And the difference such private support can make will be on display like never before as the football team enjoys the newly renovated Alex G. Spanos Stadium this season.

"When our fans demonstrate this caliber of belief in our student-athletes, it validates our commitment to excellence and inspires us to achieve new heights," said Alison Cone, Cal Poly's director of athletics.

The Cal Poly Football Team recognized this belief by changing the name of their popular "Legion Award" to the "Snelling Award," an annual recognition for exceptional effort and good sportsmanship on the field. "It was a natural choice to rename this award," said Richard Ellerson, head coach of Cal Poly football. "What the Snellings are doing off the field is allowing athletes to succeed on the field."

For Bill and Phyllis, athletics programs are an important avenue for honing the skills of leadership, persistence and teamwork, and developing a sense of pride that extends beyond the team.

"It's infectious," says Bill, who was an avid athlete while serving in the Army paratroopers. "Whatever sport there was in the Army, I was there. I like the competition - good, clean fun."

"I feel connected to Cal Poly," says Bill. "This is my community."

□
SERVING IS SOMETHING Kristen O’Halloran Cardinal (ENGR ’03) does well, whether it’s on the volleyball court or in the classroom, where she’s educating the next generation of engineers.

The Nipomo native attended Cal Poly on a full athletic scholarship, graduated summa cum laude, was twice named the Cal Poly Female Scholar Athlete, and earned the College of Engineering Outstanding Senior Award for having the highest GPA.

That level of achievement is likely to carry over into her latest endeavor: teaching at Cal Poly.

After earning a Ph.D. in biomedical engineering from the University of Arizona, the 26-year old—along with her husband of two years, Trevor—was offered an assistant professorship beginning in fall 2007.

Cardinal didn’t start out to become a teacher, or an engineer, for that matter. “I saw myself going into biology, taking the pre-med route,” she said. “But I wasn’t particularly fond of blood.”

After her first biomedical engineering class at Cal Poly, Cardinal knew what she wanted. “I found it fascinating that I could do something in the medical field by designing mechanisms, like artificial hearts. The heart is a simple system,” she said, “just pipes and pumps.”

Simple seems to be a theme that runs through Cardinal’s life. Perhaps it has something to do with the discipline she adopted as a student-athlete at Cal Poly, working out three hours a day while keeping up her superior grades. “You definitely learn a good work ethic,” she said.

Cardinal began to consider a career in teaching and research while a grad student. “The longer I was in grad school, the more I realized how consistent my priorities were with Cal Poly’s approach to learning. Cal Poly is a great place for teaching and research.”

Her first class this fall will be an upper-division master’s-level class in tissue engineering, a brand new course in the College of Engineering and Cardinal’s main research interest. She creates and designs tissue and replacement parts for tissue. Some people grow vegetables; she grows blood vessels. They can be complicated vessels or simple vessels, she explains. “I grow simple vessels.”

As a student, Cardinal chose Cal Poly because she knew she would get a great education. She gives much credit to Associate Dean Dan Walsh for helping her attain that goal. “He is one of the most amazing people I have met,” Cardinal said. “He has this ability to make you feel like you can do anything.”

Cardinal’s goals are a perfect fit for Cal Poly. “I hope I can live up to what Cal Poly does,” she said. “It’s good to have students in the classroom and in the lab. It gives students an understanding that what they are doing will have an impact on people’s everyday lives.”

Does Cardinal have any doubts or fears? “It’s still sinking in that I am back in this fantastic place,” she said. “I do have a little anxiety, but I’m not afraid. I’ll work hard and put my heart into it.”
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Experience Peru's many ancient and modern cultures that have shaped this extraordinary country.

Package costs for the trip include your hotel accommodations, excursions and most meals. One to three meals will be on your own.

Special air fares are available when purchased in conjunction with the package above.

WATERWAYS OF HOLLAND AND BELGIUM - April 22-30
The beauty, history and culture of Holland and Belgium will sit 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
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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.
HOMECOMING 2007

MARK YOUR CALENDAR and make reservations for Homecoming 2007, set for Nov. 8-10. Homecoming is a great opportunity to revisit the Central Coast, see what's new on campus, reconnect with classmates, and meet other alumni, current students, and Cal Poly families.

This year, the Mustangs tackle the Bison of North Dakota State in the newly renovated Alex G. Spanos Stadium. Thanks to generous contributions, the stadium now holds 10,000 spectators and is complete with press and skyboxes. Visitors can also see the new Mustang Memorial Plaza and Field, tributes to Cal Poly's 1960 football team.

Before the game, sample Central Coast wines at the popular Cal Poly Alumni Association Wine Tasting, try delicious Cal Poly chocolates, and enjoy the tri-tip at the Tailgate Barbecue. Other 2007 Homecoming weekend activities include the Grand Reunion, which honors the Class of 1957 and all earlier graduates, and the Honored Alumni Banquet.

Homecoming 2007 events include:

THURSDAY, NOV. 8 . . . Grand Reunion Opening Reception
FRIDAY, NOV. 9 . . . . . . . Grand Reunion Campus Activities 2007 Honored Alumni Banquet
SATURDAY, NOV. 10 . . . . . . CPAA Wine Tasting Mustang Corral Tailgate BBQ Cal Poly Football vs. North Dakota State

Homecoming has been a Cal Poly tradition for 100 years. In 1907, the first event was a June banquet that also served as the initiation ceremony for new alumni. It was first envisioned as an annual gathering for "all those who are still faithful to the memory of their alma mater." Since then, it has grown to be one of the largest events on campus, bringing alumni, current students, parents and friends together.

Pre-game events sell out in advance, so purchase tickets early. Hotel accommodations in the area also book up quickly.

Check the Homecoming Web site for more details at www.homecoming.calpoly.edu. □

LOOKING BACK WITH "RETRO•SPECTIVE"

AN UPCOMING ALUMNI art exhibition, "retro•spective," will showcase works by six Cal Poly alumni demonstrating a wide range of disciplines and perspectives. Alumni will be looking back on their undergraduate years, exhibiting a body of work that signifies Cal Poly teaching philosophies and influential professors and experiences.

The following alum will be featured:

Heidi Harmon (HIST ‘98) is an assemblage artist who creates three-dimensional symbolic and metaphorical structures that mirror her desire to capture the implied history of found objects as art.

Sumaya Agha (ART ’97) is a documentary still photographer capturing images of people, places, events and culture.

Katie Newman Winkler (ART ’91) will display drawings and paintings, all influenced by her design skills and her appreciation for typography.

Donna Kandel (MATH ’01, CRD ’02) illustrates concepts of hyperbolic geometry in an artistic format, allowing for an aesthetic presentation of complex mathematical principles.

Mandi Metzgar (GrC ’06) is driven by beautiful typography, white space, peerless compositions and love.

Jim Dee (JOUR ’75) focuses on the art of cinema and radio and will display his private "Cinema Zoo" collection of vintage independent film posters and KCPR memorabilia.

The event is sponsored by the Kennedy Library and is a collaboration of the Cal Poly Alumni Association and Learning Commons Partners.

The all-alumni exhibit will run from Nov. 2 through Jan. 6 in the Kennedy Library Gallery at the Commons. An opening reception is set for Nov. 2 at 4:30 p.m. The gallery will be open during normal library hours and also during Homecoming weekend, Saturday from 10 a.m. to 5 p.m., Sunday from noon to 5 p.m.

All students, alumni, parents and friends are encouraged to visit this unique and fascinating collection.

For more information on "retro•spective," visit the Library's Web site at www.lib.calpoly.edu/ or call 805-756-2305.

For library hours, visit www.lib.calpoly.edu/about/hours. □
AS GLOBAL WARMING CONTINUES to melt the glaciers, the hearts of some people remain cold.

Sarah Grieve (ENGL ’07) addresses this scenario quite eloquently in her poem “Hot Water,” which won Cal Poly’s 2007 Academy of American Poets Contest.

Her work earned kudos from her former professor, Kevin Clark, who calls Grieve “a tough-minded writer ... who combines descriptiveness, elegy and bittersweet comedy.”

Grieve calls her poem a message about apathy, specifically the apathy of her generation. Because of this, relationships and ultimately the environment are affected. “It’s being worried about the wrong things in life – the house, the furniture and other material things,” she said.

The Carpinteria native earned a master's in English last June and is pursuing a master of fine arts in poetry at Florida State.

Grieve is a former starting center for the Cal Poly women’s basketball team. She was named the Mustang Scholar Athlete of the Year and Outstanding College of Liberal Arts Student of the Year in 2005.

HOT WATER

if the sea rose ten feet, and they say it will soon, the woman on the hill would stand to inherit beachfront property—her petunias replaced by urchins or anemones—which would be nice until the kids tracked in sand, grinding it against the wood floor’s finish...

The link to the entire poem “Hot Water” can be found online at: www.calpolynews.calpoly.edu/magazine/fall-07/index.html
THIS IS OFTEN A POPULAR
time of year to reflect on your charitable
priorities. As you think about your
giving, consider your:

1 Tax benefits
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continue our legacy of excellence, you
can usually enjoy a tax deduction for
2007 if you give by year end.

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or other appreciated assets, you may
be able to take advantage of your gift’s
full fair market value without paying
capital gains.

3 Income for life
A planned gift can allow you to establish
a gift arrangement now, obtain current
tax benefits, create a stream of income,
and provide a future gift to Cal Poly.

4 IRA funds
A new law may allow you, if you are
70-1/2 or older, to transfer up to
$100,000 from an IRA to Cal Poly
without paying additional income tax.

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advisors to develop a plan that matches
your charitable priorities and your
current circumstances. Any gift you
make can benefit the program or
department of your choice.

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Fax: (805) 756-2711

E-mail: plannedgiving@calpoly.edu
Web: www.plannedgiving.calpoly.edu
Agribusiness senior Brandon Souza entered into the ranks of many previous agriculture students when he was elected Cal Poly's ASI president in May 2007. Souza joined the likes of attorney and public servant George Soares (AGB '66) and prominent local businesswoman Erica Stewart (HE '97) as he became the 21st ASI president from the College of Agriculture, Food and Environmental Sciences in the past 70 years.