

CAL POLY RECOGNIZED AS SUSTAINABILITY LEADER

CAL POLY WAS RECENTLY RECOGNIZED as the Leading School for Environmental or Sustainability Goal-Setting by the National Wildlife Federation in their "Campus Environment 2008, A National Report Card on Sustainability in Higher Education."

The NWF and Princeton Survey Research Associates International reviewed trends and new developments in environmental performance and sustainability at more than 1,000 colleges and universities. According to the NWF, the purpose of Campus Environment 2008 was to "explore the extent to which college and university leaders value environmental performance and sustainability and are putting these values into practice."

The publication recognizes colleges and universities for exemplary efforts and awards academic letter grades for collective performance by region on environmental literacy, energy, water, transportation, landscaping, waste reduction and more. The individual campuses were not graded.

Cal Poly was also recognized by NWF as a Leading School for Employing Environmental and Sustainability Personnel.

"I am pleased that Cal Poly was named a leader in sustainability by the NWF," said Larry Kelley, vice president for administration and finance. "While we have much more work before us, we are honored to be recognized by an independent, national review as an example of best practices in these two categories."

For more information about Cal Poly's sustainable programs, visit <http://www.facilities.calpoly.edu/sustainability/SusInd08.pdf>. For more information about the National Wildlife Federation and the "Campus Environment 2008" publication, visit <http://www.nwf.org/campusEcology/campusreportcard.cfm>. □

KENNETH HOFFMAN PUBLISHES RESEARCH ON EARTH'S MAGNETIC FIELD

THE EARTH'S MAGNETIC FIELD may be more complex than we originally thought. That's according to research by Cal Poly Physics Professor Kenneth Hoffman and colleague Brad Singer, who published an article on their evidence recently in *Science Magazine*.

According to Hoffman and Singer, two independent sources of Earth's geomagnetic field – one generated deep within the outer core of the planet and the other generated in the shallow core –

'TWO INDEPENDENT SOURCES OF EARTH'S GEOMAGNETIC FIELD... ARE RESPONSIBLE FOR THE EVER-CHANGING MAGNETISM OF OUR PLANET'

are responsible for the ever-changing magnetism of our planet. "This hypothesis addresses the long-standing problem as to how the source of Earth's strong, axial dipole field – which runs north-south through the planet – reverses its polarity," said Hoffman.

Hoffman and Singer compared historic observations of the Earth's magnetic field at two geographically separate sites, Germany and Tahiti, along with paleomagnetic data obtained from ancient lava flows that had erupted some 780,000 years ago. These flows erupted during times when the axial dipole was especially weak and underwent apparently unsuccessful attempts to reverse.

Both scientists concluded that a "flip" of Earth's polarity first involves the demise of the deeper source generating the axial dipole, leaving behind the source of magnetic field generated in the shallow core – a complex field pattern controlled by the physical variability of the lowermost mantle.

"This dichotomy of field sources may be the key to understanding what triggers an attempt by the axial dipole to reverse," said Hoffman.

Singer is a geology professor at the University of Wisconsin-Madison. Read the entire paper online at <http://www.sciencemag.org/cgi/content/full/321/5897/1800>. □



ARCHITECTURE STUDENTS PLACE IN LEADING EDGE COMPETITION

CAL POLY ARCHITECTURE STUDENTS **Reece Evan Satava** and **Oscar Zarate** took home two of three top awards in the 2008 Leading Edge Student Design Competition/Challenge Two.

The challenge was to design a 4,500-square-foot, three-unit townhouse-style residence for student equestrians with horses on-site. Successful entries satisfied unique environmental concerns while addressing advanced energy efficiency and sustainable building issues.

More than 500 entries were received from across the globe including China, Iran, New Zealand and Spain. Satava won second place and Zarate earned a merit citation. The projects had to pass through technical screening, calculating and demonstrating energy consumption, sustainable features and water use before they were juried for design.

In the judge's remarks, Satava's entry "displayed good integration of the inside and outside, and the renderings were very compelling." Zarate's entry was praised for its "... use of the cylinder form. It created a strong tie to the precedence of the site..." The designer succeeded in creating fun places to hang out."

The faculty advisor was Howard Wiesenthal. For more information, go to www.leadingedgecompetition.org. □

ALUMNI ASSOCIATION RECOGNIZES 2008 HONORED ALUMNI

AN ASTRONAUT, AN ARCHITECT, and the nation's top printer are among this year's Honored Alumni at Cal Poly.

Receiving the Honored Alumni award this year are: **Joe Bannon (AGB '76)** of Carmel, Ind., for CAFES; **Rebekah Gladson (ARCH '77, MA '80)** of Corona del Mar for CAED; **B. Quentin Lilly (BUS '83)** of Malibu for OCOB; **Christina McEnroe (CRD '00)** of Buellton for COE; **Gregory Chamitoff (EE '84)** of Pearland, Texas, for CENG; **Robert C. Tapella (GRC '91)** of Alexandria, Va., for CLA; and **Anne Marie Bergen (BIO '85)** of Columbia for CSM.

This year's Cal Poly Alumni Association Distinguished Service Award Winner is **Nancy McCracken (HE '70)** of San Jose.

The alums were honored during Homecoming 2008 at the Honored Alumni Banquet on Nov. 7, and again during half-time at the Mustang's Homecoming Game on Nov. 8. □



CAL POLY WINES AVAILABLE FOR PURCHASE

ADD TO THE HOLIDAY CHEER with a bottle (or two) of Cal Poly wine, available for purchase online at www.calpoly.com.

Cal Poly wines also can be sampled and purchased at "TASTE," a wine-tasting room operated by the San Luis Obispo Vintners Association in downtown San Luis Obispo.

The 2006 vintages are the first made by the university's

WITH NEARLY 300 STUDENTS, IT IS THE LARGEST UNIVERSITY PROGRAM OF ITS KIND IN THE STATE

Wine and Viticulture program, which allows students hands-on experience in every step of the process, from the vineyards to sales and marketing.

Among the wines are a pinot noir and a chardonnay made by student winemakers **Luke Holcombe** and **Kathryn Allegra** from fruit grown at the Trestle Vineyard on Cal Poly's campus, under the guidance of Christian Roguenant at Baileyana Winery in Edna Valley.

A third wine, called "Mustang Red," is a blend of Paso Robles zinfandel and Edna Valley syrah made by students from grapes grown off campus.

Proceeds benefit Cal Poly's Wine and Viticulture program. With nearly 300 students, it is the largest university program of its kind in the state.

Cal Poly's 2007 vintages will be unveiled in the spring, and 2008 wines are in production.

Early orders are encouraged. The wines are in limited quantity, with total production of about 800 cases. □

MARS COMES ALIVE WITH IMAGES AND MUSIC AT KENNEDY LIBRARY

EXPERIENCE ANOTHER WORLD in a unique and engaging way with “Mars Within Reach: Arctic Melodies and Science from the Red Planet,” an interactive exhibit at Cal Poly. The free public exhibit is scheduled to run through Jan. 12 in the Kennedy Library Gallery at the Commons.

The exhibit allows visitors to touch, hear and interact with data from several recent Mars missions. It blends planetary science, engineering and music to demonstrate scholarship related to the exploration of the Martian Arctic, with special attention to making the content accessible to visually impaired people.

Visitors can explore Martian volcanoes, valleys and craters using tactile models and are able to touch rock samples that have been drilled into by an abrasion tool identical to those found on the Mars Rovers Spirit and Opportunity.

The exhibit allows visitors to hear data from Mars through a process known as sonification, a musical composition created by coding data from the Mars Odyssey spacecraft from water ice and dry ice in the arctic regions of the planet.

“Mars Within Reach” also will feature scale models of the Phoenix Mars Lander, high-resolution images of Mars, and materials from Mars in science fiction, such as original copies of books by author Edgar Rice Burroughs.

The exhibit is possible thanks to the collaborative efforts of Keller, Quinn, the NASA Mars Exploration Program at JPL, the NASA Phoenix Mars Lander Mission at the University of Arizona, and Cal Poly’s Disability Resource Center and Kennedy Library.

For more information on “Mars Within Reach,” visit the Library’s Web site at www.lib.calpoly.edu/ or call 805-756-2305. The exhibit will be open during normal library hours, which can be found online at www.lib.calpoly.edu/about/hours. □



Steven T. Lerian

USC GRAD IS NEW CAL POLY ARTS DIRECTOR

CAL POLY ARTS HAS HIRED Steven T. Lerian as its new director. Lerian was selected to oversee programming and donor development for Cal Poly Arts after an extensive nationwide search.

A graduate in drama from USC with a master’s in fine arts in directing from Michigan’s Wayne State University, Lerian spent the past 15 years as executive director of Washington’s Kirkland Performance Center, one of the Seattle area’s leading arts presenters.

In addition to being the founding executive director of KPC, Lerian led that organization through its \$5.8-million capital campaign and facility construction in the mid-1990s and has served as CEO through 10 years of the operational history of the theatre.

Lerian steps in to helm the current Cal Poly Arts 2008-09 series, featuring almost 50 performances by professional touring artists from around the globe. For more information, check out www.calpolyarts.org. □

UNIVERSITY POLICE RECEIVES TOP AWARD

CAL POLY IS A SAFER PLACE to get around, thanks to our very own University Police Department. The UPD was recently awarded top honors for excellence in community traffic safety programs.

The Commissioner’s Award was presented to the UPD at the sixth annual California Law Enforcement Challenge – a daylong traffic safety symposium – in Sacramento. The Cal Poly UPD was recognized out of more than 500 agencies. □

Original artwork for this poster was created by Cal Poly graphic design student Eric Neimy



(Above) Greg Chamitoff talks to local school children from the International Space Station. (Photo by Dennis Steers)

COLLEGE OF ENGINEERING'S 2008 HONORED ALUM IS OUT OF THIS WORLD



MORE THAN 100 local school children, along with Cal Poly students and faculty, had a once-in-a-lifetime experience recently: they had a live, face-to-face conversation with NASA Astronaut **Gregory Chamitoff** (EE '84).

Pretty exciting, but the kicker was that Chamitoff was 220 miles above Earth aboard the International Space Station (ISS).

Chamitoff, a 1984 Cal Poly electrical engineering graduate and the College of Engineering's 2008 Honored Alum, flew to the station as a mission specialist on the STS-124 shuttle mission. He took up his six-month residency on June 2 and has been busy serving as a flight engineer and science officer.

What does he do in his free time? In answer to that question and others from the students attending the October campus link-up, Chamitoff revealed that he plays guitar and chess, watches "Star Trek" and "Battlestar Galactica" episodes, "jogs" on the ISS treadmill, and enjoys the reconstituted meals. Monday is Mexican night at the ISS table.

Students also asked Chamitoff such sophisticated questions as "How does the station protect itself from micro-meteorites and other space debris?" That was from 10th grader Carson Bush. Summer Tauscher from the eighth grade at Lewis Middle School asked, "While astronauts are

in space, what behavioral changes have been noted, and do they change for better or worse?"

And Josh Rodriguez, also from Lewis Middle School, asked, "In the Microgravity Science Glovebox in the Columbia Module, do you experiment with fire or steam? If so, how does fire react differently in space relative to Earth?"

In addition to his Cal Poly bachelor's degree, Chamitoff earned a master's degree from Cal Tech, a Ph.D. from the Massachusetts Institute of Technology, and an M.S. in Space Science from the University of Houston Clear Lake. He is an American Institute of Aeronautics and Astronautics Associate Fellow and received the AIAA Technical Excellence Award, NASA Silver Snoopy Award, and NASA/USA Space Flight Awareness Award.

Chamitoff developed a self-guided robot while he was a student at Cal Poly. He worked on several NASA projects during his time at MIT. He performed stability analysis for the deployment of the Hubble Space Telescope, designed flight control upgrades for the space shuttle autopilot, and worked on the attitude control system for the space station.

In 1995 Chamitoff joined the Motion Control Systems Group in the Mission Operations Directorate at the Johnson Space Center. He was selected by NASA for the Astronaut Class of 1998 and qualified for flight assignment as a Mission Specialist in 2000. Since then he has worked in the space station robotics branch and has assisted several ISS expeditions. □