

Three Professors Tapped for Distinguished Teaching Award

While Cal Poly boasts a roster full of exceptional professors, only three are chosen each year to receive the Distinguished Teaching Award, the university's highest teaching honor.

This year's honorees, all cited for their passion for teaching and learning, are English Professor Kevin Clark, Music Professor Alyson

McLamore, and BioResource and Agricultural Engineering Professor Mark Zohns.

Clark, an award-winning poet, was cited for "his deep love of poetry and literature . . . that is palpable through his untamed enthusiasm" Students who nominated him, and committee members who observed him, say, "His well-planned discussions force students to look beyond the surface of a poem and 'go deeper.' Through the nurturing, prodding, and ever-challenging

hand of this outstanding teacher, students come to care deeply for the power of words, appreciate the craftsmanship of poems, and love the voice of the poet."

When Clark learned he had been selected, he called it "one of the great, most intense moments of my entire professional life."

McLamore was recognized for "challenging students and never settling for less than their individual best." Supporters

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Alyson McLamore, Mark Zohns (center), and Kevin Clark
Photo by Jeff Greene





Cal Poly's P-POD team members are (left to right) Michelle Creedon, Isaac Nason, and Nick Johansen (all Aeronautical Engineering), and team leader Jake Schaffner (Electrical Engineering).

Photo by Rick Smith

Cal Poly Heading into Orbit with PolySat, CubeSat Programs

Student teams led by Aerospace Engineering Professor Jordi Puig-Suari are on target for the first launch of a Cal Poly-built satellite next spring thanks to the PolySat program.

Cal Poly has been working with more than 20 other universities around the globe on the project for the past three years. In the program, students design and build small satellites, known as 'CubeSats.' CP1, Cal Poly's first satellite, is a solar-powered unit equipped with a sun sensor (the subject of its testing mission), a microcomputer, and transceivers.

Roughly four inches square, each CubeSat and its research equipment costs some \$40,000, in contrast with traditional satellites,

which can be the size of a refrigerator or even a school bus and which come with corresponding multi-million-dollar price tags.

In addition to building a CubeSat, Cal Poly has designed and manufactured the mechanism that will deploy the project satellites into space. Puig-Suari's student teams designed the CubeSat deployer, officially named the Poly PicoSat Orbital Deployer, or P-POD. All universities involved in the CubeSat program will send their satellites to San Luis Obispo before the launch, where Cal Poly students will integrate each into the P-POD and conduct final testing before transporting the whole package to Vandenberg Air Force Base.

A Delta II rocket should blast off with the student payload sometime in the spring of 2003.

So far, the P-POD teams have been financed through more than \$230,000 in grants. The project has made Cal Poly the hub of the CubeSat program. In fact, said Puig-Suari, "this project has placed Cal Poly at the center of an international small-satellite revolution."

The primary goal of the programs is to teach students about satellite projects in the real world, not launch research satellites, Puig-Suari said. "The students have been involved in a whole project life cycle. It is the epitome of learning by doing."

Arthur C. Edwards Endowed Chair for Coatings Technology and Ecology Filled

Ray Fernando has been named to fill the Arthur C. Edwards Endowed Chair for Coatings Technology and Ecology in the College of Science and Mathematics. The \$1 million endowed chair, the first to be fully funded at Cal Poly, was made possible by gifts from 21 donors representing a broad spectrum of the polymers and coatings industry.

The lead gift of \$500,000 was contributed by Ken Edwards and Dunn-Edwards Corporation in recognition of Arthur C. Edwards, the

In addition to teaching and recruiting students and industry support, Fernando will be actively involved in research.

company's co-founder. Industry donors also established the Bill Moore Coatings Research Fellowships

Endowment and the Johnny Gordon Memorial Award. The endowed chair benefits the Polymers and Coatings program in the Department of Chemistry and Biochemistry. In his new position, Fernando plans to expand the content of



Ray Fernando
Photo by Jeff Greene

undergraduate classes and develop a new graduate program in polymers and coatings chemistry. In addition to teaching and recruiting students and industry support for the developing program, he will be actively involved in research.

Prior to coming to Cal Poly, Fernando was the lead research chemist for the Corporate Science & Technology Center, Air Products and Chemicals Inc., in Allentown, Penn. He is currently the program committee chair and chairman of the annual meeting technical program for the international Federation Society for Coatings Societies.

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also say, "She instills a passion for learning that takes education to a new level. She inspires students to reach high standards, and they celebrate their accomplishments."

"I must admit that the real moment of 'feeling like a winner' came in January, when I was told by the awards committee that I had been selected as a finalist," McLamore said. "The official announcement at the end of the spring quarter that I had 'won' was more like icing on the cake I'd already been enjoying."

Zohns was said to have a "knack for making students feel good about themselves." Students said, "He makes lectures and labs interesting [through] his unlimited energy and sense of humor. He has a talent for making complex concepts understandable and fun to figure out. Students see him as genuinely interested in their progress. Anyone who has studied with him knows that there are two ways to do things: the right way and again. He makes a positive and dramatic impression on the lives he touches."

"I've been on cloud nine since I received the news," Zohns said. "I am extremely honored by the award."

University News

Cal Poly Launches Summer Agriculture Program

The College of Agriculture has launched a new summer outreach program for California high-school students who show promise in technology- and science-based careers in agriculture and related industries.

The first Carver College program at Cal Poly this year brought 12 boys and 12 girls to live on campus for four days of classes and workshops taught by university faculty.

Named in honor of renowned African-American agriculture researcher, professor, and pioneer George Washington Carver, the program was sponsored by a \$25,000 grant from the Cacique Foundation, the charitable arm of the Mexican cheese company, Cacique Inc.

While at the university, students took courses in food science and nutrition, earth and soil sciences, bioresource and agricultural engineering, animal science, horticulture and crop science, dairy science, and forestry and natural resources management.

The program exposes students to the changing face of agriculture, explained Carver College Director Bret Harrison, who is also the director of the university's MESA (Mathematics, Engineering, Science Achievement) agricultural outreach initiative.



Above: Carlos Murillo, dairy products technology student, discusses the use of pasteurization equipment in the Dairy Products Technology Center pilot plant.



Left: Dawn Afman (SS '01), Natural Resources Conservation Service, shows Peter Katz (Soledad High school, left) and Andre Phillip (Montgomery High School) how to prepare a soil sample for analysis.

Photos by Bret Harrison

"Agriculture needs managers up to date on the latest developments in processing, packaging, and marketing food commodities. It needs students who are very savvy with math and science and have the technical skills to program a computer or a GPS [global positioning system] unit in a tractor to tell it how to lay the proper pattern of drip irrigation line or apply pesticides or fertilizers using satellite coordinates, as well as people who know the chemical characteristics of soils, how they

percolate, hold water, and hold nutrients," Harrison said.

Cal Poly modeled Carver College on a similar program at Tuskegee University in Alabama and on outreach programs already used by other California college MESA programs.

With continuing industry support, Cal Poly's College of Agriculture hopes to make Carver College an annual event, and expand the program to include a summer Carver Academy for middle-school students.

State Bond Would Benefit Two Cal Poly Projects

Proposition 47, a statewide education bond initiative on the November ballot in California, would benefit two building projects at Cal Poly if approved.

Engineering III, currently under construction off Highland Drive near the railroad, needs funding from the new bond for project completion, including equipment. In addition, the bond would support the next phase of replacement and renovation and accommodate some of the demand for enrollment for the colleges of Engineering and Architecture and Environmental Design, according to Robert Kitamura, Cal Poly's director of facilities planning and capital projects.

The new phase will provide for the strategic sharing of facilities and upgraded technologies that serve programs in both colleges, said Kitamura. "It also will bring together programs currently housed in several locations on campus and correct substandard conditions in some of the university's older buildings," he added.

The project includes a new engineering building that will incorporate aeronautical engineering, mechanical engineering, civil and environmental engineering, and industrial and manufacturing engineering, as well as planning for a new building for the College of

Architecture and Environmental Design to house construction management and architecture, along with additional lecture space. The new construction would total 172,000 square feet.

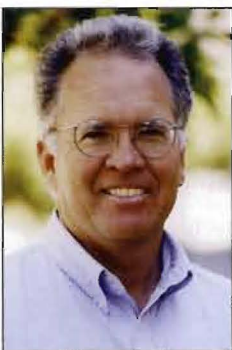
Renovations included in the project would upgrade the Architecture, Dexter, and Engineering East and West buildings – a total of 165,000 square feet.

With the completion of these projects, Cal Poly will have the necessary state-of-the-art facilities to sustain educational quality for students starting careers in engineering, computer science, and architecture – fields critical to the California work force.

Agricultural Engineering Professor Wins National Award for Work in Irrigation

BioResource and Agricultural Engineering Professor Charles Burt, chairman of Cal Poly's Irrigation Training and Research Center (ITRC), has received the 2002 Royce J. Tipton Award from the American Society of Civil Engineers.

The annual honor is given to an ASCE member "who has made a definite contribution to the advancement of irrigation and drainage engineering." Burt was cited for founding the ITRC and for advancements in irrigation efficiency, irrigation district modernization, and a



Charles Burt
Photo by Jeff Greene

consumer-information project, the Irrigation Consumer Bill of Rights.

The ITRC provides technical assistance for on-farm irrigation, landscape irrigation, and irrigation district modernization throughout the western United States and abroad, and has helped build Cal

Poly's irrigation program into one of the nation's strongest.

Last year, Burt stepped down from his original post as ITRC director, but as chairman he still manages several million dollars' worth of the center's contracts.

To help farmers get the irrigation they need, Burt has promoted modernization of irrigation districts and flexibility in water delivery, developed and implemented canal and pipeline automation projects throughout the West, and promoted techniques that quickly identify the available options for irrigation projects worldwide.

David Wehner Named New Dean for College of Agriculture

David Wehner, interim dean for the College of Agriculture during the past year, was named dean of the college April 15.

Wehner joined the faculty in 1994 as department head for what was then known as the university's Environmental Horticultural Science Department, teaching courses in turf-grass management. In 1996 he became interim assistant dean, continuing his previous duties, coordinating the college's graduate program, and assisting faculty members with research and public service programs.

In 1997 he was appointed associate dean, becoming



David Wehner
Photo by Jeff Greene

primarily responsible for the undergraduate program and the college's Multicultural Agricultural Program Center. During his tenure as interim dean he oversaw the merger of the Environmental Horticultural Science and Crop Science departments into

the current Horticulture and Crop Science Department, the formalization of a graduate education partnership with UC Davis, and ongoing

planning for a new wine and viticulture major.

Before coming to Cal Poly, Wehner taught in the Agronomy Department at the University of Maryland and in the Department of Horticulture at the University of Illinois Urbana-Champaign.

Cornel Morton Is New Vice President for Student Affairs

Cornel Morton is Cal Poly's new vice president for student affairs. He has spent his 30-year career in higher education focusing on institutional diversity issues and student support services.

In his new position he is responsible for Campus Student Relations and Judicial Affairs, Career Services, the Disability Resource Center, Health and Counseling Services, Housing and Residential Life, Student Academic Services, and Student Life and Leadership. He is also the university's liaison to the Associated Students Inc.

Morton believes that student affairs staff should "support, influence, and challenge students to embrace personal and community conduct that fosters a sense of personal accountability, belonging, respect for human diversity, mutual respect, and intellectual freedom."

Morton served as associate vice president for student support services at Kent State; assistant vice president for institutional diversity at Central Michigan University; as dean of students, executive assistant to the president, and director of equal opportunity/affirmative action at Virginia



Cornel Morton

Photo by Jeff Greene

Polytechnic Institute and State University; in affirmative action and student affairs at the University of Toledo; and as director of human relations programs at the University of Maryland.

Biological Sciences Professor Receives Presidential Award

Cal Poly oceanographer and Biological Sciences Associate Professor Mark Moline was among 60 young scientists and engineers nationwide to receive the 2001 Presidential Early Career Award for Scientists and Engineers.

A White House news release notes that the award was "established in 1996 [to] honor the most promising young researchers in the nation within their fields."

Eight federal departments and agencies annually nominate

The award was established in 1996 to honor the most promising young researchers in the nation.

the nominating agency's mission, and provide up to five years' funding to further their research in support of critical government missions.

Moline was recommended by NASA for the value of his research with phytoplankton (microscopic marine plants) in developing remote-sensing technology and understanding



Mark Moline

Photo courtesy College of Science and Mathematics

the marine food web. His award provides \$100,000 annually for five years to fund related projects, including studies with undergraduate and graduate students at Cal Poly's new Marine Science and Education Research Center, where he is one of two recently named Unocal Professors of Marine Science (*see the spring 2002 Cal Poly Magazine cover story*).

Moline has conducted research in the Atlantic, the Pacific, and the Southern Ocean surrounding Antarctica, as well as a summer program at Woods Hole Oceanographic Institution in Massachusetts with Cal Poly students. Other support from NASA, the Office of Naval Research, and Rutgers University during the last four years exceeds the \$1 million mark.

Cal Poly, Mission Produce To Open State-of-the-Art Campus Avocado Operation

Cal Poly's College of Agriculture and Mission Produce – a Southern California avocado and avocado products company with annual sales of \$100 million-plus – are planting a new 50-acre avocado orchard this May designed to be a profitable commercial operation as well as a showcase and field classroom for the latest and best orchard management techniques.

Mission Produce will invest some \$350,000 to develop and plant the orchard as well as install state-of-the-art irrigation and orchard-care systems on Cal Poly land irrigated with Cal Poly water. The company will also fund the orchard's \$75,000 annual operation costs.

College of Agriculture Associate Dean Mark Shelton said the new orchard will serve as a lab site and field classroom for Cal Poly students, and the commercial operation there will offer internships for students as well. The college also anticipates offering short courses and seminars for Central Coast avocado growers in the new orchard. "It will be a showcase orchard using the latest and best management practices, irrigation, design, and frost-protection equipment, and it will

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The Politics of Rap

Ethnic Studies Professor Charise Cheney appears to have it all: the love of her students, the respect of her peers, and validation of her scholarly pursuits in the form of a highly competitive Ford Foundation postdoctoral minority fellowship.

In her relatively short tenure at Cal Poly – she joined the faculty in fall 1999 – the Topeka, Kansas, native tied for the “Best Professor” award in a 2000 “Best of Cal Poly” student poll. And the Ford Foundation fellowship allowed her to take a year’s sabbatical from teaching to study the link between black nationalism and rap music, the results of which will appear in her book, *Brothers Gonna Work it Out: Masculinity and the Black Nationalist Tradition from Slave Spirituals to Rap Music*.

“Cheney’s book is a cutting-edge work that examines the cultural expression of political struggle within the black community,” says Ethnic Studies Professor Colleen O’Neill. “She looks at politics from the perspective of popular culture, the arena where most of us experience and are inspired by political expression.”

Cheney’s research, much of which was done in New York during the 2001-02 academic year, explores the works of such rap artists as Public Enemy, KRS-One, and Boogie Down Productions.



Charise Cheney
Photo by Jeff Greene

“Black nationalist theory asserts that due to their African ancestry and common historical experience of slavery, black people constitute a nationality separate and distinct from white Americans,” Cheney says. The Black Panther Party of the late ’60s and early ’70s espoused black nationalism.

But the civil rights gained during that time, says Cheney, were mostly overt. “Racism still exists covertly, and it’s even more insidious because it’s not being addressed,” she contends.

To address that need, Cheney believes the need exists for a more progressive politics than black nationalism. “The resurgence in black nationalism that occurred among the post-civil rights generation of the late ’80s and early ’90s resulted from a void that existed in black political leadership during the conservative Reagan-Bush

administration of the 1960s and 1970s,” Cheney says.

The resurgence in black nationalism in the late ’80s and early ’90s was bolstered by the music of certain political rap artists. And that type of music could still benefit a progressive political cause, according to Cheney.

“Not all rap music is political, but a certain genre is,” Cheney explains. “Rap music doesn’t have to be materialist, misogynist, homophobic, as some critics contend. It can actually be a vehicle through which to educate. It can be constructive as opposed to destructive.”

“Ultimately I would like to establish the fact that rap music is potentially powerful and transformative,” Cheney says. “A lot of artists are invoking the most dangerous stereotypes about black people. There needs to be a balance portrayed that blacks are also intellectual, political, and progressive.”

Cheney, who earned a doctorate in history from the University of Illinois at Urbana-Champaign in 1999, hopes to have her book completed by December. It is to be published by New York University Press.

Cal Poly Holds Sept. 11 Memorial Tribute

On the first anniversary of the nation's Sept. 11 tragedy, members of the campus and local communities gathered on Dexter Lawn to honor the memory of the victims and reflect on the meaning of that date's events.

"Universities have a special responsibility to foster and defend the inherent value and dignity of every human life," President Warren J. Baker said. "While we are a diverse nation, we remain one country, dedicated to the idea of freedom. It is our hope that memorial events such as these will give individuals an opportunity to



Photo by Jeff Greene

honor the memories of those who have been lost and the American ideals of mutual respect and tolerance."

During the ceremony the flag was lowered, a moment

of silence was observed, and the clock tower bells tolled. Baker presented remarks, and a piano piece by Aaron Copland was performed by Music Professor William Spiller.

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also be a first-class lab for our students," Shelton said.

"The orchard is a good investment for both Cal Poly and Mission Produce," Mission Produce CEO Steve Barnard (AGB '75) said. "U.S. avocado consumption is growing while the nation's avocado-growing regions are limited, which should ensure a solid market for the Cal Poly avocados."

Cal Poly already has about 17 scattered acres planted with avocado orchards. But the new

orchard will offer students the chance to learn firsthand about large-scale commercial avocado operation and vertically integrated avocado marketing practices.

"We don't have the resources from the state to put in a commercial-scale operation," Shelton said. "That's why private partnerships with industry like this are so important."

Mission Produce's strong packaging, marketing, distribution, global sourcing, and value-added

product operations are all part of the orchard-to-consumer integration the company can share with students, Barnard said.

Cal Poly's location and its agriculture program – the fourth largest in the nation – make it an excellent site for a showcase avocado orchard, Shelton explained, with avocado operations and yields in San Luis Obispo County among the best in the entire Mexico-California region.

"This is avocado country," Shelton said.

Extra Credit

Cal Poly

- Cal Poly has been rated the best public, largely undergraduate university in the West by *U.S. News & World Report* for the 10th consecutive year. Following the major service academies, Cal Poly was the highest-rated public institution in engineering programs at nondoctoral schools. Cal Poly also tied for 10th among all universities nationwide in a new category recognizing schools with superior internships and other work-experience programs.
- For the fourth straight year, the Council for the Advancement and Support of Education awarded Cal Poly a **Circle of Excellence Award** for overall fund-raising performance. The award marks the longest current consecutive winning streak in the nation. Cal Poly solicited a total of \$43.2 million in private, corporate, and foundation support during fiscal year 2000-2001.
- Cal Poly remains among the top 100 U.S. colleges and universities awarding bachelor's degrees to Hispanics, and is third to second in agriculture, architecture, and engineering, according to numbers published by the National Center for Education Statistics in the *Hispanic Outlook in Higher Education*.



- The CSU Commission on the Extended University has awarded a \$37,000 grant to Cal Poly's **Continuing Education** program (formerly Extended Studies) to carry out a comprehensive study of the educational and work-force training needs of northern San Luis Obispo and southern Monterey counties.

Faculty

- Cal Poly English Professor **John Battenburg** received an English Language Specialist grant from the U.S. State Department to deliver a series of lectures in Saudi Arabia on the subject of teaching English. This was the third year he was invited to that nation.
- City and Regional Planning Professor **William Siembieda** was one of five CSU faculty members chosen to visit the People's Republic of China to share his experience in urban planning with officials in the northeast province of Liaoning. His

Horticulture and Crop Science Professor Virginia Walter (center) is the team coach for Cal Poly's top-ranked flower judging team.

Photo courtesy Virginia Walter

visit was part of a project sponsored by the CSU Chancellor's Office of Global Partnership Development.

Students

- A Cal Poly business administration graduate team competed with groups from 24 universities in 13 states and two foreign countries to win first place in the 38th Annual International Intercollegiate Business Policy competition in San Diego. The teams, charged with running a virtual corporation for five years, were judged on the quality of their strategic plans, operating finances, written annual report, and final presentation before a panel of industry judges.
- **I-Kon Chen** (M.S. IT '02) was one of seven June college
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Extra Credit

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graduates from the United States and Canada to receive an inaugural Italian Packaging Technology Award in Milan and a two-week packaging forum in Bologna, Florence, and Milan. In her winning report she compared several different types of bottle-capping machines.

- The 2002 Cal Poly flower judging team won the 61st National Intercollegiate Floral Crop Quality Evaluation Contest. It was the seventh time since 1990 that the team has won the competition, which requires students to judge the overall commercial quality of 30 separate classes of flowers, ranging from fresh-flower snapdragons to potted hydrangeas.

- Cal Poly's National Agri-Marketing Association (NAMA) team took first place in a nationwide competition against teams from the top 35 agribusiness schools at NAMA's convention in Nashville. Cal Poly's entry was a foreign marketing plan for an Arroyo Grande tomato grower.

- Poly Reps, the university's student ambassador organization group, received the Outstanding Organization 2001-2002 award from the national Association of Student Advancement Programs. The national society represents



Than King competes in the logging team's "obstacle pole" event.

Photo courtesy
Christopher Dicus

student alumni and ambassador groups from more than 375 colleges and universities throughout the United States and Canada.

- The university's Society of Environmental Engineers club won both first and second place in the 2002 American Society of Civil Engineers' "Water Treatment from Your Kitchen and Beyond" competition, held at the University of the Pacific in Stockton. Students were required to contain, treat, and discharge a sample of contaminated water while theoretically stranded on a desert island in the Bahamas.

- Cal Poly's logging team took first place at the annual Association of Western Forestry Clubs

Conclave at the University of Montana in Missoula. The team competed against 17 teams from all the major university forestry teams in the western United States to win the title and the sportsmanship award, given by the American Lumberjack Association. Team members also won individual awards.

- Three Cal Poly students won awards at the 2002 California State University Student Research competition in Long Beach. Categories included graduate and agricultural sciences, undergraduate biological and agricultural sciences, and undergraduate engineering and computer science.