Fall activities celebrate arrival of Chancellor Denice Denton

A ‘Symposium on Academic Diversity’ will take place on Thursday and Friday, November 3 and 4. On Thursday afternoon, Shirley Ann Jackson, 18th president of Rensselaer Polytechnic Institute and former chair of the U.S. Nuclear Regulatory Commission, will deliver the keynote address. Jackson will also receive the third annual UCSC Foundation Medal.

UCSC managing operation of NASA Ames sensor facility

UCSC has taken over the operation of NASA’s Airborne Sensor Facility, a major program for observing and monitoring Earth’s environment. The facility is based at NASA Ames Research Center in Moffett Field. The transfer of management strengthens the links between NASA and UCSC and will enhance the campus’s remote sensing capability and research, said Eli Silver, a professor of Earth sciences who was named principal investigator of the facility earlier this year. UCSC has a collaborative relationship with NASA Ames that includes the management of the University Affiliated Research Center (UARC), a $330 million contract between UC and NASA for a broad range of mission-oriented research. The UARC will now oversee the activities and program of the Airborne Sensor Facility. Under the current agreement, NASA will provide funding to UCSC through the UARC at the rate of $3 million per year to cover operation costs, salaries for the current staff of 17, and stipends for one or two graduate students, Silver said.

Research shows why older adults ‘accentuate the positive’

Age-related differences appear to affect the way adults make and remember their choices in life, suggesting that older adults ‘accentuate the positive and eliminate the negative in their memories.’ Psychologists at UCSC have learned that adults of all ages tend to ‘fill in the gaps’ when recalling decisions of the past, shedding light on the mysteries of memory distortion. But as people age, they rely more heavily on a compensatory process that favors positive emotional outcomes, said lead researcher Mara Mather, an associate professor of psychology at UCSC, whose work was published earlier this year in the Journal of Experimental Psychology. The results add a twist to our understanding of how people remember things that went well, said Mather, who coauthored the paper with UCSC graduate student Martha Knight and then-undergraduate Michael McCaffrey, who graduated in 2005.

Regional events are also planned

Continuing Chancellor Denton’s inaugural ‘listening tour’ and offering community members opportunities to join in the celebration of the chancellor’s arrival, UC Santa Cruz is collaborating with partners throughout the region to present a variety of special events this fall. Among activities open to the public will be a series of concerts and lectures sponsored by UCSC’s Arts & Lectures program; a presentation cosponsored with the American Association of University Women; the annual Sidharth Maitra Lecture to complement the campus’s Sutiyajit Ray Film and Study Collection; and a presentation by professor of physics Joel Primack at NASA Ames. For details on these and related events, please visit: celebration2005.ucsc.edu

The newly discovered planet is shown in this artist’s conception.

Astronomers discover most Earthlike planet yet

A team of astronomers has reached a major milestone in the search for Earthlike planets with the discovery of the smallest planet ever detected beyond our solar system. About seven and a half times as massive as Earth, it may be the first rocky planet ever found orbiting a star not much different from our Sun. All of the nearly 150 other extrasolar planets discovered to date around normal stars have been larger than Uranus, an ice giant 15 times the mass of Earth. “We keep pushing the limits of what we can detect, and we’re getting closer and closer to finding Earths,” said team member Steven Vogt, a UCSC professor of astronomy and astrophysics. The new planet orbits the star Gliese 876, just 15 light-years away and located in the constellation Aquarius. The smaller planet whips around the star in a mere two days, and is so close to the star’s surface that its temperature probably tops 200 to 400 degrees Celsius (400 to 750 degrees Fahrenheit). “This planet will be historic,” said team leader Geoffrey Marcy, a UCSC alumnus and professor of astronomy at UC Berkeley. “Over 2,000 years ago, the Greek philosophers Aristotle and Epicurus argued about whether there were other Earthlike planets. Now, for the first time, we have evidence for a rocky planet around a normal star.”

For a schedule of special events surrounding Chancellor Denton’s investiture and to RSVP, please go to: celebration2005.ucsc.edu
**Falcon family draws online crowds**

A pair of peregrine falcons had a very public courtship this past spring and raised a family in full view of thousands of fans, thanks to researchers who set up a webcam in the falcons’ nest box. The nest box sits on a ledge on the 33rd floor of the headquarters of Pacific Gas & Electric in downtown San Francisco, where it was installed by the UCSC Predatory Bird Research Group (SCBPRG). An Internet-linked camera sent streaming video of the nest to the SCBPRG web site (www.scpbrg.org).

Widely publicized in the Bay Area media, the site attracted thousands of visitors who followed the action in the nest as the falcons, “George and Gracie,” courted and then raised a clutch of four falcon chicks. “The response has been overwhelming,” said SCBPRG research associate Glenn Stewart. More than 2,000 people participated in an online news group moderated by SCBPRG scientists. Crowds gathered in downtown San Francisco to watch the young peregrines make their first flights and to celebrate their fledging, while the web site logged hundreds of thousands of hits. Donations and notes of appreciation have poured in from enthusiasts in 100+ countries. The falcon webcam project is part of SCBPRG’s education and outreach program, supported by major gifts from Oracle and PG&E.

Four peregrine falcon chicks were raised by their parents, “George and Gracie,” in a nest box on the PG&E building in downtown San Francisco.

**Campus volunteers give nature a hand**

For the volunteers who join work crews each quarter to help preserve UCSC’s natural areas, the effort is a labor of love. “It really is a wonderful way to get out, with a great group of people, and work to help the environment,” said paleoecologist researcher and volunteer Linda Anderson. “It’s a problem here, and we’re out to address it.”

The problems are invasive, nonnative species and erosion. Work crews pull out the troublesome plants, replant areas with native species, and monitor the campus to detect problems with invasive species.

Scott Loosely, who heads the Site Stewardship Program of UCSC’s Grounds Services, estimates volunteers have added at least 2,000 plants to the UCSC landscape, mostly in the Long Marine Life Station. The work can be demanding—Anderson said she could recommend it as azaebic exercise—but it also comes with a sense of satisfaction.

In the few years I’ve volunteered at Younger Lagoon I’ve been able to see once-riny plants that we’ve planted thrive and form a thick cover that helps to keep out the weeds,” said volunteer Laura Goodnough. A 1991 UCSC graduate, Goodnough is a field assistant for the Fort Ord National Reserve rare plant survey.

Students are the backbone of the volunteer preservationists, though staff and faculty members also take part. Volunteers may sign up through the Site Stewardship Program, which can be accessed via the following web site: ucscplant.ucsc.edu/ ucscplant/grounds/.

**New Teacher Center awarded $1.5 million federal contract**

This highly regarded New Teacher Center at UCSC has been awarded a $1.5 million contract to participate in the federal government’s first major evaluation of programs that school districts offer novice teachers.

The New Teacher Center (NTC) has supported beginning teachers since 1988, and now works across the country with school districts interested in intensive induction models. “We know that teacher quality is the single most important variable in student performance, and we also know that the first two years of teaching are the most challenging,” says executive director Ellen Moir. “Our NTC induction model has been shown to cut new teacher drop-out rates by half, and we are beginning to show significant impact on student learning.”

**Engineering to offer computer game design as new track**

The development of interactive computer video games has become a multimillion-dollar industry that caters to the legions of gaming enthusiasts with a steady output of new games featuring ever greater levels of technical sophistication. For students whose interest in games goes beyond merely playing them, UCSC’s Jack Baskin School of Engineering now offers the opportunity to specialize in computer game design through a new track in the computer science major.

Science Department has put together a series of courses that will give students an in-depth introduction to the design and technology of interactive computer video games.

“The students we’ve talked to are very excited about it. To my knowledge, this is the first undergraduate initiative in computer gaming in the UC system,” said Ira Pohl, professor and chair of computer science.

**New symposium showcases graduate research**

**High school graduation rate improved by home computers**

Children living in homes with a computer are more likely to graduate from high school than young adults without computer access at home, even when factors like academic achievement are controlled for, according to UCSC researchers investigating the “digital divide.” Although many studies have explored the impact of computers in schools, few have assessed the impact on youth of having a computer in the home, says Robert Fairlie, associate professor of economics at UCSC and a lead project investigator.

More than a quarter of all children in the United States lack computer access at home, according to Fairlie, whose team documented a 6 to 8 percent increase in the high school graduation rate of youth in homes with computers. Other positive impacts include a lower rate of school suspensions and higher grade-point averages among students in homes with computers. The study is part of an investigation of the digital divide being conducted under the auspices of UCSC’s Center for Justice, Tolerance, and Community.
Sociologist examines cultural intrusions African Americans are making

Over the past decade, African Americans have become more visible on the cultural landscape of the United States, says sociologist Herman Gray. But the intrusions black artists like Wynton Marsalis have made on U.S. culture aren’t enough, according to Gray, author of the new book, *Cultural Movers: African Americans and the Politics of Representation.* “I want my multiracial six-year-old grandson to be able to turn on the television and see other people of color, but we can’t stop there,” says Gray, a professor of sociology and chair of the department at UCSC. “Just because television does a better job now of representing our diversity doesn’t mean we’ve achieved our goals of justice and equality.” In *Cultural Movers,* Gray examines the impact of culture on political change and explores how black popular culture has shaped the nation.

UCSC, NYU join in virtual dance and theater collaboration

A luminous transfer, an ambitious dance experiment in live, transcontinental collaboration using the Internet — was broadcast simultaneously this spring to audiences at UCSC’s Experimental Theater and New York University’s Frederick Loewe Theater. Two performances in April were the culmination of a distance arts project undertaken by an interdisciplinary mix of students, staff, and faculty at both universities. The result was an interactive, real-time performance where UCSC dancers performed in front of three “liquid screens,” upon which live images of the New York University dancers were simultaneously projected.

The project was conceived of by UCSC assistant professor of theater arts Ted Warburton and carried out in his move- ment research class. UCSC’s staff provided the expertise and instruction, enabling students to run all of the technical aspects of the performances. “I believe this is the first course in the U.S. to offer students both the opportunity to perform and to acquire the technical knowledge necessary to produce this type of event,” noted Warburton. UCSC dancers who performed on opposite sides of the country working together — interconnected and interdependent — using advanced telecommunications for artistic collaborative purposes.

Tennis Slugs triumph in front of home crowd

For the fifth time in school history, UCSC’s men’s tennis team captured a national championship. But this time, the feat was accomplished on the team’s home courts as the host school thumbed hundreds of very enthusiastic Slug supporters in May with a 4–1 victory over top-ranked Middlebury College of Vermont. The tournament also marked the first time in NCAA Division III history that a player on one team captured the team, singles, and doubles titles in the same year. In the singles competition, UCSC’s Matt Seeberger repeated as national champ; he also teamed with Matt Brunner to capture the doubles title, winning a thrilling third-set tiebreaker.

UC Santa Cruz to lead ambitious project on wireless networks

UCSC researchers are leading a major collaborative effort to develop the technology for complex wireless communications networks that can be set up in rapidly changing environments such as battlefields and emergency situations. Faculty in UCSC’s Baskin School of Engineering will lead a multidisciplinary team of scientists at seven major universities working on the Dynamic Ad-Hoc Wireless Networks (DAWN) project. The project also includes researchers at UC Berkeley, UCLA, Stanford University, Massachusetts Institute of Technology, the University of Maryland, and the University of Illinois at Urbana-Champaign. It is funded by a five-year grant from the U.S. Department of Defense that will provide an average of $1 million per year spread among the institutions. J. J. García-Luna-Aceves, Jack Baskin Professor of Computer Engineering at UCSC and the project’s principal investigator, said the methods and protocols developed for this project will have widespread applications. The research is of interest to the U.S. Army to enable troops to deploy mobile communications networks on the battlefield. But such networks could also be used by emergency personnel in the aftermath of an earthquake or other disaster in which pre-existing communications infra- structure has been knocked out.

Ecologist receives Mellon grant

Erika Zavaleta, an assistant professor of environmental studies at UCSC, has received a prestigious grant from the Andrew W. Mellon Foundation to investigate the ecological impacts of the loss of plant species in California ecosystems. Through a program that supports the research projects of outstanding junior faculty, Zavaleta has been awarded a three-year, $200,000 grant. A maximum of only three such awards are presented each year.

Biolopist earns prestigious Searle grant

The Searle Scholars Program has awarded Melissa Jurica, assistant professor of molecular, cell, and developmental biology, a three-year, $240,000 grant to support her research. Jurica, who studies the complex system by which human cells process genetic information, is one of just 15 young scientists awarded the prestigious grant this year. The program makes grants to selected universities and research centers to support the research of exceptional young faculty in the biomedical sciences.

In Memoriam

UCSC faculty in 1985, immediately after completing her M.S. and Ph.D. in computer science at UC Berkeley. She earned her B.A. in zoology at the University of Wisconsin—Madison, and an M.A. in biology at Stanford University. Her experience in computer graphics and animation included working as a computer programmer at Lucasfilm—where the Star Wars movies were produced—while she was a graduate student at UC Berkeley.

In Memoriam

Jane Willemsen

Jane Willemsen, professor of computer science and an expert in computer graphics and animation, died of cancer in March in Santa Cruz. She was 56. Willemsen began her career as a biologist, teaching anatomy and physiology for many years at junior colleges before returning to school in computer science. Much of her work in computer graphics, including techniques for animal modeling and animation, drew on her background in biology. Willemsen joined the UCSC faculty in 1985, immediately after completing her M.S. and Ph.D. in computer science at UC Berkeley. She earned her B.A. in zoology at the University of Wisconsin—Madison, and an M.A. in biology at Stanford University. Her experience in computer graphics and animation included working as a computer programmer at Lucasfilm—where the Star Wars movies were produced—while she was a graduate student at UC Berkeley.

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