

Yzaguirre bolsters civil rights efforts

Noted Hispanic leader Raul Yzaguirre has joined ASU as Presidential Professor of Practice in Community Development and Civil Rights.

Yzaguirre, former president and chief executive officer of the National Council of La Raza, will help create a center, to be located at ASU's Downtown Phoenix campus, focusing on community development, education for practitioners, and academic scholarship.



Raul Yzaguirre

Yzaguirre is one of the most widely recognized national leaders in the Hispanic community. His involvement in many of the most critical legislative and public policy issues of the last three decades has made him a key national player on behalf of Hispanic Americans.



Scott MacIntyre



Jared Niska

ASU boasts two of top U.S. scholars

Continuing an amazing record of accomplishment, two more ASU students were named to *USA Today's* All-USA Academic Teams.

ASU has had more students named top U.S. undergraduates by the newspaper over the past 11 years than any other public school. Only Harvard and Yale have had more.

Scott MacIntyre, a senior in piano performance in the Herberger College of Fine Arts, has been chosen one of the top 20 undergraduates in the United States, named to the first team.

Jared Niska, who graduated in December with a degree in bioengineering from the Ira A. Fulton School of Engineering, was named to the second team of 20 students.

Prescott earns ASU's first Nobel Prize

Edward Prescott, the W. P. Carey Chair in Economics at ASU, was named winner of the 2004 Nobel Prize in economic sciences in October 2004.

Prescott is a professor in the department of economics at ASU's W. P. Carey School of Business and a senior monetary adviser at the Federal Reserve Bank of Minneapolis. He shares the prize with Finn E. Kydland of Carnegie-Mellon University.

In its announcement, the Nobel Committee of the Royal Swedish Academy of Sciences, Stockholm, lauded Prescott and Kydland "for their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles."

The prize, including a check for 10 million Swedish kronor (about \$1.36 mil-

lion) shared by the two, a gold medal and a diploma, was presented in December, on the anniversary of Nobel's death in 1896.

"Edward Prescott is most deserving of this highly prestigious honor," ASU President Michael Crow says. "He is a man of great intellect, drive and commitment, who always puts others — particularly students — first. We are immensely proud to have Ed at ASU, and



Edward Prescott

we hope this is the beginning of many Nobel Prize winners coming out of this great institution. We are extremely excited about the fact that he chose to join this university because of what we are attempting to achieve."

Prescott, known for his work on growth theory and time inconsistency, is one of a small circle of scholars who have altered the course of macroeconomic thinking in the past three decades. The span of his research includes seminal work in business cycles, economic development, general equilibrium theory and finance, and his work has addressed some of the most important questions in economics. His insights have had profound implications for the conduct of fiscal and monetary policy and even bank regulatory issues.



The Decision Theater for the New Arizona will allow policy makers to see the impact of their decisions using state of the art imaging tools.

Decision Theater gives power to decision-makers

ASU's new Decision Theater for the New Arizona will serve as an advanced visualization tool that will enable policy makers and others to see, in detailed three-dimensional representation, the environmental consequences of their actions.

The computer-driven visualization tool was made possible by a \$3 million gift from Valley businessman and philanthropist Ira A. Fulton. It is a central component of ASU's newly created Decision Center for a Desert City.

ASU's Decision Theater for the New Arizona will feature an "immersive environment" (a 270-degree screen) where researchers will be able to see the effects of public policy decisions

played out before them. Using computer models and computer visualization techniques, the Decision Theater will enable researchers to test the outcomes of decisions made today on such topics as urban growth and water usage, and the effects of policy decisions on public health and on a myriad of environmental and social challenges.

The goal is to provide interactive forums that identify and assess probable outcomes of real-world decisions, review the potential impacts of varying policy decisions, and provide visualizations of alternative scenarios and scientific analyses produced by complex and integrated computer models.

ASU, city of Phoenix work to develop downtown campus

ASU and the city of Phoenix are developing key elements for a proposed intergovernmental agreement to develop a 15,000-student campus in the city's downtown area. The agreement must still be approved by the Phoenix City Council and the Arizona Board of Regents.

ASU will move five schools to the new Downtown Phoenix campus: the existing schools of Nursing, Journalism, and Public Programs, and the new University College and School of Global Health. KAET, the university's PBS affiliate, also will move downtown.

The campus will comprise an urban mix of academic facilities, residential facilities, ground-level dining and retail stores, park space and open pedestrian spaces.

According to the proposed agreement, the city will acquire about 20 acres of land within the Downtown Redevelopment Area, bound by Van Buren Street, Fillmore Street, First Avenue and Third Street; develop and finance academic and academic support space through the renovation of existing buildings and new construction; and build any necessary public infrastructure.

ASU will operate and maintain all Downtown Phoenix campus facilities. The university estimates an annual investment of \$40 million to \$50 million.

The university also will be responsible for the development of student housing and campus parking. On- and off-campus residential housing will be funded and constructed by the private sector.

According to city leaders, the Downtown Phoenix campus will be a major step in building a vital downtown urban core.

ASU's Downtown Phoenix campus

- College of Nursing
- Cronkite School of Journalism and Mass Communications
- College of Public Programs
- University College
- School of Global Health
- KAET

ASU Highlights

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ASU researchers take Mars project to Beijing

ASU becomes first international institution to participate in a major Chinese science exhibition

In May, ASU will take Mars to Beijing in an exhibit never before seen outside of the United States. ASU will present "Welcome to Mars!" as part of China Science & Technology Week.

ASU is the first educational institution outside of China to be invited to stage an exhibit at the event. China's S&T week is an annual, national event that has attracted 20 million people in Beijing in its 10-year history — including 3 million people attending in 2004 alone.

ASU's Mars Space Flight Facility is the earthly home for two instruments currently in orbit around Mars and assists in commanding decisions for two instruments on the surface of Mars.



This graphic illustration shows one of the twin Mars rovers, which included a variety of ASU-developed technology.

"Welcome to Mars!" will include a variety of exhibits and interactive adventures designed for students of all ages. It will use an array of

visuals and experiences that portray Mars in printed media and multimedia formats. These will include large panoramic images, unique prints, paneled story displays of the most recent Mars data, computer animation and scrolling imagery. This immersive experience will provide a basic understanding of Mars and its environment, present the challenges of exploration, and make Mars a real place — and the possibility as a future destination for humans more imaginable.

ASU's exhibit includes actual meteorites and various Earth rock samples to show the geological composition of Mars. World-leading Mars researchers from ASU will be on site to answer questions and to interact with audiences, young and old.

ASU In The News

National Media

Though diabetes is rampant among Native Americans, the epidemic can be blamed more on environmental changes than genetics. "Focusing on genetics is a mistake," says **Donald Warne**, clinical professor of health management and policy. "It's a way to disempower people, making it seem fatalistic that you have to get a disease. We have the power to prevent it." *Forbes*, Aug. 30, 2004.

Post-colonial Africa has been hobbled by illegitimate political take-overs, according to research by political scientist **Patrick McGowan**. He documented 80 successful coups, 108 failed coups and 139 reported coup plots in sub-Saharan Africa between 1956 and 2001. But security experts say African nations are starting to cooperate to thwart the coups, and to be more assertive in the face of such action. *Christian Science Monitor*, Aug. 31, 2004.

Researchers at ASU have developed an impartial system to keep score of political mudslinging. Business professor **Kevin Dooley** and communication professor **Steven Corman** are using a computer to conduct daily analyses of language in news releases put out by the Bush and Kerry campaigns. "Looking at the graphs for mud in August, you see that Bush seemed to pick particular issues and hammer Kerry on them," said Corman. "Meanwhile, Kerry was less focused and still catching up to Bush in mud-throwing." *New York Times*, Sept. 12, 2004.

For the first three months of the Mars Exploration Rover Mission, scientists and engineers at the NASA Jet Propulsion Laboratory split into two shifts for round-the-clock work. Geologist **Jim Rice** worked all three months, catching two hours' sleep at each shift change. "We're the 21st-century Corps of Discovery," he said, invoking the Lewis and Clark expedition. *U.S. News & World Report*, Sept. 13, 2004.

"Arizona State University's overarching goal is to provide access to as many academically qualified students as possible, regardless of financial need. ... ASU will not rise to the level of world-class status without adequate funding. We can't ignore any revenue sources, including the investment students make in their portion of the cost of higher education," says **President Michael Crow**. *USA Today*, Sept. 15, 2004.

When researchers unveiled evidence of an extinct race of dwarf humans on a remote island recently, the finding furthered the theory that several different human species existed across the entire arc of human history. "The increased rate of discovery of fossils has shown diversity," says archaeologist **William Kimbel**. "We had all accepted the notion that 30,000 years ago, modern humans were essentially it." *Christian Science Monitor*, Nov. 1, 2004.

The key to a lasting marriage may be how a couple argues, researchers have found. Marriage therapy has shifted toward helping spouses manage and accept their discord, rather than resolving differences. Communication studies professors **Douglas Kelley** and **Vince Waldron** found that forgiveness is a key factor in long-lasting marriages. *Wall Street Journal*, Nov. 4, 2004.

Geographic information systems, or GIS, are helping archaeologists locate clusters of tombs in Egypt via high-resolution satellite photos. In Jordan, satellite data has mapped the entire country for archaeologists, says archaeologist **Stephen Savage**. GIS will broaden the understanding of past cultures and improve the sharing of data between scientists. *USA Today*, Nov. 8, 2004.

New college deans offer dynamic leadership

Bernadette Mazurek Melnyk and Debra Friedman have joined ASU to serve as the deans for the College of Nursing and the College of Public Programs, respectively.

Melnyk is former associate dean for research and director of the Center for Research and Evidence-Based Practice at the University of Rochester. She joined ASU in July 2004, replacing Barbara Durand who retired.

"I believe the education component of the college is very strong and we will build on that foundation in creating new innovative programs," she says. "I will focus on bolstering the research enterprise of the college and bringing national and international visibility through a new Center for the Advancement of Evidence-Based Practice, which will also improve nursing practice and the quality of care in the community."



Bernadette Melnyk



Debra Friedman

At Rochester since 1992, Melnyk founded and led the Center for Research and Evidence-Based Practice, which focuses on research and the implementation of research to best nursing practices.

Friedman, who has been at the University of Washington since 1994, is currently director of special projects, development and

alumni relations. She will join ASU before the fall 2005 semester, replacing Anne Schneider who retired in 2004.

At Washington, Friedman also served as associate provost for academic planning (1998 – 2003) and associate and assistant dean, office of undergraduate education (1994 – 97). Since 1995, she has been affiliate associate professor of public affairs and sociology.

"The college has a connection to urgent social issues and has a rapidly expanding body of transdisciplinary expertise in these areas," she says. "Communities are also advancing their knowledge and better articulating their concerns. Public Programs has a special responsibility to bring these concerns and expertise together. The college's new location at the Downtown Phoenix campus will help transform the relationship between the university and community."

Hackett to serve as founding dean for University College

Gail Hackett has been chosen as the founding dean for ASU's new University College.

ASU is launching University College as an interdisciplinary undergraduate college for students pursuing specialized or new degree programs and those with no declared major.

Students who have completed the required high school coursework and graduated in the top 50 percent of their class are eligible for admission to University College.

University College will function on all university campuses and sites, with headquarters at ASU's downtown Phoenix campus.

It will enable ASU to better serve the growing population – about 2,000 undeclared freshmen each year – of students who are exploring academic and career options, plus students seeking a specialized, interdisciplinary degree, as well as re-entry and transfer students.

Overarching goals of University College are improving retention and graduation rates of all students and increasing the baccalaureate degree production as well as the efficiency of degree production.

Hackett, a longtime administrator with ASU, also will remain in her role as a vice provost of the university.

Crow joins Council on Foreign Relations

ASU President Michael Crow has been selected to join the prestigious Council on Foreign Relations.

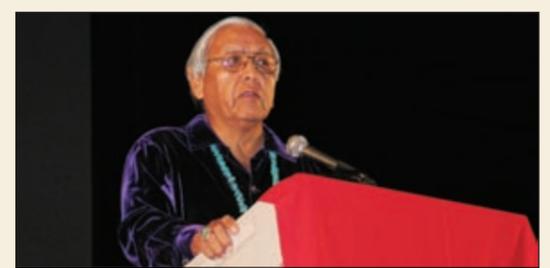
Founded in 1921, the Council on Foreign Relations is an independent national membership organization drawing together scholars, policymakers and experts in foreign relations.

Its primary goal is to offer a wide range of nonpartisan ideas to help educate policymakers, journalists,

students and interested citizens on the foreign policy choices facing the United States and other governments.

The council has 4,000 members equally divided among New York, Washington, D.C., and the rest of the nation.

Membership includes leaders in government, business, finance, media, academia and a wide range of nonprofit organizations.



Peterson Zah presented the keynote address at the National Indian Education Association annual convention.

Zah receives high honor for work with students

Peterson Zah, who has promoted Native American education during his entire career and has helped double the number of Native American students enrolled at ASU, has received a prestigious Lifetime Achievement Award from the National Indian Education Association.

Zah, former president of the Navajo Nation, has served ASU as adviser to the president on American Indian Affairs since 1995, helping with recruitment and retention of American Indian students. Since that time the ASU Native American student population has increased from 672 to 1,276.

Zah is considered to be one of the keys to the increased enrollment and retention, having helped create the Native American Achievement Program, a partnership with tribes which provides scholarships, mentoring and advising to students.

Student persistence and retention rates in the program increased from 43 percent to 78 percent. These numbers are among the highest of any major college or university in the country.

In the Spotlight

Marketing's Ostrom named Arizona Professor of Year

Amy Ostrom, an associate professor of marketing at ASU's W. P. Carey School of Business, has been named Arizona Professor of the Year by the Council for Advancement and Support of Education (CASE) and the Carnegie Foundation for the Advancement of Teaching.

Award criteria included impact on and involvement with undergraduate students; scholarly approach to teaching and learning; contributions to undergraduate education in the institution, community and profession; and support from colleagues, as well as current and former undergraduate students.

Ostrom, who serves as faculty adviser to the Honors Marketing Association, was nominated for being "an exceptional classroom educator."

Candelaria claims Outstanding Latina Cultural Award

Cordelia Candelaria, chair of ASU's Chicana and Chicano Studies Department, has been honored with the 2005 Outstanding Latina Cultural Award in Literary Arts and Publications from the

American Association of Higher Education.

This award is given to leaders working toward Latino education who have contributed significantly to the understanding of the Hispanic community and culture through literary arts, scholarship or publications.

Candelaria has contributed to the Hispanic community through various literary works, including publishing 15 books and serving as executive editor of the two volumes, *Latino Encyclopedia of Popular Culture*.

Governor's awards single out ASU innovators

The 2004 Governor's Celebration of Innovation Awards highlighted ASU researchers as some of the top innovators in the state.

ASU's Center for Cognitive Ubiquitous Computing (CUBiC) was named Innovator of the Year for Academia for its iCARE research project. The iCARE team received the award over two other finalists, both projects in the Biodesign Institute at ASU.

CUBiC's flagship project is iCARE, which is developing several projects to help

people who are visually impaired recognize text, people and environments. Sethuraman (Panch) Panchanathan, director of CUBiC and chairman of the Department of Computer Science and Engineering, accepted the award on behalf of the iCARE research team.

The other two finalists were the Center for Applied NanoBioscience, led by Frederic Zenhausern, and the Center for Single Molecule Biophysics, led by Stuart Lindsay.

Innovative social work program garners national praise

Christina Risley-Curtiss, an associate professor at ASU's School of Social Work, earned national acclaim from the Humane Society of the United States at its Sixth Annual Animals and Society Course Awards.

Risley-Curtiss developed a unique course focused on the link between domestic violence; animal, child and elder abuse; and the healing and resiliency humans can gain through positive connections with animals.

Her course was one of three national winners selected by HSUS, which recognizes academic excellence in courses that teach about the relationships between people and animals.

Professor returns to Sri Lanka in quest for tsunami clues

H.J. Fernando recently returned home to Sri Lanka, but it wasn't a heart-warming trip spent only with family.

Fernando, a professor of aerospace and mechanical engineering in ASU's Ira Fulton School of Engineering, flew back to Sri Lanka in January with a team of researchers focused on learning clues about the devastating tsunami of December 2004.

Fernando and the others on his team gathered measurements and evidence from the disaster including the maximum wave height and the inundation area in five or six of the regions most affected by

the tsunami.

Fernando, who does wave research and operates a wave simulator at ASU, is working back from that information to try and better understand exactly what happened. That information will allow the researchers to gain a better scientific understanding of the waves and to improve the predictive capabilities of tsunami warn-



H.J. Fernando

ing systems.

Fernando's group is one of two sponsored by the U.S. National Science Foundation and the Earthquake Research Institute and sent to the region.

For Fernando – who was born and raised in Sri Lanka and whose entire family still lives there – the journey back to his native land included some valuable time to be with family after one of the greatest natural disasters of our time.

The trip has also given Fernando hope that he can help provide technology that could prevent similar tragedies like this in the future.

Fulton School's Mahajan earns national academy honors

Subhash Mahajan, professor and chair of ASU's Department of Chemical and Materials Engineering in the Ira A. Fulton School of Engineering, has been elected to membership in the National Academy of Engineering, one of the most prestigious honors awarded to an engineer.

An election to the NAE represents an individual's "outstanding contributions to engineering research, practice, or education." Mahajan was selected for this honor for advancing "understanding of structure-property relationships in semiconductors, magnetic materials and materials for light-wave communication," an area in which he is internationally recognized.

His work shows how growth and processing affect the introduction of defects in materials – and, ultimately, the performance of devices employing those materials.

Mahajan's election gives the Fulton School eight NAE members, an impressive accomplishment considering the rapid growth it represents. In one year's time, the Fulton School has increased its faculty NAE membership by five members. This increase was possible because of the investment in engineering education made by Fulton and the subsequent strategic initiatives that arose for the school.



ASU engineering professor Subhash Mahajan has been honored with inclusion in the National Academy of Engineering.

Mahajan's research focuses on developing fundamental knowledge on the integration of dissimilar materials and the development of efficient systems incorporating these principles.

Leading American Indian scholar joins ASU program

Eddie F. Brown, noted researcher and administrator who has helped create American Indian policy at the highest levels, has joined ASU as director of American Indian Studies. Brown is a former assistant secretary for Indian Affairs at the U.S. Department of Interior.

Previously, Brown served as director of the Kathryn M. Buder Center for American Indian Studies, George Warren Brown School of Social Work at Washington University in St. Louis. An Arizona native, he also has held positions as executive director of the department of human services for the Tohono O'odham Nation and director of the Arizona Department of Economic Security.

The fledgling ASU American Indian Studies program already enrolls 70 majors, exceeding expectations when it



Eddie F. Brown

was approved by the Arizona Board of Regents in the Spring of 2001. Twenty students have graduated. The program also is home to *Wicazo Sa Review*, a respected journal of American Indian studies.

Architecture faculty selected as finalist for 9/11 memorial

Terry Surjan, a visiting assistant professor of architecture in ASU's College of Architecture and Environmental Design (CAED), is part of a team that has been chosen as a finalist in the Flight 93 National Memorial competition to design a permanent memorial for the people who died Sept. 11, 2001, in rural Pennsylvania.

Surjan and team member Laurel McSherry comprise one of five teams to enter Stage II of the competition chosen out of 1,011 design entries. Their competition entry is titled "Fields, Forests, Fences."

McSherry was a member of the CAED landscape architecture faculty until 2003, when she was named director of the School of Landscape Architecture at The Ohio State University.

A second finalist team with ties to ASU is headed by Frederick Steiner, past director of the School of Planning, who is the dean of the School of Architecture at the University of Texas-Austin. His team member, E. Lynn Miller, is a past adjunct faculty in landscape architecture at ASU.

The final decision on the winning concept will be announced in September, and the winning team will be invited to negotiate a contract with the National Park Service for design of the new memorial.

The Pentagon 9/11 Memorial design competition was won by ASU CAED architecture graduate Keith Kase-man. The Pentagon Memorial Fund is raising \$30 million to build and maintain the memorial.

American Academy of Nursing selects Malloch, Mattson

Nursing professors Susan Mattson and Kathy Malloch have been selected for fellowship in the American Academy of Nursing (AAN).

Since its establishment in 1973, there have been 1,500 inductions into the Academy, with 63 new Fellows being inducted this year.

The criteria for selection requires evidence of outstanding and broad contributions to nursing and health care, as well as evidence of strong potential for continuing influence on nursing practice and health policy aimed at improving the health of the American people.

Mattson, who joined the faculty in the College of Nursing in 1993, earned tenure



Susan Mattson



Kathy Malloch

in 1996 and was promoted to full professor in 2001, also is president-elect of ASU's Faculty Senate. She received a Ph.D. from Claremont Graduate University in 1987. Her research focuses on women's health,

particularly addressing the topic of domestic violence across cultures.

Malloch, a faculty associate at the College of Nursing, is president of Kathy Malloch Associates, a national health care consulting firm. Malloch has been a registered nurse for 30 years and is a nationally known writer and speaker.

Mattson and Malloch join six other ASU nursing professors in the academy.

The AAN comprises 1,500 qualified and savvy nurse leaders who are at the top of their profession, having accomplished extraordinary milestones in their nursing careers. AAN members have been identified by their peers to be the best and brightest in their nursing discipline.

ASU In The News

National Media

The biographical movie about sex researcher Alfred Kinsey has generated controversy beyond the movie pages, but some say the film can do good by promoting frank talk about sex. "Regardless of how we might feel about the controversial pioneer ... it's important to carry on, in both our public and private lives, the conversation that Kinsey initiated," says media analyst **Mary-Lou Galician**, *Editor & Publisher*, Nov. 27, 2004.

ASU researchers have found that fishermen toting store-bought salamanders as bait for fish may be unwittingly transporting a lethal disease from pond to pond. They found a virus killing salamanders is similar to one killing frogs at far-flung sites in Arizona and Canada. "Salamanders being moved around as bait are functioning like Typhoid Mary," says ecologist **Jim Collins**, *Discover Magazine*, December 2004.

The United States' budget deficit is manageable in light of the enormous size of the U.S. \$11 trillion economy, says Nobel Prize-winning economist **Edward Prescott**. "I don't see any problems with the U.S. deficit. ... It's for political reasons that people are yelling and screaming about that." *Forbes*, Dec. 7, 2004, and *Washington Times*, Dec. 9, 2004.

Problems with painkillers Vioxx and Celebrex have led to calls for reform within the Food and Drug Administration. "One group is responsible for the approval of products, and they look at whatever safety information is gathered," says Biodesign Institute researcher **David Feigal**, "then the process is handed off to a completely different group. And when that same drug comes back for new uses, it goes back to the first group. There's relatively little communication." *Wall Street Journal*, Dec. 20, 2004.

American universities face intense competition abroad for students and top faculty, as higher education undergoes rapid globalization. China and the European Union are drawing top scholars. "Baseball's World Series includes only American teams," says ASU President **Michael Crow**. "But higher education is truly a world series now, because we're competing for students and faculty against universities all over the world." *New York Times*, Dec. 21, 2004.

Black actors may find a contradiction between using their cultural background to play a part and searching for a universality that makes us all share common and recognizable traits, says theater professor **Gus Edwards** in a conversation with playwright Douglas Turner Ward. Colorblind casting may add to the dilemma. *American Theatre*, January 2005.

Leaders of charitable organizations must cultivate public relations and fundraising skills if they are to do an effective job. "You've got to be out there," says **Robert Ashcraft**, director of ASU's Center for Nonprofit Leadership and Management. "The best directors are those who put themselves into positions to meet people and tell their stories." *Chronicle of Philanthropy*, Jan. 26.

An exploding star in our solar system's infancy may have saved Earth from extinction, damaging a planet-forming disk of dust orbiting the Sun and keeping Earth from colliding with Jupiter and Saturn. "Something very bad happened to our solar system's disk in its early years," says astronomer **Steve Desch**. *USA Today*, Jan. 26.

ASU In The News

National Media

In Latino families, usually it is women who take charge of passing down their culture, from mother to daughter. "If it were not for the women, native traditions and languages would be extinct," says **Miguel Aguilera**, an expert in Mayan religion. *Latina Magazine*, February 2005.

A new study has found that states that have high-stakes exit exams have lower graduation rates and college entrance exam scores than states that don't have them. "There does seem to be a danger that you could narrow the curriculum and hurt achievement on broader tests like the SAT that measure critical thinking skills," says education professor **David Berliner**. *Education Week*, Feb. 2.

A hepatitis B vaccine grown in genetically engineered potatoes seemed to protect most people who ate them, ASU researchers reported. They hope to develop the vaccine into something that could be used in developing nations. Scientist **Charles Arntzen** said he was pleased with the success of the trial, and pleasantly surprised that the vaccine withstood the stomach's acids and enzymes. *ABC News, New Scientist, and National Geographic News*, Feb. 14.

New mineralogical information from Mars indicates that while some of the planet was wet at one time, most of the surface has been cold and dry. "There should be clays everywhere if Mars truly was warm and wet," says planetary scientist **Phil Christensen**, but there aren't. Instead, Mars seems to have been "incredibly dry and unweathered" for billions of years. *Science Magazine*, Feb. 18.

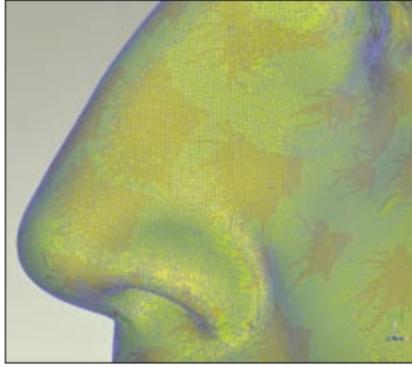
Comedy is popular in Afghanistan, a country stung by successive violent regimes. Once used as a way to cope, it now is part of a healing mechanism. "Humor is especially important in conflict and post-conflict countries, because it is a way of transcending or disengaging from the difficulties," says English professor **Don Nilsen**. "Humor is a way of inverting the power system." *Christian Science Monitor*, Feb. 23.

Business reporters rarely understand corporate finance, and finance officers have to be terrific communicators because they are expected to explain it. W. P. Carey School dean **Robert Mittelstaedt** says he has chided journalists for not making an effort to understand compensation practices. Stock options are very different from salary, for instance, but they are "reported as income, because that's what the formula says." *CFO Magazine*, March 2005.

Indian tribes seeking federal recognition are expected to provide detailed genealogical records from 1870 to 1930, an unrealistic task considering that Indians were told to assimilate, says law professor **Kevin Gover**. "Some adopted a strategy of anonymity, believing it better not to be noticed than to come to the attention of authorities. Small wonder, then, that documentary evidence of some tribes in this period is sparse." *Indian Country Today*, March 14.

Visionary dancer and choreographer Trisha Brown has pushed boldly into technological experimentation, exploring the latest wrinkles in "motion capture technology" in collaboration with ASU for the motion-e performance. **Thanassis Rikakis** says the dance works and their motion-analysis system cost \$1.8 million to develop over three years. *New York Times*, April 10 and April 13.

Researchers aim to take a closer look at George Washington – nose and all – in a first-of-its-kind project that will forensically "de-age" our nation's first president by computer modeling. The research team includes **Anshuman Razdan**, director of the Partnership for Research and Spatial Modeling (PRISM).



Nation's first president gets 'virtual makeover' in study

Most people glance daily at the familiar drab green and gray countenance of George Washington found on the U.S. dollar bill without giving a second thought to the true portrait of the man behind the image.

Now, Anshuman Razdan, director of the Partnership for Research and Spatial Modeling (PRISM) and professor in the Department of Computer Science and Engineering at ASU, will give Washington a "virtual makeover" using the science of three-dimensional computer modeling.

The end result of the project will be three new life-size figures of Washington that will be displayed in a new \$85 million Education Center expansion underway at his home in Mount Vernon, Va.

The ages of the life-size models will capture Washington as a strapping Virginian frontiersman of 19, commander of the Continental Army during the Revolutionary war at 45, and when he became our nation's first president

in April, 1789, at the age of 57.

Relying on a grant from the Mount Vernon Foundation, Razdan has assembled a team that includes Gerald Farin, professor of computer science in the Ira A. Fulton School of Engineering, ASU professor of intermedia Dan Collins, and forensic anthropologist Jeffery Schwarz of the University of Pittsburgh.

The research team will rely on a variety of three-dimensional laser scans of artifacts to create the virtual composite used to make the final figures.

Included are miscellaneous artifacts such as a life mask housed at the Morgan Library in New York, his bust at Mount Vernon by French sculptor Jean-Antoine Houdon and a life-size statue in the Virginia capitol rotunda, along with several sets of Washington's dentures, eyeglasses, clothing and shoes.

The project is believed to be the first of its kind that will forensically "de-age" an individual by computer modeling.

Motion^e performance melds art, technology

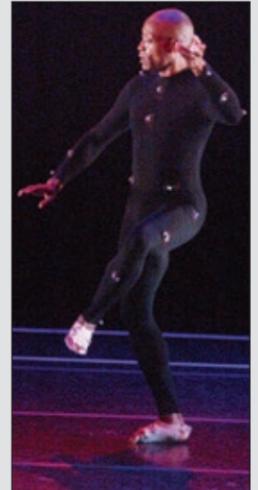
Technology's influence on everyday life is profound. Its reach extends into the arts, where computers and electronics have reshaped music making and how images are composed and made.

Now dance is heading into a digital revolution. The first public performance for motion^e took place April 9 at ASU's Galvin Playhouse on the Tempe campus. It marked the first time motion analysis has been used in choreography.

By melding dance with imagery and sound and then tying the three together through real-time electronics feedback, motion^e attempts to take dance to a new level, where the dancer influences the visuals and sound produced, and the sound and visuals affect the performance of the dancer. The result is a dance performance that is ever-changing, reflecting the dynamics of the performance and of the performer.

Using an elaborate system of sensors, cameras and computers, motion^e captures and analyzes dance choreography in real time. Visual artists and musicians manipulate the resulting information to form unique visuals and sound that immediately respond to the choreography.

At the core of motion^e is motion capture technology that allows the movement of dancers to be integrated in real time with digital graphics and sound environments to create a powerful, physical digital experience. As each dancer moves, the motion capture-and-analysis system uses those movements to select accompanying sounds and images. In this way, dancers' movements are dictating the images and the sounds that the audience sees.



By melding dance with imagery and sound and then tying the three together through real-time electronics feedback, motion^e attempts to take dance to a new level.

Mission donates collection of historic images to ASU



Images such as this one are part of the historic collection from St. Michaels Mission that was deeded to ASU Feb. 17.

More than 100 years ago, a Franciscan brother living at St. Michaels Mission on the Navajo reservation close to Window Rock, Ariz., began experimenting with the mission's oversized camera, exposing images from northern Arizona and New Mexico on 5-by-7-inch glass plates. Brother Simeon Schwemberger, born George Charles Schwemberger in Cincinnati in 1867, traveled the Navajo reservation, nearby Hopi mesas and the ancient pueblos of New Mexico for seven years, producing about 1,750 exquisite images of Native American life and landscapes.

The complete collection of photographic glass plate negatives that Schwemberger produced have been deeded to ASU for archiving, scholarly research and digital reproduction. A signing ceremony was held Feb. 17 at ASU's Hayden Library.

Sherrie Schmidt, university librarian and dean, signed the deed of gift agreement for ASU. The Rev. Meldon Hickey, president of

St. Michaels Mission and the Very Rev. Larry Dunham, provincial of Curia Juan Diego, the Franciscan administrative district for St. Michaels, signed for the mission.

The glass negatives, state of the art in the early 1900s, had been kept in reasonable – but not ideal – conditions at St. Michaels Mission. The Franciscans at St. Michaels, recognizing the necessity for a more permanent way of preserving this photographic legacy, began discussions several years ago with experts at ASU's New College of Interdisciplinary Arts and Sciences to develop a plan for storing and studying the negatives.

A plan was developed by which ASU would take possession of the glass negatives, perform careful, high-resolution scans of each one, catalog the collection and store the one-of-a-kind plates in the university's state-of-the-art archival storage facility, according to Robert Taylor, associate professor and department chair in the New College of Interdisciplinary Arts and Sciences.

In the Spotlight

'Mars Science Laboratory' project sports definite ASU influence

A number of ASU scientists are lined up to play key roles again in NASA's planned return to Mars. The mission, called the "Mars Science Laboratory," is scheduled for launch in 2009. It will have even greater capabilities than the very successful Mars Exploration Rovers, which continue to operate nearly a year after their arrival. Four of the eight instruments selected for the mission have ASU faculty on their teams.

Laurie Leshin, the Dee and John Whiteman Dean's Distinguished Professor and director of ASU's Center for Meteorite Studies, was selected to be on two of the science teams – the Alpha-Particle-X-ray-Spectrometer (APXS) provided by the Canadian Space Agency, and the

Sample Analysis at Mars (SAM), an integrated suite consisting of a gas chromatograph mass spectrometer and a tunable laser spectrometer built by NASA's Goddard Space Flight Center. Leshin is a sub-team leader on the latter, in charge of light element chemistry.

Michelle Minitti, a faculty associate at the Center for Meteorite Studies, is on the science team for the Mars Handlens Imager (MAHLI) a powerful microscopic imager built by Malin Space Science Systems, and directed by ASU alumnus Kenneth Edgett.

Jack Farmer, director of ASU's astrobiology program and a professor of geological sciences, is a member of the science team for CheMin, which is described as "an X-ray Diffraction/X-ray Fluorescence instrument for definitive mineralogical analysis," being built by NASA's Ames

Research Center.

'Time machine' aims to re-create past to map possible futures

A new, multidisciplinary research project at ASU aims to use input from the distant past to look far into the future.

The project, funded by a five-year, \$1.5 million grant from the National Science Foundation, aims to create a set of computer models for socioecology – the long-term interaction of human land use and ecology – based on areas that have been occupied by humans for millennia in the eastern and western Mediterranean.

The project aims to create a model that captures the complex interplay between specific human actions and landscape changes.

University targets humanities, social science

ASU is developing a pair of new institutes designed to develop world-class research in the social sciences and humanities. The university has launched the Institute for Social Science Research and the Institute for Humanities Research in the College of Liberal Arts and Sciences.

The Institute for Social Science Research (ISSR) is designed to facilitate leading-edge thinking by the faculty and to foster new transdisciplinary collaborations. It also will help ASU's social science research expertise

become more accessible to the community.

One of the goals of the institute is to serve as an umbrella organization, along the lines of the "small business incubator" model, for a number of promising research projects and centers. The institute provides these projects with initial organizational support, start up space, funding and assistance in finding appropriate funding sources.

The Institute for Humanities Research (IHR) is designed to support and develop

world-class research activity in the humanities and to create active research connections between humanities scholarship and scholarship and research in other disciplines.

The IHR will increase the profile and involvement of humanities research through a range of newly funded programs. Prominent among these is the IHR Fellows Program, which is designed to support collaborative research among scholars, both at ASU and around the world.

ASU researcher finds why parrots' heads are red

Parrots, long a favorite pet animal, are attractive to owners because of their vibrant colors. But those colors may mean more to parrots than what meets the eye.

For more than a century, biochemists have known that parrots use an unusual set of pigments to produce their rainbow of plumage colors, but their biochemical identity has remained elusive. Now, an ASU researcher has uncovered the chemistry behind the colors of parrots, describing on a molecular level what is responsible for their bright red feathers.

The work casts a new light on what is chemically responsible for the colors of birds, and the findings defy previous assumptions and explanations for color variations in parrots, says Kevin McGraw, an assistant professor in ASU's School of Life Sciences.

The researchers used a chemical analysis technique to survey the pigments present in red parrot feathers. The researchers collected and analyzed samples from 44 parrot species that have red feathers. They found a suite of five molecules, called polynal lipochromes (or psittacofulvins), that color parrot plumage red in all of the species studied.

"We've uncovered a system where all red parrots use the same set of molecules to color themselves," McGraw says. "It is a unique pigment found nowhere else in the world. We are fascinated at how parrots are able to do this."



Details of ASU assistant professor Kevin McGraw's work are in a paper, "Distribution of unique red feather pigments in parrots," by McGraw and Mary Nogare, a parrot fancier from Snoqualmie, Wash. Their findings were published in the Feb. 16 issue of the journal *Biology Letters*.

Education projects reap \$33 million in funding grants

ASU accumulated \$33 million in education research funding during the fall semester.

The grants exemplify a deep spirit of cooperation in Arizona's education community, as they involve active partnerships and intense collaboration between ASU and other state educational institutions. The projects also point to ASU's commitment to improve quality of life in Arizona.

The grants include:

- \$12.5 million from the National Science Foundation (NSF) for a pilot program to improve math and science teaching skills by delivering tuition-free advanced teacher training.
- \$4.4 million from the NSF to bolster the recruitment, preparation and retention of teachers in science, technology, engineering and mathematics.
- \$1.4 million from the NSF for a three-year project to better understand what is involved in children learning math.
- \$10 million from the U.S. Department of Education to create a Professional Development School to recruit, train and place new teachers in high-poverty urban and remote rural school districts.
- \$2.5 million from the DOE to develop a program to encourage early reading by preschool children.
- \$2.5 million from the National Institutes of Health for research to find factors predicting early education success.



Marilyn Carlson, right, director of the Center for Research on Education in Science, Mathematics, Engineering and Technology (CRESMET), will lead two teacher education projects with \$17 million in funding.

Scientists track birth of 'designer ecosystem' amid Phoenix growth

When ASU's Central Arizona-Phoenix Long Term Ecological Research Project (CAP LTER) was funded by the National Science Foundation in 1997, more than 50 scientists signed on to do the multidisciplinary research, knowing they were embarking on something unusual: the first long-term ecological study of "a human-dominated ecosystem" – in other words, a city.

Seven years later, the first phase of the research has been completed, and the NSF has renewed the project with a second grant of \$4.9 million for six more years of study, indicating the agency's satisfaction with the researchers' accomplishments.

The project scientists increasingly are convinced that they are looking at a new kind of ecosystem – one that is radically different from the native desert that surrounds it and driven in part by forces unlike those usually studied by ecologists.

"It's not what people generally think. They think there's either nature or there are cities," says Charles Redman, director of ASU's Center for Environmental Studies and one of the project's principal investigators. "That's what this is all about – there is nature in the city. The city is part of nature."

Sacrificial burial deepens Teotihuacan mystery

A spectacular new discovery from an ongoing excavation at Teotihuacan's Pyramid of the Moon has revealed a grisly sacrificial burial from a period when the ancient metropolis was at its peak, with artwork unlike any seen before in Mesoamerica.

Though archaeologists hope that discoveries at the pyramid located outside of Mexico City will answer lingering questions about the distinctive culture that built the great city, the new find deepens the mystery, with clear cultural connections to other burials found at the site – but with some markedly new elements.

With the excavation of the pyramid nearly complete, one important conclusion is emerging: combined with past burials at the site, the

new find strongly suggests that the Pyramid of the Moon was significant to the Teotihuacano people as a site for celebrating state power through ceremony and sacrifice. Contrary to some past interpretation, militarism apparently was central to the city's culture.

Teotihuacan, the 2,000-year-old, master-planned metropolis that was the first great city of the Western Hemisphere, has long perplexed Mesoamerican archaeologists. Located 25 miles north of Mexico City, this ancient civilization left behind signs of a unique culture amid the ruins of a city grid covering eight square miles. But even the Aztecs, who gave the city its present name, did not know who built it. They called the monumental ruins "the City of the Gods."

The Pyramid of the Moon is one of the site's oldest structures, and has long been suspected to be its ceremonial center.

In the continuing excavation of the pyramid, led by Saburo Sugiyama, professor at Aichi Prefectural University in Japan and research professor at ASU, and Ruben Cabrera of Mexico's National Institute of Anthropology and History, the team has found a fifth tomb, this time at the center of the fifth of the pyramid's seven stages of construction. This phase of the excavation has been supported by the Japan Society for the Promotion of Science and the National Geographic Society. ASU manages an archaeological research center at the site.

ASU In The News

International Media

The ancient city of Teotihuacan in Mexico was long thought a relatively gentle place. But a tomb excavation has uncovered the bones of 12 adult males, 10 of them decapitated – and all apparently offered up to the gods. "There may be still some people who cling to the vision of Teotihuacan as a peaceful place, but I think the evidence now is overwhelming," says archaeologist **George Cowgill**. *The Guardian, UK, Dec. 6, 2004.*

The world has seen a sharp increase in natural disasters such as earthquakes, floods and volcanic eruptions. But the calamities are becoming greater because of where and how people live, says **Daniel Sarewitz**, professor of science and society. Because of new technology and poverty, people are living in flood plains and deserts, on steep slopes and fault lines. *International Herald Tribune, Jan. 3.*

North American manufacturing is not doomed, as many have predicted, but can prosper by becoming more efficient and focusing on value-added production. "I see manufacturing jobs coming back to the United States and Canada," says **Dan Shunk**, director of the MBA technical program. "Raw materials can only take you so far." *Toronto Star, Feb. 8.*

Valentine's Day, despite its marketing as a romantic holiday, might bring about the demise of romantic relationships, an ASU study found. Couples were five-and-a-half times more likely to break up close to Valentine's Day than in September, November or April. "Valentine's Day may be less beneficial to relationships than those who market cards, flowers, chocolates and jewelry would have one believe," says psychologist **Steven Neuberg**. *Daily Mail, UK, Feb. 14.*

The world may run out of effective antibiotics by the end of this decade and faces a gap of at least five years before new drugs can be developed to combat superbugs. "Most governments are asleep at the switch," says **George Poste**. "We are facing a relentless increase in antibiotic resistance. If we think we have problems today, the problems at the end of the decade will be that much more dramatic." *The Telegraph, UK, March 2.*

Eastern Media

Though psychologists counsel the benefits of forgiveness, law professor **Jeffrie Murphy** says it's not for everyone. "It's valid to want the person who wronged you to suffer punishment. Very often, all it takes is for a person to be properly punished by a court of law." *Delaware News Journal, Sept. 15, 2004.*

The city of Boston changed the route of the victory parade for the World Series champion Red Sox after police and crowd control specialists predicted 3.6 million people would show up to greet the team. Such estimates are notoriously inaccurate, fueled by poor methodology and wishful thinking, says journalism professor **Stephen Doig**, who has analyzed crowd-counting techniques. "It seems extraordinarily unlikely, generous to a fault." *Boston Globe, Oct. 30, 2004.*

Exercise has an immediate and long-term effect in reducing anxiety, says kinesologist **Dan Landers**. It has been found to be just as effective in reducing panic attacks as selective serotonin reuptake inhibitor drugs. There also is evidence that exercise increases levels of a brain chemical that enhances mood and intellectual functioning. *Boston Globe, Jan. 11 and Baltimore Sun, Jan. 21.*

ASU In The News

Eastern Media

ASU scientists in the Goldwater lab are looking at ways to trap greenhouse gases to reduce global warming. "What we're trying to do is take what nature does over 100,000 years and do it in less than an hour," says **Michael McKelvy**. "A lot will depend on the next few years," says **Andrew Chizmeshya**. *Washington Post*, Feb. 22.

The desert in northwestern Arizona could become America's next great bedroom community, as Las Vegas development spills over its borders. "Thirty years ago, if you had said there will be this huge growth out here, people would have laughed their heads off," says policy researcher **Rob Melnick**. *Washington Post*, March 26.

South/Southeastern

Despite the arguments that year-round schools promote academic excellence, 41 percent of the schools that have tried it abandoned it. "These arguments often rely on data drawn from lab experiments, where subjects memorize nonsense syllables or perform other non-meaningful tasks," education professor **Gene Glass** says. *Atlanta Journal-Constitution*, Sept. 7, 2004.

Economists say U.S. economic recovery will take time and depend on several factors: the November election, the war in Iraq, oil prices and interest rates. "There's a whole bunch of uncertainties, and uncertainty is very bad for economic growth," said research economist **Dawn McLaren**. *Miami Herald*, Sept. 14, 2004.

Some of the biggest advocates of anti-immigrant ballot propositions cropping up in several states are those whose family members crossed the border most recently. "They don't realize their own past," says sociologist **Cecilia Menjivar**. "They think that their ancestors worked hard but that current immigrants don't." *Houston Chronicle*, Nov. 23, 2004.

Midwestern Media

Big campaign spending doesn't translate to victory on moral issues. "When you get an overpowering kind of interest and juxtapose that with something people inherently feel strongly about, money can't overpower that when it's really gut issues," says **Ruth Jones**, political scientist. *Kansas City Star*, Aug. 16, 2004.

Online ticket reselling has flourished in the past five years, as fans turned from scalpers and looked for an easier and safer way to buy tickets. "There's a lot more reselling of tickets today than ever," says economist **Stephen Hoppel**, who studies the ticket market and estimates that 30 percent of tickets bought the traditional way are resold online. *Chicago Tribune*, Oct. 11, 2004.

Nearly 4 billion-year-old rocks from Greenland may hold the earliest evidence of life on Earth, scientists say. Geologist **Ariel Anbar** says the finding of sediment boosts the argument there are signs of microbial life. The results seem to show the rocks were at the bottom of an ocean rather than formed from lava, and they contain relatively high oxygen levels. *Chicago Sun-Times*, Dec. 17, 2004.

When the CIA wanted cutting-edge technology to sort maps, printed material and handwritten notes, it turned to computer scientist **Anshuman Razdan** and his graduate students. The group developed a way of separating out print-only documents by using three-dimensional technology. "The fundamental problem has been that 80 percent of documents are of mixed quality," Razdan says. "Rarely do you get nice, clean printed documents." *Cincinnati Enquirer*, Feb. 16.

Institute vaults ASU into sustainability elite

ASU has created the International Institute for Sustainability to deal with global and regional ecological, economic and societal issues in an effort to ensure that humans maintain a sustainable quality of life on Earth.

The Institute is being launched with a founding gift of \$15 million from Julie Ann Wrigley, a philanthropist and member of the ASU Foundation board of directors and co-chair of the Foundation's Women and Philanthropy pro-

gram.

Expected to quickly join Harvard, Columbia, Stanford and a handful of other institutions around the world as a leader in the important and emerging field of sustainability, the institute is slated to develop

into a degree-granting school within two years. It would make ASU the first university in the world with a school fully dedicated to research, education and solutions to real-world problems in sustaining life on Earth.

College engages emeritus faculty

ASU is forming the Emeritus College, an organization that will provide a home and focus for the continued intellectual, creative and social engagement of more than 800 retired or soon-to-retire faculty members.

The college will be a generous volunteer effort on behalf of ASU's emeritus faculty. Emeritus College faculty will serve in a number of ways, including mentoring students and junior faculty; providing additional teaching resources; overseeing collections and archives; offering public lectures and performances; and providing an organized source of expert consultants.

Many of the college's functions will be offered by centers designed to bring together faculty from diverse academic backgrounds who have common interests in issues, research or creative activity. These centers include the Center for Mentoring, the Center for Issues in K-12 Education, the Center for Innovation in Teaching, the Center for ASU History and Tradition, and the Center for Emeritus Writing.

ASU, Army building a flexible future

In a major effort to revolutionize on-field command and information exchange that will also lead to unlimited consumer applications, the U.S. Army and ASU have established the Flexible Display Center.

The FDC, based at the ASU Research Park in Tempe, brings together academia, industry and gov-

ernment to develop what in essence will be revolutionary information portals – devices that are small, lightweight, rugged and consume very little

power. The center will accelerate research, development and the manufacture of flexible display technologies, which will speed commercialization. The Army will use the technology developed in the center to accelerate the pace of Army transformation, which cannot be achieved with existing glass-based displays.



College offers first biotech law degree

The ASU College of Law will offer the nation's first advanced legal degree in biotechnology and genomics starting in the fall of 2005 as part of the school's plan to develop a number of advanced degrees for lawyers and non-lawyers.

The college will award a Master of Laws, or LLM, in biotechnology and genomics to lawyers who complete a new course of study in the field. The curriculum will address

legal issues arising from the increasing use of genetics in legal contexts, which range from forensic criminal investigations to new gene-based medical therapy to genetically modified foods.

The new program is headed by Professor Gary Marchant, executive director of the College's Center for Law, Science and Technology, the oldest such center in the United States.

Biodesign Institute brings world-class labs to ASU

When the Biodesign Institute opened the doors of its first new building in December 2004, it marked a significant milestone for ASU. By adding some of the most advanced research laboratories in the nation, it signified a major step toward fulfilling President Michael Crow's vision for ASU becoming a New American University.

The 170,000-square-foot building, the first of four that will make up the Biodesign Institute, is now home to 285 researchers and eight of the institute's initial 10 centers. The building itself is sleek-looking, and the labs incorporate the latest innovations in design and functionality to promote scientific inquiry and collaboration.

The institute serves as a major draw for some of the world's top researchers. Among the newest additions to ASU:

- Bruce Rittmann, a professor of civil and environmental engineering and a fellow of the National Academy of Science, joined the university and the institute to build the new Center for Environmental Biotechnology at the Biodesign Institute.
- Roy Curtiss, also a National Academy member joined ASU to co-direct the Center for Infectious Diseases and Vaccinology.
- Stephen Johnston, a pre-eminent scientist whose work spans a broad range of genetic and medical research, has been



The new Biodesign Institute building brings world-class research labs to ASU.

recruited to head a new Center for Innovations in Medicine within the Biodesign Institute at ASU.

World renowned researcher George Poste, director of the institute, has also received multiple accolades since joining ASU. In October 2004, Poste was named Scientist of the Year by *R & D Magazine*, a national research publication.

This spring, Poste was named Bioscience Leader of the Year by the Arizona BioIndustry Association.

Research to develop new HIV/AIDS prevention drugs

Biodesign Institute researchers have been tapped to lead development of plant-derived topical medications that would prevent HIV/AIDS and other sexually-transmitted diseases. A \$7.4 million grant from the National Institutes of Health will fund a collaborative research center headed by Charles Arntzen, who co-directs the Biodesign Institute's Center for Infectious Diseases and Vaccinology.

The research will focus on developing microbicides, medications that would kill or block sexually-transmitted viruses at the point of contact and could be formulated as gels, creams or

time-released applications.

Scientists develop biomolecular 'roadmap'

A team of scientists led by biophysicist Stuart Lindsay has created the first reproducible single molecule negative differential resistor – and in the process has developed a groundbreaking experimental technique that provides a "roadmap" for designing single-molecule devices based on biochemistry.

Lindsay's team reports achieving an experimental result that physicists have been trying to detect for a long time: negative differential resistance in a single molecule attached to electrodes. The specifically designed molecule

belongs to a group of molecules that biochemists believe to be capable of being molecular switches but that have failed to exhibit those properties in conductance experiments.

Water fuels hydrogen energy research

Biodesign Institute researchers have received a \$1.5 million grant from the U.S. Department of Energy to explore innovative methods for generating hydrogen.

Neal Woodbury, director of the Center for BioOptical Nanotechnology at the Biodesign Institute, says the research will explore new ways to efficiently convert water into hydrogen.

ASU enrollment surges past 58,000 mark

Freshman 2004 class boasts record number of scholars

ASU's largest freshman class in history – 7,719 first-time freshmen – also included a record number of scholars.

There were 69 National Hispanic Scholars in the fall 2004 incoming class, an impressive 72 percent increase over last fall. The National Merit and National Hispanic scholarship winners represent approximately the top one-half of 1 percent of the year's graduating high school seniors.

The incoming class of 2004 had 162 freshman National Merit Scholars, and a record 482 National Merit Scholars were enrolled at the university overall.

Enrollment at ASU continued to rise in the fall of 2004, reaching a record 58,156 at all campuses, more than 600 students over last year's 57,543 enrollment.

As planned, the growth primarily occurred at the East and West campuses, with the Tempe campus remaining relatively stable.

Programs at ASU's East campus, with its polytechnic focus, are in high demand. The campus registered a 12 percent increase in enrollment, for a total of 3,983 students.

ASU's West campus also is experiencing record growth, with enrollment increasing 3.4 percent to 7,348 students. Formerly an upper-division campus, the northwestern Valley location began enrolling freshmen three years ago and now has 1,383 freshmen and sophomores.

The Tempe campus grew slightly to

49,171, just 270 more than last fall. This reflects ASU's focus on managing growth by attracting students to the other campuses, concentrating on maintaining quality and services on all ASU campuses.

More students than ever before are enrolled full time, continuing a trend toward full-time enrollment that has grown for several years.

Though the university established earlier priority application deadlines and tuition increased over last year, the student body is larger than ever before and the demand for a higher education continues to rise.

"The demand for an ASU degree continues, and we are managing the growth in a manner that ensures the highest standards of quality," says James Rund, vice president for university undergraduate initiatives.

From left, football players Randy Hill, Chaz White, Lamar Baker (standing) and Kyle Caldwell were part of the Scholar Ballers program.

TIM TRUMBLE PHOTO



Football team program emphasizes academics

When the ASU Sun Devils began the 2004 football season, 29 student-athletes took to the gridiron wearing a special logo signifying their commitment to victory in a not-so-readily recognized game: academics.

The players are part of the "Scholar Baller" program, designed to reward football players for strong academic efforts in the classroom. Among the rewards, players who achieved a 3.0 grade point average in the previous academic year will wear a Scholar Baller patch on their jerseys. The "Thinkman" logo will be highly visible on the left front of the jersey from the stands, or by the audience at home during televised games.

"There are lots of ways by which athletes are recognized for their athletic accomplishments, but there are very few that recognize academics," says Jean Boyd, assistant athletic director for student-athlete development. "To my knowledge, there has not been an institution that has recognized academic achievement on a jersey. The players are really excited about it."

The Scholar Baller paradigm is a mentality – and an incentive program to support the university's regular academic efforts. All incoming football players are screened academically and monitored throughout the semester. There are mandatory tutoring sessions for some, and study halls and regular meetings with academic advisers for all. Those considered at-risk are placed in additional programs to aid them academically.

Scholar Baller builds on conventional efforts, creating an atmosphere of success, positive peer pressure and academic competition. Boyd says every member on the team understands the concept of a "baller" – an urban or hip-hop term for a top performer or outstanding athlete. Boyd has challenged the team with the idea of being more than just a baller, but a Scholar Baller, or a top academic performer.

ASU students claim Goldwater, Udall scholarships

ASU continues to cut a wide swath in the world of prestigious national scholarships, with the news that two students won a Goldwater Scholarship and a Udall Scholarship.

Jason Rugolo of Scottsdale, a junior in physics who is doing research on nanoporous metals in a mechanical engineering lab, garnered a Goldwater Scholarship, the nation's highest award for undergraduates who are planning careers in scientific research. The \$7,500 award is given on academic merit and the extent and sophistication of the student's undergraduate research.

Taylor Jackson, a junior in biology and society who came to ASU as a National Merit Scholar from Hattiesburg, Miss., has been named a Udall Scholar for his service and research in the area of environmental policy.

Jackson, the founder of Students for Environmental Action at ASU, will receive a \$5,000 award.

An impressive 28 ASU students have won Goldwater Scholarships over the past 12 years, putting ASU in the top 20 universities in the nation. ASU also is in the top 10 universities for Udall Scholarships. ASU students have won 15 Udalls since the award was established in 1995.

Rugolo and Jackson are enrolled in the Barrett Honors College and the College of Liberal Arts and Sciences. Two students also received honorable mentions: Kayvon Daie of Fountain Hills for the Goldwater and Aaron Begay of San Carlos, Ariz., for the Udall.



Jason Rugolo



Taylor Jackson

ASU In The News

Midwestern Media

Researchers are beginning to measure how money problems can make people sick, leading to headaches, nausea and inability to concentrate. The consequences also can devastate families. "Economic distress in the family does impact children's health and well-being," says psychologist **Irwin Sandler**. "Parents are stressed, demoralized and depressed, and this leads to difficulty in parenting." *Chicago Tribune, Feb. 20.*

ASU researchers have found that vitamin C can help ease allergy and asthma symptoms and boost energy. Nutritionist **Carol Johnston** has conducted studies showing that the vitamin can lower levels of histamines in our blood, and that a vitamin C deficiency can lower levels of a substance that helps burn fat for energy. Women exercisers on treadmill tests "felt better and were more energetic" after taking extra vitamin C. *Chicago Tribune, March 9.*

Western Media

The Internet has given consumers a huge voice in product marketing, allowing customers to start fanzines that whip up public buzz but also allowing them to bash a product they are unhappy with. "It's the first time mass media has been accessible to the average consumer," said marketing professor **James Ward**. *Seattle Post-Intelligencer, Sept. 7, 2004.*

Fueled by workplace pressures and technology, more people are trying to do multiple tasks at once, but research shows our brains aren't equipped for this much activity. "Hypertasking is excessiveness," says **Patricia Arredondo**, professor of psychology in education. "It's overload in the sense of having your brain trying to respond to a number of stimuli at the same time, and that can really start to cost you." *The Olympian, Oct. 10, 2004.*

Global warming probably is becoming the leading cause of huge wildfires, says fire expert **Stephen Pyne**. Instead of debating over thinning forests and suppressing fires, forest managers should deal with the health of the entire globe. "We can't cut our way out of the problem, we can't burn our way out. We can't suppress and we can't walk away." *Seattle Times and Salt Lake Tribune, Nov. 19, 2004.*

Arizona biologists are checking the diversity of fish in the Lower Salt River and reservoir lakes, because changes in the proliferation of nonnative species could threaten the future survival of native Salt River fish. "We have to figure out a balance," says ichthyologist **Paul Marsh**. "There's a very clear conflict between sport fish and native fish, and it's not yet resolved." *Los Angeles Times and Newsday, Jan. 11.*

Rather than importing foreign scientists and engineers, the U.S. should do more to grow their own. "No matter how much foreign talent we import, for our country's health and well-being we need a large number of U.S. nationals to get involved in the mathematical sciences," says mathematician **Carlos Castillo-Chavez**. *San Francisco Chronicle, Jan. 16.*

Well-located affordable housing does more than provide a way for people to live close to where they work, it also provides economic benefits to cities, says architect **Michael Pyatok**, director of ASU's Stardust Center. "For the Phoenix area, an estimate said if renters pay 35 percent of their income on rent instead of 30 percent, that 5 percent difference equates to \$150 million not being spent elsewhere in the economy." *Rocky Mountain News, Feb. 9.*

In the Spotlight

Grant paves path to investigate doctoral degree completion rate

ASU's Division of Graduate Studies (DGS) was awarded a grant to study how to increase doctoral degree completion rates, including those of minorities and women in fields where they have been traditionally underrepresented or experience disproportionately high attrition.

The university is one of 21 institutions selected from a highly competitive pool to participate as a research partner in the Ph.D. Completion Project led by the Council of Graduate Schools, the only national association dedicated to representing and advancing graduate education. The three-year project, supported by funding from Pfizer Inc. and the Ford Foundation, is designed to address attrition issues in the areas of the sciences, engineering, and mathematics, as well as the humanities and social science disciplines.

ASU ranks No. 4 in universities for freshman Merit Scholars

ASU is again one of the top universities in the nation for the number of freshman National Merit Scholars enrolled this year. ASU ranks fourth among public universities and 12th overall, according to a report just released. ASU enrolled 162 National Merit Scholars in the fall 2004 freshman class.

The annual report by the National Merit Scholarship Corp. listed 375 public and private institutions that enrolled 8,258 scholars last fall.

National Merit Scholars represent the top one-half of 1 percent of all high school students who take the Preliminary SAT.

For the past five years, ASU has ranked among the top 20 universities in the country.

Graduate student heads to U.N. to work on global warming study

This spring, ASU graduate student Tracy Johns began working for the United Nations in implementing the Kyoto Protocol, in essence, getting the opportunity to help develop international policy to curb global warming.

Johns, a master's student in biology in the School of Life Sciences (SoLS), was awarded a six-month internship at the United Nations Framework Convention on Climate Change (UNFCCC) in Bonn, Germany, which is the organization that administers the Kyoto Protocol. The 1997 treaty sets guidelines for industrial nations to reduce emissions of greenhouse gases, which trap heat in the earth's atmosphere. According to some in the scientific community, the gases have caused temperatures to rise and eventually will lead to more frequent extreme weather events.

Financial aid program boosts access to ASU for needy Arizonans

To help build a university of the highest academic rank that also is accessible, ASU has launched a series of new initiatives called "Access ASU."

The cornerstone of the first initiative is a new financial aid program for low-income Arizona high school seniors, which covers all costs directly related to obtaining an undergraduate degree.

The program, "ASU Advantage," is targeted to Arizona families whose total annual family income is \$18,850 or less. Through a combination of financial aid resources that do not

require repayment, ASU will cover the annual cost of tuition, fees, books, room and board for eight semesters of full-time enrollment. ASU officials believe this program is the only one of its kind in the West.

While ASU Advantage is targeted at students who have significant financial need, the university is committed to supporting Arizona families from a wide range of income levels. ASU has increased institutional grant aid by 157 percent since 2002. This additional aid, combined with ASU's tradition of generous scholarship support, resulted in the highest

amount of gift aid ASU has ever offered to Arizona residents. In 2003 – 04, nearly 11,600 Arizona undergraduates received more than \$34 million in ASU grant and scholarship aid; nearly \$24 million was awarded to students who demonstrated financial need.

This year, eligible Arizona undergraduate students with an annual family income of \$20,000 to \$50,000 received, on average, \$2,200 in grant support.

For more details, visit the Web site (www.asu.edu/fa/advantage).

ASU, Mayo Clinic forge new educational ties

ASU and Mayo Clinic, Scottsdale, Ariz., have joined forces on several new and exciting collaborations in medical research and education.

The new collaborations include the potential development of joint education programs involving law, business and nursing; setting up a joint seed-fund program to pursue cutting-edge research and technology; collaborative research in bioinformatics and bioengineering; and shared office space on each campus.

The collaborations draw from the major strengths of each organization — ASU's recognized leadership in basic research and its advanced programs in biodesign and biotechnology, and Mayo's extensive clinical experience, medical education programs and its integration of research spanning basic science, laboratory based clinical investigation, clinical trials and population sciences.

One of the major manifestations of the partnership is an agreement to collaborate on a new joint nursing program based at Mayo Clinic Hospital in northeast Phoenix.

Nursing students will receive their didactic and clinical training using the College of Nursing curriculum taught by faculty composed of master's level registered nurses from Mayo Clinic in classroom and laboratory learning space at Mayo Clinic Hospital.

The ASU – Mayo Clinic campus is scheduled to begin classes with 20 student nurses in August 2005.



Presidential Debate draws global spotlight to ASU

More than 2,500 local, national, and international media left ASU with a positive and lasting impression following their experience covering the final 2004 presidential debate Oct. 13 at Gammage Auditorium.

"This opportunity has shown the world that ASU is a competitive university of the highest caliber," said ASU President Michael Crow.

Seats for the debate were limited, but attending in person became an unexpected reality for many. About 250 lucky ASU students had their names drawn in a lottery that attracted more than 15,000 applica-

tions. All of the lottery-winning students ended up getting a ticket to the event. In all, about 1,000 seats opened up following the final security walk through of Gammage.

The 32,000-sq.-ft. Media Filing Center, which was constructed on the Gammage parking lot, was a veritable who's who of celebrity journalists and pundits. Some sightings included the Reverend Jesse Jackson, Michael J. Fox, Walter Cronkite, Andrea Mitchell, Tom Brokaw, Brian Williams, Candy Crowley, Greta Van Susteren, Judy Woodruff, Sean Hannity and Alan Colmes.

Report shows public funds for science benefit state economy

University-based research activities in biodesign, nanotechnology, information science, materials science and advanced manufacturing benefited Arizona's knowledge economy from 2002 through 2004, according to a study by the Morrison Institute for Public Policy, a unit of ASU.

The Morrison Institute's 19-page report, "New Returns on Investment in the Knowledge Economy: Proposition 301 at Arizona State University; Three-Year Aggregate Report, FY 2002 – FY 2004," analyzes results from ASU's three years of science and technology research under voter-approved Proposition 301 funding. It shows that the research activities attracted new federal and private funding, in addition to producing highly skilled workers, new products and spinoff companies.

Among ASU's Proposition 301 accomplishments for the three years are: a \$47.7 million increase in external funding attracted by research projects; \$3.7 million in revenue from newly developed products and new company startups; 26 new courses developed in biotechnology, nanotechnology and information science; 100 newly degreed graduate students and 43 post-doctoral students trained in science and technology added to the work force; 46 new patents approved, 10 new companies launched and 13 new products in the marketplace; 64 new tenure track and research faculty recruited; 41 new research collaborations initiated with industry partners and national labs; and an internationally recognized research, development and business leader hired to direct the Biodesign Institute.

The flagship for ASU's Proposition 301-supported research investments is the Biodesign Institute at ASU, which oversees interdisciplinary biomedical research centers that investigate new ideas for improving human health and quality of life. The Biodesign Institute also links ASU to other biomedical research facilities in the Phoenix area, including the Translational Genomics Research Institute (TGen), Barrow Neurological Institute and Mayo Clinic.

Cottage becomes home to writer's house

After nearly a hundred years of history, the former "President's Cottage" has a new and exciting role to play as the Virginia G. Piper Writer's House.

The building, built in 1907 and listed on the National Register of Historic Places, has been restored to serve as a home once again – this time to ASU's Virginia G. Piper Center for Creative Writing.

The renovated two-story structure contains a host of facilities for ASU and community writers, including classrooms; a traditional "writers workshop" seminar room; an "outdoor classroom" built into the garden landscaping design behind the facility; a large reading room with a fireplace and comfortable

lounge chairs, and a writers' library. In addition to key reference materials for writers, the facility will house the area's largest collection of contemporary literary magazines – a critical resource for writers interested in publishing.

The Piper Writer's House also will serve as the headquarters for Virginia G. Piper Center for Creative Writing and the myriad of programs the Center sponsors in the community.

The center's activities will continue to extend well beyond the Piper Writer's House, with a wide range of educational and outreach activities being planned at a variety of other venues in collaboration with other Valley education and cultural institutions.



The Americas Gallery features artwork from North America, Central America and South America, grouped by three themes: faces, work and space/place.

Retooled Americas Gallery breaks traditional art barriers

For years, the ASU Art Museum's gallery of American artwork was just like that of many other museums. Audiences liked the permanent exhibition of relevant American artists and movements, but they wanted works presented in a more dynamic way.

Now, the ASU Art Museum has broken down the barriers between the United States and Latin America and reinstalled its former American Gallery as the new Americas Gallery. In November, the *Arizona Republic* named the museum "the best home to Latin-American art."

"Given the importance of Arizona's geographic position on the border and the growing presence of people of Latin-American heritage in this area, it

was time for us to begin the discussion of art and art history in light of the confluence of two cultures," says Marilyn Zeitlin, museum director and chief curator.

The Americas Gallery features artwork from North America, Central America and South America, grouped by three themes: faces, work and space/place. This shift replaces the standard chronological installation with topics addressed in works from all of the Americas.

The diversity of art forms creates interactions among works of art, suggesting new affinities between contemporary and historic; painting and video; Latin-American and North American artists.