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## Pedroia wins AL MVP

Former Sun Devil and current Boston Red Sox second baseman Dustin Pedroia has been named the 2008 American League Most Valuable Player, the Baseball Writers Association of America announced Nov. 18.

Pedroia held a press conference at ASU's Winkles Field-Packard Stadium at Brock Ballpark in Tempe to discuss the honor.

Pedroia received 16 of the 28 first-place votes in balloting conducted by two writers from each of the 14 American League cities. The 25-year-old was a powerhouse for the Boston club in the 2008 season, batting .326 with 17 home runs and 83 RBI in 157 games. He also led the majors with 54 doubles, tied for first with 213 hits, and ranked second with 118 runs and 61 multi-hit games, both American League highs.

"I'm definitely excited," Pedroia says. "It was a tremendous year. Just to be considered with the five or six guys that I'd heard could win this award, it's definitely an honor. With (Kevin) Youk(ilis), (Justin) Morneau, (Joe) Mauer, there are so many guys, and to win this award is a huge accomplishment."

While at ASU, Pedroia was integral in three of the best seasons in Arizona State baseball history, finishing his college career with a .384 batting average while starting all 185 games of his tenure with the team.

## Ranking high

ASU secured the second-largest amount of federal funding for chemical engineering in fiscal year 2006, according to the National Science Foundation (NSF).

Only the Massachusetts Institute of Technology earned more federal funding for chemical engineering than ASU in fiscal year 2006, the most recent year for which data are available, according to the NSF.

MIT was awarded \$13.2 million and ASU was awarded \$8.9 million. Penn State, Johns Hopkins and the University of Michigan rounded out the top five in chemical engineering federal funding.

This was the second year in a row in which ASU came in second in federal funding of chemical engineering research and development.

ASU ranked sixth in overall spending on chemical engineering research and development (federal, state and private funding combined) with \$12.7 million in fiscal year 2006. MIT was at the top of the list with \$18.9 million. North Carolina State, Penn State, Georgia Tech and the University of Texas-Austin filled the second through fifth spots.

ASU's total research expenditures for fiscal year 2006 were \$203.5 million. For its most recent year, fiscal year 2008, ASU research expenditures were nearly \$238 million.

## Study: Arizona growth strains state infrastructure

Experts urge funding to head off problems

By Sharon Keeler

Every person in the Valley who turns on the lights, brings trash to the curb, drives a child to school or takes a shower is joining the 6 million other Arizona residents who are using the state's infrastructure.

That infrastructure is at risk from aging systems that need renovation – and the fact that it has not kept up with the state's growing population. Add to that 4 million new residents who are expected to call Arizona

home by 2030, and that sets the stage for a significant problem that will affect both quality of life and the state's economic future unless policymakers and the private sector make it a priority.

This is the message of a new report, titled "Preparing for An Arizona of 10 Million People: Meeting the Infrastructure Challenges of Growth," that was presented Nov. 17 at a statewide forum at ASU's Tempe campus.

The report is written by Dennis Hoffman, director of the L. William Seidman Research Institute at

the W. P. Carey School of Business, and Tom Rex, associate director of the Center of Competitiveness and Prosperity Research.

"What distinguishes the Third World from the First World is infrastructure," says Timothy James, an ASU research professor of economics who was one of the panelists at the forum.

James says businesses choose to locate – and people choose to live – in communities that have good infrastructure.

Infrastructure is defined as the basic facilities, services and instal-

lations needed for a community or society to function: energy, health care, education, public safety, transportation, telecommunications, water, waste disposal, mail services, and parks and recreation. Public and private entities also provide support, though more recently the burden has fallen on state and local governments.

Hoffman says Arizona invested well in infrastructure through the early 1990s but has not kept pace with the state's growth over the last 15 years. Currently, infrastructure (See GROWTH on page 11)



Members of ASU's softball and track and field teams surround President George W. Bush as the entire group flashes the school's "pitchfork" sign during a ceremony at the White House Nov. 12.

## Sun Devils show school spirit at White House ceremony

ASU's softball and track and field teams traveled to the nation's capital Nov. 12 and met with President George W. Bush to celebrate the national championships each team won during the past academic year.

In all, 11 teams were on hand for the celebration, including five representing the state of Arizona.

ASU's men's and women's indoor track and field national champions – who were celebrating the women's third title in two years (indoor twice and outdoor once) and the men's first indoor crown – joined the first-time champion softball squad by taking a tour of the White House, including much of the East Wing.

The softball team met Bush first and presented him with a jersey adorned with his name and a "1" on the back. The president then met with other teams before revisiting ASU's track and field team. After talking and joking with the team, Bush accepted a gift of a Sun Devil track suit (black and gold) before posing for two pictures – one of them showing the president flashing the university's "pitchfork" symbol.

From there, both squads were presented to the crowd on the South Lawn as the Marine Corps Band played the university fight song. Selected team captains met with Bush and joined him on stage, where he

(See ATHLETES on page 11)

## Cárdenas steps up as general counsel at ASU

By Sharon Keeler

Prominent Phoenix attorney and community leader José A. Cárdenas has been named senior vice president and general counsel of ASU, effective Jan. 1.

ASU President Michael M. Crow made the announcement Nov. 13. The appointment is subject to approval by the Arizona Board of Regents.

Cárdenas serves as the chairman of the law firm of Lewis and Roca and is a partner in its commercial litigation practice group. His many community affiliations include serving as a board member or trustee of Greater Phoenix Leadership, Greater Phoenix Economic Council, Chicanos Por La Causa and the Virginia G. Piper Charitable Trust. He also chairs the board of directors of the Translational Genomics Research Institute (TGen).

Cárdenas, a member of the ASU Minority Advisory Council, is the host of "Horizonte," Eight/KAET-TV's public affairs program that explores Arizona issues through a Hispanic lens.

He replaces Paul Ward, who has been named vice president for legal affairs, general counsel and secretary to the Board of Trustees at Southern Methodist University.

"José is an outstanding lawyer and a gifted administrator," Crow says. "He has served the Greater Phoenix community through a variety of board memberships, and he has been an adviser to me and knows ASU well. I consider it a major coup that ASU has been able to attract a man of

(See ASU TAPS on page 11)



José A. Cárdenas

## Grant gives researchers dexterity in carpal tunnel syndrome fight

By Skip Derra

Grasping an object is as easy as reading a newspaper for most people. It's a natural function, honed by years of experience.

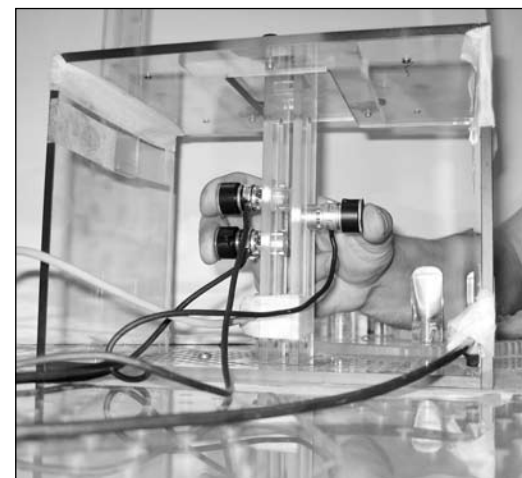
But take away several of the sensory inputs (as happens when a person suffers from carpal tunnel syndrome), and the brain is left grasping at straws in trying to decipher incomplete and "noisy" information from only a portion of its normal inputs (fingers). The result can be a noticeable loss of hand dexterity for the carpal tunnel syndrome (CTS) sufferer.

Help may be on the way for that person, thanks to a new five-year, \$1 million grant from the National Institutes of Health to a research team led by Marco Santello, an associate professor of kinesiology at ASU.

Santello says the goal of the project is to fill in the knowledge gaps that exist concerning CTS and its effect on hand dexterity. CTS affects the quality of life for 6 million to 14 million people in the United States.

"Our main goal is to quantify the effect of CTS on hand control and grasp-

(See NATIONAL on page 11)



A new five-year, \$1 million grant from the National Institutes of Health will boost research being done by a team led by Marco Santello, an associate professor of kinesiology at ASU.



Mary Lou Fulton College of Education

## Early childhood education students embrace reading program

On a single day, 130 early childhood education majors from ASU's Mary Lou Fulton College of Education read the classic children's book "Corduroy" to hundreds of Valley schoolchildren as part of a national campaign to encourage literacy.

For the third year, early childhood education majors from the Fulton College read to children in preschools, Headstart programs, kindergarten-through third-grade settings, and in many homes throughout the Valley.

The annual Read for the Record campaign is sponsored by Jumpstart, a 15-year-old national organization whose mission is to ensure that every child enters school prepared to succeed. The organization estimates that, on Oct. 2, more than 400,000 young students listened to "Corduroy," author Don Freeman's story of a stuffed bear in search of a button.

It is particularly important for children to be read to by "someone who loves them," says Rebecca Stahlman, a clinical associate professor of curriculum and instruction who helped coordinate the Read for the Record Day with students at ASU's Tempe campus.

That could include a relative or a well-loved teacher such as Nina Santi, 21, an early childhood education major who graduates in May. Santi read the classic book to 21 kindergarten students at Kyrene Del Milenio Elementary School in Phoenix.

"There is so much in the book they



SUZANNE STARR PHOTO

**Mary Lou Fulton College of Education intern teacher Nina Santi reads the classic children's book "Corduroy" to a classroom at Kyrene del Milenio Elementary School as part of the Fulton College's recent involvement in the national "Read for the Record" campaign.**

can relate to," says Santi, who spends six hours a week with the children. "They are extremely attentive, even though they've heard it before."

In the first two years of the program, children listened to "Ferdinand" and "The Little Engine That Could," long-loved classics.

Jumpstart is sponsored by top-tier supporters, including NBC's "Today Show," Leapfrog Enterprises, developers of technology-based learning products, Hyatt Hotels and Resorts, XM satellite radio and Pearson, a textbook publish-

ing company.

Jane Legacy, a clinical associate professor of educational technology with the Fulton College, used her contacts with the national publishing company to secure 130 copies of "Corduroy" that were donated to ASU's Read for the Record Day.

"The most important note here is that we have to partner with communities and businesses to get things done in education," she says.

As for Santi, she says she hopes to remain in the Valley to teach "at least

a couple of years" after she graduates from ASU.

"It would be very practical, because I am already working with young children," says the Gross Pointe, Mich., native.

Besides, she adds, "I don't like winter."

Kara Morris, 20, another early childhood education major, read "Corduroy" and other books to eight children in her Mesa home.

"I had baby-sat for many of these children, so I e-mailed their mothers and asked them to bring them over," she says.

Between books, Morris played games with the 4- to 8-year-olds to prevent the wiggles. In one game, they used gummy worms to chart a graph. In another, they played a game about their families.

And at the end, "we had popsicles," she says.

Morris expects to graduate in May 2010.

Meanwhile, she already has her student teaching assignment at the Early Education Center, a preschool in the Mesa Unified School District.

Kara says she was drawn to teaching her first day of kindergarten.

"When I stepped into my class, I told my mom that I wanted to be a teacher," she says.

Morris says she made the right choice. "There is no doubt in my mind that this is the right choice for me," she says.

## Philanthropic group's generosity boosts ASU history teaching programs

By Erica Velasco

A local philanthropic organization dedicated to enriching the lives of individuals in Arizona and Florida by creating opportunities for success in postsecondary education is responding to the need for highly qualified history teachers.

A \$1 million gift from the Helios Education Foundation will benefit ASU's Department of History.

"This investment from the Helios Education Foundation will help us prepare future teachers by building their historical knowledge base and grounding them in historical thinking skills," says Mark von Hagen, chair of the department in ASU's College of Liberal Arts and Sciences.

The Helios Education Foundation, which has invested in ASU's history department programs, will establish two endowments at the ASU Foundation, providing permanent funding for fellowships for students in the master's of teaching history program, as well as a mentoring program for history teachers in Arizona.

The new endowment funds will be named for William C. "Bill" Jenkins, a founding director of the Helios

Education Foundation. Jenkins was a passionate advocate for history education. He inspired the foundation to fund programs in ASU's Department of History, helping to improve the quality of history education within postsecondary classrooms.

The gift is a result of Jenkins' most recent advocacy for supporting the teaching of history.

"William C. 'Bill' Jenkins was a guiding force through the creation of Helios Education Foundation, and as a founding board member he brought a genuine passion to our mission of changing lives through education," says Paul Luna, the foundation's president and chief executive officer. "It's with Bill's passion, commitment and excitement about the teaching of history and the teaching profession itself, that Helios Education Foundation awards \$1 million to the ASU Foundation. Changing lives through education begins by first creating opportunities in education, and we believe this partnership will open doors for students and existing teachers in history education."

The gift was presented Nov. 14 by Vince Roig, chairman of the Helios Education Foundation, to Quentin Wheeler, university vice president and dean of the College of Liberal

Arts and Sciences, as part of the college's Homecoming Week festivities. The college bestowed its Hall of Fame award on Bill and Sue Jenkins this year for their support of the humanities, and the formative impact they have had throughout their careers and volunteer work in the college, in Scottsdale and in Arizona. The award is the highest honor the college confers.

Bill Jenkins, who died this past summer, taught American and Arizona history, American government, and economics for more than 25 years in the Scottsdale Unified School District. From 1966 to 1974, he served on the Scottsdale City Council and from 1974 to 1980 was the city's mayor. He also was a naval officer. He earned a master's degree in history from ASU in 1963 and his bachelor's degree in accountancy in 1952.

Sue Jenkins worked for Arizona Public Service for more than 35 years, retiring in 1990 as the community relations liaison for the East Valley. Her volunteer contributions to the Scottsdale community are numerous.

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## Awards help build international dimensions of dance

By Judith Smith

Pegge Vissicaro, associate chair of ASU Herberger College Dance, has received two awards – a Fulbright Senior Specialists Award for research and teaching in Portugal, and a Global Engagement Faculty Seed Grant Award from ASU – that will help build the international dimensions of ASU dance research.

Vissicaro, who began her partnership with the educational and artistic community in Portugal in 1996 with her first Fulbright Scholar Award, was in Lisbon May 25-June 7. She conducted a workshop titled "Global Networking for Cross-Cultural Dance Research" at the Universidade Tecnica de Lisboa, Faculdade de Motricidade Humana. Masters and doctoral dance students explored the use of social networking tools to gather and analyze data for conducting ethnographic dance research.

She also collaborated with colleagues at the university and surrounding area to identify art projects with refugees, designing a new research initiative that involves community dance practices with Angolan migrant children.

Vissicaro anticipates working with Angolan youths in the Phoenix area in a similar project. This investigation extends Vissicaro's work with refugees for the past six years, which examines how dance culture serves as a resettlement strategy. She co-presented with her colleague from the Universidade Tecnica de Lisboa at the 11th annual dance and the Child International Conference in Jamaica.

Fulbright Senior Specialists Awards, created in 2000, provide short-term academic opportunities to prominent U.S. faculty and professionals to support curricular and faculty development and institutional planning at colleges and universities around the world.

Vissicaro's \$10,000 Global Engagement Faculty Seed Grant Award will fund her project, titled "Global Networking for Cross-Cultural Dance Research: Strategies for Ethnographic Analysis of Macedonian Roma Dance Culture."

One aspect of the project brought together students enrolled in ASU's Critical Language Institute and a scholar who is internationally renowned for her research on the Roms (gypsies) in Skopje, Macedonia.

The scholar, Flagstaff resident Elsie Dunin, has an extensive archive of films, slides and photographs of Macedonian dance, part of the Cross-Cultural Dance Resources Collection that was recently given to Herberger College Dance. Dunin provided a \$1.15 million endowment to fund a curatorial position to oversee the preservation and management of this significant collection, the largest of its kind in the Southwest.

On July 21, Dunin addressed students in the Melikian Center's Critical Language Institute via Web conference from Zaton, Croatia.

"Her presentation focused on the Rom celebration of Gjurgjovden (St. George's Day) and Erdelezi (coming of summer), which takes place from May 5-9," Vissicaro says. "Research to study change and continuity was based on observations and recordings covering four decades (1967-2007)."

Vissicaro says she looks forward to continuing collaborating with the Critical Language Institute. She is negotiating with colleagues at the University of Ss. Kiril and Metodij to bring a Macedonian dance researcher to ASU through the Fulbright Visiting Scholars in 2010 to work with students across the university.

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## Sedimentary records trace Himalayas evolution

By Nikki Staab

Throughout history, the changing fortunes of human societies in Asia have been linked to variations in the precipitation resulting from seasonal monsoons. A new paper published in the British journal *Nature Geoscience* suggests that variations in monsoon climate over longer time scales also influenced the evolution of the world's highest mountain chain, the Himalaya.

The climate over much of Asia is dominated by seasonal winds that carry moist air over the Pacific Ocean into East Asia, and over the Indian Ocean into South Asia. The East Asia and South Asia monsoons are responsible for most of the rainfall in these regions.

Although the time when these monsoon patterns were first established is unknown, many lines of evidence suggest that they first came about at least 24 million years ago.

The new study uses geochemical data from an Ocean Drilling Project sediment core extracted from the sea floor of the South China Sea to establish a record of the East Asian monsoon climate over that time interval.

"Sediments in this core were eroded from the drainage area of the Pearl River system in China, and their chemistry records the relative intensity through time of chemical weathering in an area that received the bulk of its precipitation from East Asian monsoon storms," says Peter Clift, lead author of the study, and a professor of geology and petroleum geology at the University of Aberdeen in Scotland.

Many researchers believe that a geologically "abrupt" uplift of the Tibetan Plateau – the largest high-altitude region on Earth, with an average elevation of more than 4,000 meters (13,000 feet) – at 8 million to 10 million years ago caused a major intensification in the monsoon climate.

"South China Sea data do not support that interpretation," says Kip Hodges, a co-author of the paper and director of the School of Earth and Space Exploration in ASU's College of Liberal Arts and Sciences. "Other than a brief drop between about 17 million and 15 million years ago, the pattern in the core suggests a steady increase in East Asian monsoon intensity from 23 million to 10 million years ago, followed by a steady weakening until about 4 million years ago. After that, the intensity began to increase once more. The implication is that either the development of the plateau was not as abrupt as we might have thought, or that an abrupt uplift of the plateau at 8 million to 10 million years caused a



Kip Hodges

change in precipitation patterns that was not recorded in East Asia."

Another controversy surrounds the degree of coupling between the South and East Asian monsoons. Could one have varied in intensity differently from the other?

The team compared the South China Sea record with less-complete sedimentary records from the Arabian Sea and Bay of Bengal – which contain sediments that were eroded from the Himalaya, where the principal rainfall comes from South Asian monsoon storms – to argue for a linkage between the two monsoon systems over most of the past 23 million years.

"The really exciting moment in this research came when we began to compare patterns from one record to another and found broad agreement," Clift says.

The most interesting correlation was found when the team compared the sedimentary records to cooling age patterns in the Himalaya. Hodges and his students have spent years using isotopic dating techniques to determine the cooling ages of thousands of bedrock and sediment samples from all over the Himalaya.

"Most people are familiar with the use of such techniques to determine the crystallization ages of minerals and rocks," Hodges says. "They also can be used to determine when a mineral cooled through a certain temperature. The principal mechanism by which samples cool in mountainous regions is erosion, so a high frequency of minerals with the same cooling age generally means a high rate of erosion at that time."

Compilations of the cooling ages obtained by Hodges' group and other researchers show that the periods of high East Asian monsoon intensity matched well with high frequencies of cooling ages, implying a relationship between monsoon intensity and erosion in the Himalaya.

"While it makes sense intuitively that heavy rainfall should be correlated with more aggressive erosion, it is important to see such direct evidence of the coupling between the processes that define the evolution of mountain ranges and climatic processes," Hodges says. "It implies, once again, that Earth is a complex system, and we cannot begin to fully understand mountain building without appreciating the roles of the hydrosphere and atmosphere in the evolution of mountain ranges."

But Hodges cautions that the results of this study are suggestive.

"It is important to confirm our interpretations by generating a more comprehensive cooling-age data set from regions of the Himalaya that have not yet been studied because of logistical constraints or political instability."

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## Briefings reveal diverse opinions among Arizonans

By Nicole Haas

New data from the statewide Arizona Indicators Panel Survey reveals a population that holds diverse opinions and frequently divided outlooks along income, educational and other lines.

This data is reported in the first five installments of "AZ Views," a new, ongoing briefing series by the Morrison Institute for Public Policy.

The AZ Views briefings reveal Arizonans to be complex – and sometimes even conflicted – in their views.

Overall, the surveys show that some views are broadly shared and most respondents display a generally optimistic tone. Most Arizonans, for example, say they have an "excellent" or "good" quality of life, trust the police, enjoy active outdoor pastimes, value family time, and identify their top issues of concern as the economy, crime, and health care.

Yet apparent inconsistencies emerged in other areas. While large majorities of Arizonans say they like their jobs and feel secure in them, for example, just 16 percent are "very confident" they could get another comparable job if they lost theirs. A demographic breakdown of respondents' answers by race and ethnicity, income,

educational level and other factors reveals a host of differences among Arizonans' views.

Other findings include:

- Phoenix residents reported extremely high job satisfaction (97 percent), considerably higher than Tucson residents (69 percent).
- 89 percent of minority-group panelists believe that "the academic performance of our schools is not as high as it should be," compared to 62 percent of all respondents.
- Tucson panelists (36 percent) were more likely to say quality of life had improved than those in Phoenix (24 percent), the rest of Maricopa County (29 percent) or the rest of the state (22 percent).
- Health care was chosen as the primary issue affecting quality of life by a larger percentage of those whose family income were \$30,000 to \$60,000 than those earning less than \$30,000 or those earning \$60,000 and up.
- Immigration was chosen as the primary issue affecting quality of life by 4 percent of all panelists, by 6 percent of majority group members, and by no minority group members.
- Minorities (24 percent) were much more likely to strongly agree that "I enjoy living among

people with different lifestyles and backgrounds" than majority group members (5 percent). Respondents with at least a college degree (20 percent) were much more likely to strongly agree than those with some college (9 percent) or a high school education or less (9 percent).

The Arizona Indicators Panel Survey, a project of Arizona Indicators, includes a representative sample of Arizonans. The first two surveys were conducted in May and July. The respondents are Arizona residents who have agreed to be surveyed often during a year across many topic areas.

Arizona Indicators is supported by ASU, the Arizona Community Foundation, the Valley of the Sun United Way and the Arizona Department of Commerce.

The AZ Views series is a new tool that will offer fresh analysis of the collected data and insight into representative Arizona opinions on an evolving range of current topics.

To read all five briefings, go to the Web site [www.morrisoninstitute.org](http://www.morrisoninstitute.org). For more on Arizona Indicators, visit [www.ArizonaIndicators.org](http://www.ArizonaIndicators.org).

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## New report puts human face on chronic homelessness

By Nicole Haas

A new report puts a face on chronic homelessness and provides an overview of the issue's high human and financial costs.

"Richard's Reality: The Costs of Chronic Homelessness in Context" is modeled on the story of "Million-dollar Murray," a Reno, Nev., resident who was chronically homeless over a decade. This report by the Morrison Institute for Public Policy combines personal stories of people who are experiencing homelessness with actual and average costs for basic assistance, such as emergency shelter and health care.

"Richard's Reality" also provides background on the more than 14,000 people (adults and children) in Maricopa County who experience homelessness each year, and some of the public and private organizations that provide services to them.

The report balances hard costs with the real-life challenges and the "voice of experience" of individuals and families who are chronically homeless. As shown by the stories of Richard, Sam, Bart, Oscar and others, residents who are chronically homeless generally:

- Have serious health problems, often including substance abuse and psychiatric illnesses.
- Use the homeless assistance system and other services frequently.
- Have limited support personally or in the community.

- Experience the effects of multiple problems simultaneously.
- Are left to fragmented systems of care.

The work reveals a population with high levels of need and potentially high price tags for services. For example, a frequent user of shelters for homeless persons tends to be in an emergency shelter for 70 percent of a year, for a cost of more than \$7,300 per year at a minimum. The highest costs are for emergency health care, ambulance services and hospitalizations.

"Homelessness is at the intersection of health care, housing, jobs, social services and a sense of community," says Susan Hallett, administrator of the Department of Economic Security's Office of Community Partnerships and Innovative Practices. "These are issues that affect the community at large – issues we can all relate to. We hope that 'Richard's Reality' will help engage partners who perhaps traditionally had not seen chronic homelessness as their issue. This will help us to maximize our collective resources and improve outcomes for individuals experiencing homelessness."

"Richard's Reality" also identifies the types of long-term follow-up studies and evaluations that are needed in Arizona to create more effective, innovative services.

To read the report, visit the Web site [www.morrisoninstitute.org](http://www.morrisoninstitute.org).

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## In THE NEWS

ASU experts frequently are called upon by the local and national news media to provide insight and opinion on current events and issues of public interest. Following are excerpts of recent news articles featuring ASU representatives.

Members of "Generation Y" have sparked a surge in nonprofit management and leadership courses at colleges and universities around the country. Last year, ASU created the first named undergraduate degree in nonprofit management. "We're getting students that want to know at the end of the day that they've made the world a better place," says **Robert Ashcraft**, director of the Lodestar Center for Philanthropy and Nonprofit Innovation at ASU. "They can't imagine themselves in a cubicle in a corporation." *New York Times*, Nov. 11.

Experts say that, during hard economic times, reassurance is key to helping children understand the family's finances. "Don't lie if things are bad or if there's a noticeable change in your family's circumstances," says ASU child psychologist **Keith Crinc**. Nonetheless, he tells parents to find some way to put a positive spin on things to help children adapt under stress and anxiety. "Even teens need to hear parents express a sense of confidence and competence," Crinc says. *Boston Globe*, Nov. 14.

ASU's **Tom Duening** says that, while venture capital firms and individual investors dig out of their holes, the market in Arizona remains about the same as it always has – and good deals still are being made at a certain level. "Those that are in need of high-level venture capital funding are finding it, but not locally," says Duening, director of the entrepreneur program in the Ira A. Fulton School of Engineering. *San Francisco Business Times*, Nov. 14.

Allegiant Air, a carrier soaring with profitability and near-capacity flights, is likely to survive the woes hitting the airline industry because of its unique business model, experts say. "It's one of a kind," says **Richard Charles**, professor and chair of ASU's Aeronautical Management Technology Department. "If the majors want to compete with Allegiant, it would be difficult, because the carrier has a price model they cannot afford." *Arizona Republic*, Nov. 14.

Although the retailing downturn is national in scope, some areas of the country may be suffering more than others. In Phoenix, the situation is "beyond belief," says ASU economics professor **Dennis Hoffman**. In Phoenix, he says, retail sales in October fell 10 percent compared with a year ago, pulled down by a 25 percent to 30 percent collapse in automobile sales. "Every sign says 40 percent off," Hoffman says. "What we need is a positive psychological shot." *Christian Science Monitor*, Nov. 17.

The need for new and better roads is a hot topic among trade and logistics leaders from the United States, Canada and Mexico. **Rick Van Schoik**, director of ASU's North American Center for Transborder Studies, says efforts being made to fix the problem include improvement of the north-south continental transportation infrastructure and the formation of tri-national customs teams. "We have got to get together and develop transportation plans," Van Schoik says. "We need to study congestion maps internationally and find out where bottlenecks truly are." *The Packer*, Nov. 17.

## Tutoring program emphasizes education, community service

Robert McWhirter, curious as any 6-year-old boy, was more interested in examining the seat of his chair than writing the five words for his recent homework assignment.

"I'm taking a break," he told his tutor, Amber Bren, 20, a sophomore with the Mary Lou Fulton College of Education at ASU's Tempe campus.

Bren knew just how to navigate him back to his workbook.

"If you get your homework done now, you'll have time to watch baseball tonight," she told Robert.

He sat up straight, grabbed his pencil and quickly wrote: "tent," "for," "rest," "they" and "have." Finished, he smiled, anticipating home runs instead of homework.

Robert is one of 48 students who attend the free after-school tutoring classes offered by the Mary Lou Fulton College of Education. Some children are struggling. Others are there to find new challenges.

Gina Huerta, mother of Robert and his twin, Ryan, says she saw fliers for the program at Our Lady of Mount Carmel, the boys' school in Tempe. Huerta says she immediately was interested, because her sons' transition from kindergarten to first grade has been rocky.

"They are having trouble adjusting to first grade," she says. "They don't like it."

But after three one-hour tutoring sessions, they are improving.

"It's wonderful," she says.

The popular program was born 10 years ago, when Kathleen M. McCoy, associate professor of curriculum and instruction with the Fulton College, says she became concerned about the cost of private tutoring, which today has climbed on average to \$50 or more per hour.

McCoy had another motive. She wanted



SUZANNE STARR PHOTO

**ASU's Mary Lou Fulton College of Education provides free tutoring for K-12 students in the Phoenix metropolitan area. In the photo above, 9-year-old Chloe Pfitzer of Tempe, left, receives a tutoring session from Daniela Hernandez, a 21-year-old junior pursuing a dual degree in elementary and special education.**

children and their parents to feel comfortable, rather than humbled, by the imposing ASU campus in the heart of Tempe.

"We want them to feel that going to college would be a normal part of their life," she says.

The program also is a learning lab for aspiring teachers interested in additional hands-on experience with students.

"They write gorgeous lesson plans but are unsure how to apply them," McCoy says.

But McCoy has a solution for that. She divides the tutors into two groups. One group tutors the children, while the others attend McCoy's class in an adjoining room. Then they trade places.

During the "active learning" session, the

ASU students polish up their objectives and go over lesson plans with McCoy.

The professor stays close by, ready to answer a question or intervene if a tutor is having trouble assisting a child.

When the students file into room 320 in the Farmer Education Building at 3:45 p.m. on Mondays and Wednesdays, tutors are ready with books, math problems or other fresh ideas.

Some of the future teachers are 19 years old. Others decided to teach later in life.

John Welch, 27, a former Air Force jet engine mechanic, is a junior in the Fulton College.

"Education has always been a passion of mine," he says.

## New teachers thrive with support from ASU's BEST program

At Kyrene Altadena School in Ahwatukee, 21-year-old student-teacher Mary Anna Nordstog introduces sixth-graders to a computer program to write a "personal narrative."

Smiling, and moving among her students, Nordstog tells the sixth-graders to dress their story with vivid description, sights, sounds and smells. They listen, no fidgeting, no covert conversations in the back row.

Still, Nordstog assures their attention.

"Put your hands in your lap and keep your eyes on me so I know you are listening," she tells the students.

At ease in the classroom, Nordstog has earned high praise as an exceptionally talented student teacher.

Stephanie Leake, who is serving as mentor teacher to Nordstog as she completes her student teaching experience, has taught sixth grade for nine years. Leake says she sees rare talent in her student-teacher.

"She has been effective in building relationships," Leake says. "Often young teachers struggle with middle school students because they don't respect the teacher. She has mastered that."

Nordstog returns the compliment, saying she tries to model herself after Leake.

Students, whose personal narratives were mostly about scars, close calls with traffic or scary sleepovers, waggle their hands in the air to summon Nordstog to their desk.

"She always seems to know how to help us," says Jacob Caron, 11.

Dania Kassab, 11, gave Nordstog the ultimate compliment.

"I wish I could have her in seventh grade," she says.

Nordstog will graduate from ASU's Mary Lou Fulton College of Education in December and will start looking for a job.

But when she lands one, she won't be on her own. She will be one of about 1,000 new teachers statewide who are annually steadied in the classroom by a mentoring program known as BEST (Beginning Educator Support Team).

For more than a decade, BEST has spread a safety net under jittery new teachers, an intense mentoring program that also appears to be decreasing their early flight from the classroom.

Bred by the Fulton College in 1998, BEST has partnered with 36 districts statewide, with the program serving more than 15,000 beginning teachers, mentors, teacher leaders and administrators.

And it has spread to 60 school districts in Iowa, New York, New Jersey, Texas, Colorado, Virginia and California – which, like Arizona, are struggling to meet higher state and federal standards, including No Child Left Behind, high-stakes graduation tests, and tougher performance requirements for teachers.



**Mary Lou Fulton College of Education student-teacher Mary Anna Nordstog, right, talks with Phillip Brandis, 11, about computers in her class at Kyrene Altadena Middle School.**

SUZANNE STARR PHOTO

Sharon Kortman, BEST program director, says that increasingly tougher educational standards demand a supercharged mentoring program for teachers in their first two years in the classroom and beyond.

"Regardless of how well students were prepared in their college training they need to have support structures in place to become excellent," Kortman says.

"Education is under a microscope," adds Andi Fourlis, director of recruitment and professional development for the Scottsdale Unified School District.

Fourlis invokes BEST to recruit promising, but often wary, new teachers.

"One of the first questions prospective teachers ask is do we have a mentoring program," Fourlis says.

National statistics show that 50 percent of teachers leave the classroom in the first five years, she says.

"A feeling of isolation is one of the most commonly reported reasons why they choose to leave," Fourlis says.

BEST was designed to stoke nervous young teachers' confidence and keep them in the classroom. In a seven-year study, nearly 97 percent of 2,906 first-year teachers participating in BEST said they planned to return to the classroom the following year. Those numbers are encouraging when compared to national teacher retention rates of 88 percent to 93 percent.

BEST has had a wide reach. Over the decade, 299 teacher leaders and administrators have coached, mentored and held seminars to refine the skills of more than 8,000 teachers in Arizona alone.

As of this past spring, mentors conducted 2,190 semi-

Ondra Scott, 8, a third-grader at Broadmor Elementary School in Tempe, worked with Welch on spelling and reading comprehension.

"She is doing really well," he says.

Toward the end of the session, Ondra was working out math problems on a legal pad.

"I love multiplication," she says.

Sarah Estorga, 31, a mother of three, who drives 50 miles round-trip from Laveen to ASU to pursue a teaching degree, also was helping a student who relishes math.

"I like to learn new stuff about math and writing," says 6-year-old Jonathan Covarubias, who announced that "two plus 10 is 12."

Estorga is a genius at juggling schedules. In addition to caring for her family, she has three part-time jobs and a demanding class load.

"I don't know how she does it," McCoy says.

Estorga, who has worked with severely mentally ill patients over the last 12 years, says she wants to teach special education classes.

McCoy watched as the children shouldered their backpacks at 4:45 p.m. to head home.

"Coming to tutoring is the high point of their day," she says. "Where else do they get this kind of one-on-one attention?"

Aware of the continuing need for free tutoring, McCoy recently expanded the program to the Ladmo Branch of the Tempe Boys & Girls Club.

"It doesn't matter how many students we get," she says. "If we run out of tutors, we'll get volunteers."

For more information, contact Nancy Landers with the Mary Lou Fulton College of Education, Division of Curriculum and Instruction, at (480) 965-6156 or nancy.landlers@asu.edu.

nars, resulting in 31,326 contacts with beginning and experienced teachers.

"The reach of BEST has positively influenced teacher development and student success," she wrote in a program summary.

This was critical to her vision for the program, Kortman says.

BEST doesn't stop with new teachers. Many districts have expanded the program to include longtime teachers.

"The hidden benefit is that they are rejuvenated in their own teaching practices," Kortman says.

Rony Assali, 25, a high-energy second-year math teacher at Arcadia High School in the Scottsdale district, calls the BEST program "comforting."

He and other new math teachers meet frequently with Karen Tipsword, head of Arcadia's math department.

"We ask her about lesson plans, and talk about certain situations," Assali says, adding: "What's cool about it is that we get to meet with other new math teachers."

A longtime mentor even before the BEST program, Tipsword says, "I listen to what they want to talk about and that's what we do."

Tipsword occasionally visits new math teachers' classrooms, and sometimes the teachers observe her techniques with high school students.

Even long-experienced mentors such as Tipsword attend an array of BEST before-or-after school seminars offered by the school district to sharpen their coaching skills.

"I only have to go to one session, but I go to them all," she says. "I think they are very good."

Lisa Zirbel, a new teacher mentor and BEST coach in the Scottsdale district, also meets with new teachers.

"She talks to us about how to design a test and work with curriculum," Assali says.

She warns them about stress, "and tells us about how things are going to go, that sometimes we'll get kind of in a slump," he says. "I didn't know what to expect. I didn't know how many days would be bad days and how many would be good days."

On a recent morning, Assali, whose family came to the United States from Lebanon when he was 7, worked the classroom, moving among his pre-algebra class, answering questions, prompting students with cues.

"Where does the x go, do we distribute twice?" he asked them, pointing to equations on the board.

Arturo Mena, who came to the United States five years ago from Michoacán, Mexico, says he has been "trying to understand algebra for five years. But Mr. Assali explains it very well."

Other students describe him as "awesome."

"That's nice to hear," Assali says.



# Insight *On campus*

November 21, 2008

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## ASU supercomputer will boost TGen's biomedical research

By Joe Kullman

The "Saguaro 2," a new supercomputer in the facilities of ASU's High Performance Computing Initiative (HPCI), will be helping the Translational Genomics Research Institute (TGen) in Phoenix speed up its efforts to advance biomedicine.

Saguaro 2, housed in ASU's Barry M. Goldwater Center for Science and Engineering, is capable of performing 50 trillion mathematical operations per second.

"That's the equivalent of taking a calculator and doing one operation per second, by hand, continuously for the next 1.5 million years," says Dan Stanzione, director of HPCI, a part of the Ira A. Fulton School of Engineering.

TGen will use that speed to continue its research into the causes and potential cures of variety of human diseases through the use of data-rich DNA sequencing, genotyping, microarrays and bioinformatics.

"This is really a remarkable testament," to the cooperative efforts of ASU and TGen, says Jeffrey Trent, TGen president and scientific director of TGen, especially in a tight funding environment.

TGen researchers are developing new therapies for treating Alzheimer's disease, autism, diabetes, coronary heart disease, melanoma, pancreatic cancer, prostate cancer, colon cancer, multiple myeloma and breast cancer.

The new computer system doubles HP-

CI's capabilities. More importantly for TGen, the system has 20 times the computational power previously available to TGen researchers, says James Lowey, director of TGen's High Performance Biocomputing Center.

The HPCI storage will be used to store a vast array of data from TGen's sequencers and simulations, as well as other large data sets from ASU researchers, including a high-resolution mapping of the moon to be performed in the upcoming year by NASA's Lunar Reconnaissance Orbiter.

The computational power "is crucial to the competitiveness of our research at TGen and at ASU, and is increasingly crucial to our economic competitiveness as a

state and nation as well," Stanzione says.

High-performance computing addresses the needs of science beyond theory and experimentation to "the ever more important role of simulation," which Stanzione calls the "third mode" of scientific progress.

"As we move in science into the nanoscale of materials and molecular design and diagnostics, or into the macro scale of global climate or the motion of the galaxies, experimentation becomes more expensive and difficult, and simulation becomes invaluable," Stanzione says. "The speed of those simulations determines the speed of progress."

Kullman, with the Ira A. Fulton School of Engineering, can be reached at (480) 965-8122 or joe.kullman@asu.edu.

## Hair you go

ASU Homecoming court member Shannon Green expresses her surprise as she is shown a lock of her hair that was cut off during the "Bald for Bucks, Locks of Love" event took that place at the north side of the Memorial Union on ASU's Tempe campus Nov. 13. The cut was made for a good cause: a special event focused on donating hair to Locks of Love, a charity organization that provides hairpieces to underprivileged children suffering from medical hair loss. More than \$6,500 that was raised during the event went to the American Cancer Society.

TOM STORY PHOTO



## Professor's expertise infuses encyclopedia with bilingual heft

By Verina Palmer Martin

A new encyclopedia of well-researched, non-technical articles edited by ASU professor Josué González is being hailed as a first-stop reference for accepted knowledge in the field of bilingual education.

González is a professor of educational leadership and policy studies with the Mary Lou Fulton College of Education, and an internationally known expert in bilingual education. He was contacted two years ago by Sage Reference books to edit the 2008 edition of the *Encyclopedia of Bilingual Education*.

He says he realized then that the two-volume project provided an opportunity to compile the best research on the highly politicized – and often emotionally charged – subject of bilingual education.

"I wanted to get this story out," says González, who also is director of the Southwest Center for Education Equity and Language Diversity within the Fulton College. "It's not ambiguous. It's not apolitical. The field itself is very political, so we wanted to reflect that."

The center focuses on policy analysis and scholarship in bilingual and dual-language education.

The encyclopedia links bilingual education to its many areas of direct socio-cultural impact, including issues of language and literacy, diversity, education equity and the effects of shifting demographics across the United States.

"This reference will be a valuable tool for anyone seeking the research behind bilingual education and the implications of national policies on student achievement among English-language learners," says George Hynd, senior vice provost for education and innovation and dean of the Fulton College. "Josué González has written and lectured extensively in the field, and his work with the Southwest Center for Education Equity and Language Diversity is crucial as immigration and bilingual education issues continue to rise to the political forefront in the United States."

González selected expert authors as contributors for the project from a wide range of disciplines, including applied linguistics, politics, civil rights, history and education. He also developed a unique journalistic style, using essays rather than traditional encyclopedic entries, as a way to communicate with lay readers. It is designed to be a first-stop library reference with cross-references to related works and bibliographic entries of more in-depth research.

(See PROFESSOR'S on page 8)

## Partnership helps social work students, youths

By Kirsten Martin

Through an ASU partnership with the Arizona Department of Economic Security, students in the graduate and undergraduate social work programs have a chance to pay for their education while bringing a higher quality of service to youths in the child welfare system.

Students who take part in the Master of Social Work (MSW) Child Welfare Training Project receive full in-state tuition, fees and a \$550 monthly stipend. They must take a concentration of child welfare courses to maintain eligibility in the program. In return for this assistance, students must be willing to work for Child Protective Services (CPS), for 18 to 24 months following graduation.

"The purpose is to educate students to work with CPS when they graduate and to serve vulnerable Arizona families," says Jan Shore, coordinator of the project in ASU's School of Social Work.

The school is part of the College of Public Programs at the ASU Downtown Phoenix campus.

When students graduate and begin their work with CPS, they will have a strong foundation in child welfare and bring a wealth of knowledge with them in the job force, Shore says. The project began in 1988 and is funded by the Title IV-E Child Welfare Training Program.

The MSW project is directed by Christina Risley-Curtiss and Nora Gustavsson. It is coordinated by Jan Shore and Tonia Stott. The bachelor's degree in social work program is directed by Teri Kennedy. Applicants to the program must show a demonstrated interest in child welfare, capability in communicating with clients and working with at-risk families, and scholastic achievement. Applicants are required to write essays that clearly define their interests in working in the field of child welfare.

For more information, visit the Web site <http://ssw.asu.edu/portal/research/cwtp> or call (602) 496-0082.

Martin, in the College of Public Programs, can be reached at [kirsten.a.martin@asu.edu](mailto:kirsten.a.martin@asu.edu).

## Intercampus shuttle changes to coincide with light rail opening

By Shereen Saurey

The METRO light rail system, which is on track to open next month, will be an efficient new mode of transportation to help usher in a smoother commute for community members from the West and East valleys who need to reach downtown destinations or travel the length of the greater Phoenix metropolitan area.

When METRO becomes operational Dec. 27, ASU's Tempe and Downtown Phoenix campuses will be connected via a direct, 20-minute light rail ride. As a result,

ASU Parking and Transit Services administrators have confirmed that the shuttle between the Tempe and Downtown Phoenix campuses will be discontinued at the end of the fall semester. Students, faculty and staff traveling to the Downtown Phoenix campus are encouraged to use light rail. The shuttles between Tempe and the West and Polytechnic campuses will continue to operate on their current schedules through the end of the spring semester.

In preparation for riding light rail at the start of the spring semester, students and employees should obtain an ASU U-Pass.

The U-Pass grants unlimited access to Valley Metro bus routes and will also be valid for light rail boardings. Students can receive a U-Pass for free, while faculty and staff can receive this annual transit pass for the deeply discounted rate of about \$10 per pay period.

Students and employees can pick up a U-Pass by bringing their Sun Cards to any ASU campus permit sales office. U-Passes are valid through June 30.

For additional information and frequently asked questions about the changes to the intercampus shuttles, visit the PTS

shuttles' Web page at [http://uabf.asu.edu/parking\\_commuter\\_shuttle](http://uabf.asu.edu/parking_commuter_shuttle).

To learn more about the ASU U-Pass, and to view the Polytechnic and West campus shuttle schedules, visit the PTS Commuter Options Web page <http://pts.asu.edu/commuteroptions>.

To learn more about METRO light rail, visit the Web site [www.valleymetro.org/metro\\_light\\_rail](http://www.valleymetro.org/metro_light_rail).

Saurey, with Parking and Transit Services, can be reached at (480) 727-7053 or [shereen.saurey@asu.edu](mailto:shereen.saurey@asu.edu).





Events are free, unless otherwise noted. Items in the "Exhibitions" section run at exhibit opening and on the first of each month only. Building abbreviations are listed according to the official ASU phone directory. Send information to Judith Smith at [jps@asu.edu](mailto:jps@asu.edu) or fax (480) 965-2159. For information about ASU events, visit the Web at <http://events.asu.edu>.

## Meetings

### Monday, Dec. 1

**University Senate**, 3-5 p.m., Education Lecture Hall (EDC) room 117. Information: (480) 965-2222.

### Thursday, Dec. 4

**Arizona Board of Regents**, 8 a.m.-5 p.m., Memorial Union (MU) Alumni Lounge room 202. Also 8 a.m.-5 p.m., Dec. 5. Information: (480) 965-2222.

## Lectures

### Friday, Nov. 21

**"Knowing Full Well,"** 3 p.m., Coor Hall room L1-74. Speaker: Ernie Sosa, Rutgers University. Sponsored by Philosophy Department. Information: (480) 965-9860.

**"Prehistoric Roots of Southern Arabia's High Civilizations,"** 3:30-4:30 p.m., School of Human Evolution and Social Change (SHESC) room 340. Speaker: Joy McCriston, Department of Anthropology, Ohio State University. Sponsored by the School of Human Evolution and Social Change. Information: <http://shesc.asu.edu/colloquia>.

### Monday, Nov. 24

**Must See Mondays Speaker Series**, 7 p.m., First Amendment Forum, Walter Cronkite School of Journalism and Mass Communication, 555 N. Central Ave., Phoenix. Speaker: Derrick Hall, president, Arizona Diamondbacks. Sponsored by Cronkite Career Services and the student chapters of the Public Relations Society of America, National Academy of Television Arts and Sciences, and Radio-Television News Directors Association. Information: (602) 496-8692.

### Tuesday, Dec. 2

**"Clinical Partnership at ASU,"** 11 a.m.-noon, Biodesign Institute Auditorium. Speaker: Kathy Matt, Franca G. Orefice Dean's Distinguished Professorship in Kinesiology, and associate vice president for biomedical affairs and clinical partnerships. Sponsored by Biodesign Institute Center for Innovations in Medicine. Information: (480) 727-0370.

**"Local Knowledge and the Health of Human Communities: What Local Public Theory Illuminates about Potentially Divisive Issues in Activism,"** noon, location TBA. Speaker: Elenore Long, Eastern Washington University. Long will argue that we can best deal with the deep but also generative conflicts in activism today if we understand them from both rhetorical scholarship and the emerging theory of local publics. Sponsored by the Rhetoric Society of America at ASU and the Department of English. Information: [imholda@asu.edu](mailto:imholda@asu.edu).

### Wednesday, Dec. 3

**"The Role of Tissue Mechanics in Embryonic Development and Regeneration,"** 3:40 p.m., Barry M. Goldwater Center (GWC) room 487. Speaker: Eva-Maria Schoetz, Princeton University. Refreshments at 3:30 p.m. Sponsored by Center for Biological Physics. Information: (480) 965-4073.

**"Charles Olson: (Language as Physical Fact),"** 5-6 p.m., Durham Language and Literature Building (LL) room 148. Speaker: Charles Alexander, editor-in-chief of Chax Press and Tucson-based poet and book artist. Part of Cynthia Hogue's English 538 class, Modernist Poetry. Sponsored by

Department of English. Information: (480) 965-7611.

### Thursday, Dec. 4

**"The Art of Poetry and the Practice of Translation,"** noon-1:15 p.m., Piper Writer's House. A poetry reading and discussion with Charles Alexander, editor-in-chief of Chax Press, and Tucson-based poet and book artist. Sponsored by Department of English. Information: (480) 965-7611.

**Physics Colloquium**, 4 p.m., PS F-123. Speaker: Keith Dienes, University of Arizona. Sponsored by Department of Physics. Information: (480) 965-9075.

### Friday, Dec. 5

**Life Sciences Lecture**, 2-3 p.m., LS E-104. Speaker: Allison Snow, professor, Department of Evolution, Ecology and Organismal Biology, Ohio State University. Sponsored by School of Life Sciences. Information: (480) 965-2705.

### Saturday, Dec. 6

**"Fuel for Growth: Water Challenges Facing Arizona's Urban Environment,"** 1-2 p.m., Deer Valley Rock Art Center, 3711 W. Deer Valley Road, Phoenix. Speaker: Archaeologist and historian Doug Kupel. Information: (623) 582-8007.

### Monday, Dec. 8

**"Happiness, Virtue and Love,"** 10:30 a.m.-noon, Student Union Cooley Ballroom A, Polytechnic campus. Speaker: Elaine Yoshikawa, ASU lecturer of philosophy in the School of Applied Arts and Sciences. Sponsored by Osher Lifelong Learning Institute. R.S.V.P.: (480) 727-1153 or [lois.lorenz@asu.edu](mailto:lois.lorenz@asu.edu).

### Wednesday, Dec. 10

**"Security in Cyberspace,"** 10:30 a.m.-noon, Student Union Cooley Ballroom C, Polytechnic campus. Presented by Penny Ann Dolin, ASU lecturer in the College of Technology and Innovation. Sponsored by Osher Lifelong Learning Institute. R.S.V.P.: (480) 727-1153 or [lois.lorenz@asu.edu](mailto:lois.lorenz@asu.edu).

### Thursday, Dec. 11

**"Nanotechnology for Human Health,"** 3 p.m., Biodesign Institute Auditorium. Speaker: James Baker Jr., director, Michigan Nanotechnology Institute for Medicine and the Biological Sciences, Ann Arbor, Mich. Part of the Biodesign Institute Innovators Seminar Series. Information: (480) 727-0370.

## Conferences

### Monday, Nov. 24

**"Spaces, Instruments, and Players in the U.S.-Mexico Border," a border wall workshop**, 1-6 p.m., Memorial Union (MU) Cochise Room (228). Speakers include Rick Van Schoik, ASU North American Center for Transborder Studies; Enrique Lendo Fuentes, Titular UCAI-SEMARNAT; Carlos de la Parra, El Colegio de la Frontera Norte; and others. Continues 9 a.m.-5 p.m., Nov. 25. Sponsored by North American Center for Transborder Studies. Information: (480) 965-1846.

### Tuesday, Nov. 25

**"The European Union and North America (NA): Lessons Learned,"** 8:30 a.m.-12:30 p.m., Coor Hall room 5536. Speakers include Christof Roos, research assistant and doctoral fellow at Bremen University, Germany. The workshop will explore the EU's successes and failures – and how, if at all, North America can benefit from them. Sponsored by North American Center for Transborder Studies. Information: (480) 965-1846.

### Friday, Dec. 5

**Southwest Consortium for Environmental Research & Policy (SCERP) 2008 annual technical conference**, noon-6 p.m., MU Ventana Ballroom room 241B. Speakers include Kevin Whitty, University of Utah; Eric Keys, ASU; Barry Thatcher, New Mexico State University; Kimberly Collins, San Diego State University; and others. Topics include "Non-Hazardous Waste in Energy Production," "Securing HAZMAT Transport," "Quality of Life Perceptions" and "Urban Growth Along the U.S.-Mexican Border." Continues 9 a.m.-5 p.m., Dec. 6. Conducted by North American Center for Transborder Studies. Information: (480) 965-1846.

## Miscellaneous

### Friday, Nov. 21

**26th annual Walter Cronkite Luncheon**, 10:30 a.m., Arizona Biltmore Resort and Spa, 2400 E. Missouri, Phoenix. Winners of the Walter Cronkite Award for Excellence in Journalism, Jim Lehrer and Robert MacNeil, will be honored. Admission. Information: Bethany Taylor, (480) 727-9444.

**Science Café**, 5:30-6:30 p.m., Arizona Science Center, 600 E. Washington St., Phoenix. Guests David Calderon, Santiago Manriquez and Darlene Johnson will be discussing "Democratizing Science: Should the Public Have a Voice in Science Research and Development?" Sponsored by the Center for Nanotechnology in Society at ASU. Information: (602) 716-2000.

**Astronomy Open House**, 8-10 p.m., PS roof of the Bateman Physical Sciences Center (PS) H wing (fifth floor). Information: (480) 965-7652 or <http://homepage.mac.com/agfuentes/openhouse.html>.

**Fulton Undergraduate Research Initiative (FURI) Research Symposium**, 1-3 p.m., outside the Engineering Center (ECG) G wing. Information: (480) 727-8713.

### Saturday, Nov. 22

**American Indian Heritage Month Festival**, 10 a.m.-3 p.m., Deer Valley Rock Art Center, 3711 W. Deer Valley Road, Phoenix. Enjoy performances by Native American dancers and musicians, Lakota storytelling, guided hikes, rattle-making, Native American gardening and many other activities. Information: (623) 582-8007.

**Glyph Shop Sale, Deer Valley Rock Art Center**, 3711 W. Deer Valley Road, Phoenix. Do your Christmas shopping through Nov. 30. Items include pottery, paintings, jewelry, rock art, books and more. Information: (623) 582-8007.

### Monday, Nov. 24

**Book signing by Jonathan Marshall**, 6-8 p.m., University Club. Marshall, longtime publisher of the *Scottsdale Progress*, will sign copies of his new book, "The Life of Journalist Jonathan Marshall: A Memoir." Sponsored by Department of English. Information: (480) 965-3528.

### Tuesday, Nov. 25

**Discussion of "Hot, Flat and Crowded: Why We Need a Green Revolution – and How It Can Renew America," by Thomas Friedman**, noon, Decision Theater Conference Room, Brickyard Orchid House (BYOH) 126A. Hosted by Lutheran Campus Ministry. Conveners: Sustainability major Loni Amundson and the Rev. Gary N. McCluskey. Continues Dec. 2. Information: (763) 923-3276.

### Wednesday, Nov. 26

**Exhibits @ Noon**, noon-1 p.m. See the Museum of Anthropology today. Sponsored by Museums, Galleries & Collections Committee. Information: [www.asu.edu/museums](http://www.asu.edu/museums).

### Tuesday, Dec. 2

**ASU Retirees Association Annual Holiday Luncheon**, 11 a.m.-1 p.m., Community Services Building (CSB) Classroom 330A, 200 E. Curry Road, Tempe. A potluck event. Information: (480) 965-7668.

**Discussion of "Hot, Flat and Crowded: Why We Need a Green Revolution – and How It Can Renew America," by Thomas Friedman**, noon, Decision Theater Conference Room, Brickyard Orchid House (BYOH) 126A. Conducted by Lutheran Campus Ministry. Conveners: Sustainability major Loni Amundson and the Rev. Gary N. McCluskey. Final session. Information: (763) 923-3276.

### Wednesday, Dec. 3

**Reception for Board of Regents appointee LuAnn Leonard**. 2-6 p.m., Armstrong Hall (LAW), Steptoe & Johnson Rotunda. Conducted by the College of Law's Indian Legal Program. Information: (480) 965-4637 or Sunny.Larson@asu.edu.

### Thursday, Dec. 4

**University Club Annual Holiday Celebration**, 5-8 p.m., University Club. Complimentary hors d'oeuvres, cash bar. R.S.V.P.: (480) 965-0701 or [debi.smith@asu.edu](mailto:debi.smith@asu.edu).

## EMPLOYMENT

The following positions are available as of Nov. 21 and are subject to change. All positions will be advertised in *Insight* only once. The staff requisition or job order number for each position is indicated by the (#) sign. ASU is an equal opportunity-affirmative action employer.

### ASU POSITIONS

A complete job announcement for classified, administrative and service professional positions at the Downtown Phoenix, Polytechnic, Tempe and West campuses is available on the Human Resources Web page at [www.asu.edu/asujobs](http://www.asu.edu/asujobs), or the Telecommunication Device for the Deaf at (480) 965-3002.

For complete position descriptions and application requirements for academic positions, contact the appropriate department listed below. Faculty, academic professional and graduate assistant positions are also listed on the Human Resources Web sites and details must be obtained from the hiring department. Application deadlines are listed.

Dates listed are application deadlines, and application material is due by 11:59 p.m. on that date. Positions are 100 percent, full-time employment (FTE) unless otherwise noted. Code below is: (O) – position is open to the public.

### STAFF POSITIONS

#### TEMPE CAMPUS

##### Professional

**Accountant** (O) #21567 – Business and Finance – Student Business Services (Dec. 1).  
**Financial Aid Counselor** (O) #21466 – VP University Student Initiatives – Student Financial Assistance (Nov. 26).  
**Laboratory Coordinator** (O) #21571 – School of Life Sciences (Dec. 2).  
**Nurse Practitioner** (O) #21520 – VP University Student Initiatives – Campus Health Service (Dec. 12).  
**Program Coordinator (part-time)** (O) #21553 – College of Education (Dec. 3).  
**Research Advance Specialist Senior (part-time)** (O) #21560 – Ira A. Fulton School of Engineering (Dec. 3).  
**Specialist** (O) #21575 – School of Life Sciences (Dec. 2).  
**Specialist** (O) #21566 – School of Earth and Space Exploration (Nov. 26; every week thereafter until the search is closed).

#### DOWNTOWN PHOENIX CAMPUS

##### Professional

**Office Specialist** (O) #21573 – University College (Dec. 1).

### ACADEMIC POSITIONS

#### TEMPE CAMPUS

**Graduate Research Assistant/Associate** – College of Liberal Arts & Sciences – ACMRS (Nov. 24).



**Graduate Programs Information Session**, 6 p.m., Faculty and Administration Building (FAB) West campus. Information: (602) 543-4622.

■ **Friday, Dec. 5**

**Ollie's Storybook Adventure**, 10-11 a.m., Deer Valley Rock Art Center, 3711 W. Deer Valley Road, Phoenix. Today's theme is "Desert Tortoises." For children ages 3-6. Admission. Information and reservations: (623) 582-8007.

**Holiday Poetry Reading**, 1-3 p.m., Durham Language and Literature Building (LL) room 316. Sponsored by Department of English and the English Club. Information: (480) 965-7611.

■ **Tuesday, Dec. 9**

**"Let's Talk About It: Jewish Literature,"** 7 p.m., Hayden Library room C6A/East. The final book is "Neighbors: The Destruction of the Jewish Community in Jedwabne, Poland," a nonfiction book by Jan T. Gross. Information: Rachel Leket-Mor, (480) 965 2618.

■ **Wednesday, Dec. 10**

**45th Annual ASU-JPMorgan Chase Economics Forecast Luncheon**, 11:15 a.m.-1:30 p.m., Phoenix Civic Plaza South Ballroom, Third Street and Jefferson Avenue, Phoenix. Admission. Information and reservations: wpcarey.asu.edu/ecr/efl or (480) 965-3531.

■ **Friday, Dec. 12**

**Christmas Sing-Along**, 12:30-1:30 p.m., Danforth Chapel. Sponsored by ASU Carillon Society. Information: (480) 965-4921.

## Events and Performances

\*Indicates tickets are available at Herberger College of Fine Arts Box Office, Nelson Fine Arts Center, (480) 965-6447.

\*\*Indicates tickets are available at ASU Gammage, Mill Avenue and Apache Boulevard, (480) 965-3434; ASU Kerr Cultural Center, 6110 N. Scottsdale Road, Scottsdale, (480) 596-2660.

■ **Friday, Nov. 21**

**"Happy Days – A New Musical,"** 7:30 p.m., ASU Gammage. The musical reintroduces us to Richie, Potsie, Ralph Malph and the unforgettable "King of Cool," Arthur "The Fonz" Fonzarelli. Other performances: 2 and 7:30 p.m., Nov. 22; 2 and 7 p.m., Nov. 23.\*\*

**Percussion Jazz Ensemble**, 7:30 p.m., Katzin Concert Hall.

**"Don Pasquale,"** 7:30 p.m. Evelyn Smith Music Theatre. The elderly Don Pasquale plans to take a wife and beget an heir, but a meddling nephew, who stands to lose his inheritance and his love, conceives a comic plot to win both. Other performances: 7:30 p.m., Nov. 22, Dec. 3, Dec. 5-6; 2 p.m., Nov. 23.\*

■ **Sunday, Nov. 23**

**"Sontines for a Sunday,"** 7:30 p.m., Katzin Concert Hall. Faculty artists Elizabeth Buck, flute, and Andrew Campbell, piano, perform the well-known Sontines by Burton, Dutilleux and the rarely performed Boulez Sonatine.\*

■ **Tuesday, Nov. 25**

**ASU Pan Devils Steel Band**, 7:30 p.m., Katzin Concert Hall. Band members evoke the litting West Indies sounds of the steel drum, or pan.

■ **Sunday, Nov. 30**

**Reed Family Holiday Show**, 3 p.m., ASU Kerr Cultural Center, Scottsdale. You'll be treated to the remarkable blend of R&B, jazz and gospel that only the Reeds can deliver.\*\*

■ **Monday, Dec. 1**

**ASU Latin Jazz Band**, 7:30 p.m., Katzin Concert Hall.

■ **Tuesday, Dec. 2**

**ASU Jazz Repertory Band**, 7:30 p.m., Katzin Concert Hall.

■ **Thursday, Dec. 4**

**"Pass in Review,"** 7:30 p.m., ASU Gammage. The Sun Devil Marching Band reprises the football season. Also, ASU Wind Bands present "A Child's Garden of Dreams," a multimedia production.\*

**"Anon(ymous),"** 7:30 p.m., Paul V. Galvin Playhouse. Loosely based on "The Odyssey," this play by Naomi Iizuka is a poetic journey of a young boy who has been separated from his family and his country by war. Also at 7:30 p.m., Dec. 5-6; 2 p.m., Dec. 7. Suitable for youths and adults.\*

■ **Friday, Dec. 5**

**Arizona Contemporary Music Ensemble**, 7:30 p.m., Katzin Concert Hall. The ensemble performs contemporary, avant-garde music written in the last two decades.

■ **Sunday, Dec. 7**

**Holiday Concert**, 2:30 p.m., ASU Gammage. Presented by ASU Symphony Orchestra and Choral Union. Program includes "Chanson Joyeuse," "Fantasia on We Three Kings," "A Christmas Garland," "Festive Sounds of Hanukkah" and more.\*\*

**African Drum Ensemble**, 7:30 p.m., Evelyn Smith Music Theatre.

■ **Monday, Dec. 8**

**Holiday Choral Showcase**, 7:30 p.m., Camelback Bible Church, 3900 E. Stanford Dr., Paradise Valley. Admission. Information: (480) 965-8863.

■ **Tuesday, Dec. 9**

**Tuesday Morning Music and Tea**, 10:30 a.m., ASU Kerr Cultural Center, Scottsdale. ASU's Viola Studio is featured. Free, but R.S.V.P. required: (480) 596-2660. Bring a can of food or sealed personal item for Vista del Camino food bank.

**"Spring Awakening,"** 7:30 p.m., ASU Gammage. This musical, which has won eight Tony Awards, is a groundbreaking fusion of morality, sexuality and rock 'n' roll. Other performances: 7:30 p.m., Dec. 10-12; 2 and 7:30 p.m., Dec. 13; 2 and 7 p.m., Dec. 14. Mature themes, sexual situations and strong language.\*\*

■ **Sunday, Dec. 14**

**Annual Organ Christmas Concert**, 2:30 and 5 p.m., Organ Hall. Performing: Goldman Professor of Organ Kimberly Marshall and the ASU Organ Studio.\*

## Exhibitions

**ASU Gammage**—1-4 p.m., Monday. Information: (480) 965-6912.

Through Dec. 15, Photography by Rhet Andrews; acrylic on canvas by PSA Art Awakenings.

Opens Dec. 18, Mixed media by Mesa Art League.

**The Galleria**—8 a.m.-6 p.m., Monday-Friday, located in Mercado Building C, 502 E. Monroe St., Phoenix. Information: (602) 496-1500.

Opens Dec. 1, "Artists on Parade" is a colorful exhibit of photography and paintings by the Paradise Valley Artists League. First Friday participant Dec. 6, 6-9 p.m.

## Defenses

**Trudy Sherman**, PhD, Comp. Sci., 9 a.m., Nov. 21, BYENG 420.

**Marion Vance**, PhD, Mech. Engr., 9:30 a.m., Nov. 21, ISTB2 299.

**Monica Butler**, PhD, Hist., 10 a.m., Nov. 21, COOR 4403.

**Melissa Cunningham**, PhD, Ed. Psy., 10 a.m., Nov. 21, EDB 311B.

**Krishna Biligiri**, PhD, Civ. and Envr. Engr., 10:30 a.m., Nov. 21, GIOS 401.

**Seth Marshall**, PhD, Ed. Psy. (Schl. Psy.), noon, Nov. 21, EDB 311B

**Ashwin Ashok**, PhD, Elec. Engr., 2 p.m., Nov. 21, ECG 214.

**Jay Schwartz**, PhD, Chem. Engr., 9:40 a.m., Nov. 24, ENGR 490.

**Matthew Cooper**, PhD, Phil., 10 a.m., Nov. 24, COOR 3323.

**Tamer Helmy**, PhD, Bio., 10:30 a.m., Nov. 24, ECG 250.

**Qinghai Gao**, PhD, Elec. Engr., 11:10 a.m., Nov. 24, GWC 208.

**Rishu Saxena**, PhD, Math., 12:15 p.m., Nov. 24, PSA 206.

**Michelle Benavides**, PhD, Hist., 12:30 p.m., Nov. 24, COOR 4411.

**Myoungsoo Ham**, PhD, Ind. Engr., 1 p.m., Nov. 24, GWC 510.

**John LeDoux**, PhD, Span., 1 p.m., Nov. 24, LL 165.

**Tanya Soule**, PhD, Microbio., 1 p.m., Nov. 24, PSC 101.

**Jesse Tice**, PhD, Chem., 3 p.m., Nov. 24, PSC 107.

**Sridhar Balasubramanian**, PhD, Mech. Engr., 10:15 a.m., Nov. 25, GWC 409.

**Anthony Griffith**, PhD, Curr. and Instr. (Lang. and Lit.), 11 a.m., Nov. 25, ED 425.

**Wolfgang Stefan**, PhD, Math., noon, Nov. 25, PSA 206.

**Ma. Del Carmen Amato-Tejeda**, PhD, Span. (Lit.), 2:30 p.m., Nov. 25, LL 165.

**William Lambert**, PhD, Elec. Engr., 3 p.m., Nov. 25, ENGR 490.

## 'About a Bear': Film debuts at First Friday event

Film screening and art show to debut at Bragg's Pie Factory Dec. 5

"And Everything Was Alright" is a story about a bear. But it's not that simple.

It's a film, a picture book and the subject of an upcoming art show – as well as the beginning of a homegrown production company, Placeholder Films, and a saga that explores, through different media, the adventures of "Bear" in both human and non-human worlds.

That the project belongs to ASU staff members Robert Kilman, a technical support analyst at the West campus' new media studio, and Safwat Saleem, a graphic designer in the office of university initiatives on the Tempe campus, appears irrelevant since the duo claim they decided to make a film simply because they lived close to one another – and because Saleem had always wanted to make a movie.

"This is my first film," says Saleem, who long ago had begun writing what would become the film's prologue – a story about a brokenhearted bear with a hankering for space travel.

"Bear is anyone who ever tried to fit in but couldn't," he says.

"He's an outsider," adds Kilman. "He is the odd duck out."

And indeed he is. Donning a red shirt with blue-jean overalls, Bear hardly can be considered inconspicuous amongst the humans he encounters in his day-to-day business. As viewers, we experience Bear's ability to stand out and be exposed as he makes his way around town, to the café and to the grocery store – to shop for honey, naturally. Kilman and Saleem's strikingly minimalist shots lend themselves to the stylish and subtle qualities of indie filmmaking, and help emphasize Bear's overt attributes, much to the viewer's delight. The film contains no dialogue.

"It would be nice if Bear could fit in,



The indie film "And Everything Was Alright," featuring a bear as its main character, will debut at Bragg's Pie Factory Dec. 5.

and he tries very hard," Saleem says. "Ideally, he'd like to stay with people and make friends."

But Bear has other plans. Obsessed with space and building rockets, Bear is a character determined to fit in and find happiness – even if it is on another planet.

Kilman, an ASU West alumnus with a master's degree in digital media performance, notes that although the story is predicated on the fact that Bear is a loner, the public's response to the character had been quite the opposite.

"Bear is a lovable, sympathetic character," says Kilman in describing the grocery store scene that was filmed in a local Sunflower store. "Kids loved him. Adults just wanted to get their broccoli."

Along with the grocery store, images of Tempe's Three Roots coffee shop and suburban Phoenix are easy to discern from the movie's on-location film shots. The actors in the movie are students, staff and faculty from the ASU community. Assistant professor Barry Moon appears in the film and in the Web site's "I Hate Bear" videos as the bear-hating character, further symbolizing Bear's struggle to be accepted.

Despite a lack of funding and the time constraints that come with full-time jobs, Saleem and Kilman found the indie filmmaking experience to be extremely rewarding. They are looking

forward to the film's debut, along with the art show and picture book release, at Bragg's Pie Factory in downtown Phoenix, part of the First Friday art walk Dec. 5.

"We were very glad to come across Braggs," Saleem says. "The art community can be somewhat of a clique and open to ideas among them, but outsiders' ideas are not necessarily welcome. Braggs does a wonderful job at promoting the entire art community."

The storybook, geared toward young and older readers alike, will be on sale (along with DVDs of the film) at Braggs Pie Factory, where enlarged images from the book will be presented on the gallery's walls in a traditional art show format. The film's debut screening will take place in the gallery as well, playing every half-hour from 6 p.m. to 9 p.m.

"With myself as a graphic designer and Robert's background in film, it made sense for us to pursue different media and collaborate on this," Saleem says. "While each medium can stand on its own, it is part of a more comprehensive collection."

For a peek at the movie trailer, picture book and art exhibition that will be on display until Dec. 19, visit the Web site [www.andeverythingwasalright.com](http://www.andeverythingwasalright.com).

Bragg's Pie Factory is located at 1301 W. Grand Avenue in Phoenix.



# Study finds link between water availability, distress

By Rebecca Howe

Thirsty? Imagine the fear, anxiety and desperation of not knowing when or from where you will get your next sip of water. Consider the shame of begging for or borrowing enough water to meet the basic needs of you and your family.

This may seem like a nightmare, but it is a sad reality for many impoverished people around the world. And with water levels dropping and potable water supplies becoming scarcer, the scope of this suffering undoubtedly will spread.

Amber Wutich, a cultural anthropologist in ASU's School of Human Evolution and Social Change, is taking an in-depth look at the pressing issue of water insecurity and how it affects people on an emotional level. Along with Kathleen Ragsdale, an assistant professor of anthropology at Mississippi State University, Wutich has produced the first systematic study of intra-community patterns of water insecurity in an urban setting. Their findings will appear in an upcoming edition of *Social Science & Medicine*.

For the scene of the study, Wutich and Ragsdale chose what just could be the ideal place for researching water issues: Cochabamba, Bolivia, site of the famed "Water War" of 2000. Specifically, they worked in Villa Israel, a squatter settlement on the fringes of the South American metropolis. What they found during the course of their work in the region carries global resonance and is particularly pertinent to areas of persistent drought.

"The study revolved around three aspects of water insecurity: insufficient access to water distribution systems, inadequate water

supply and dependence on seasonal water sources," Wutich says.

The results point to a significant link between emotional distress and access to water distribution systems, but virtually no relationship to water supply or dependence on seasonal water sources. In addition, the women in the study reported feeling more emotional distress than the men.

But the crux of the findings is that social inequities and the perception of unfairness and instability of the water distribution system are the major players in creating emotional distress, not the lack of water itself.

"I think that's understandable," says Wutich, relating the results to one of our nation's recent crises, Hurricane Katrina. "What was it that caused the most emotional distress: the hurricane itself, or the fact that some people felt that government resources were not distributed across communities in a fair way?"

Wutich, who is a core faculty member in ASU's Center for the Study of Institutional Diversity, began the ethnographic field study of Villa Israel in 2004 and concluded it with another visit last summer. The study was based on interviews with the heads of 72 households. The interviews were held four times a year to cover all seasons, from the rainiest to the driest. Each interview lasted an average of 65 minutes, and were conducted in Quechua, Aymara and Spanish, the main languages of the ethnically diverse community.

Cochabamba is buzzing with development and commerce, and it draws people from all over with the promise of employment. Most come to work in the open-air market, said to be the largest

in South America. And many of those who wind up in far-flung settlements such as Villa Israel face one-way work commutes of 45 minutes, followed by workdays of up to 16 hours.

That leaves little time for obtaining water from vendors, natural sources or elsewhere. Four or five water trucks circulate daily with 10,000-liter loads, transferring their cargo to those who can afford it. Wealthier clients often buy entire loads, depriving poorer customers of water for days at a time unless they have access to other sources, which often is not the case.

But Wutich says the spirit in the young community is strong — and improvements are occurring, thanks to the hard work, sacrifice and drive of locals who are motivated to improve residents' quality of life. As a result of their efforts, there are two schools, a clinic, 14 churches and numerous bridges and canals in the area.

But water insecurity remains, as do the emotional repercussions evidenced by Wutich's and Ragsdale's study.

Wutich is expanding her research on water insecurity by planning for a study of 40 squatter settlements and coordinating with CEDIB (Centro de Documentación e Información Bolivia), a community organization in Bolivia, to create a research base that will expedite the processing of field data. In the meantime, Wutich's and Ragsdale's findings have been made available to organizations in Cochabamba with the hope they will help the people, and local government, better understand and deal with the issue.

Howe, with the School of Human Evolution and Social Change, can be reached at (480) 727-6577 or [rebecca.howe@asu.edu](mailto:rebecca.howe@asu.edu).

## Professor's expertise infuses bilingual encyclopedia with intellectual heft

(Continued from page 5)

The encyclopedia contains more than 300 articles and 1,000 pages of text.

González, an early innovator in bilingual and dual-language education, served as the first director of the Office of Bilingual Education and Minority Language Affairs during former President Jimmy Carter's administration. He has served on several advisory commissions engaged in the field and has been president of the National Association for Bilingual Education.

Bilingual education has figured prominently throughout González' life. He was born in Texas within walking distance of the Mexican border and, because he had Spanish-speaking teachers, he assumed bilingualism was the norm.

"I've been bilingual all my life, so essentially I've been in this field for more than 60 years," he says.

Throughout his career as a language teacher, academic researcher and leader of

discourse about bilingual education policies, González has questioned the role of language in education. He has seen school curricula shift from bilingual programs that inspired students and teachers to succeed academically to the implementation of laws such as Proposition 203 (English for Children), which made bilingual education illegal in Arizona, and criminalized undocumented immigration to the United States.

"At ASU, we have an outstanding body of expertise in the field," he says. "We are loaded for bear at a time when the demand for bilingual education teachers has waned somewhat, at least in Arizona. Other states are still looking for bilingual education teachers and have a rising demand. The families who benefit from bilingual education tend not to be politically active or even speak English, so they don't have a way of expressing their interest in having the program to serve their children."

González argues that the role of language

in education supports human development, intergroup relations and respect for other cultures. Yet he believes the public doesn't grasp the depth of professional knowledge underscoring bilingual education because it is so highly politicized that it becomes distorted as anti-American.

He also says journalists have written narrowly on the subject and haven't fully informed the public, which is why he envisions his audience for the encyclopedia as a young journalist assigned to write a deadline piece on bilingual education.

González says indigenous languages disappear every year, and linguists have determined that English, Chinese and Spanish are the top three languages in the world. He says the Internet has had a profound effect on language choice, because more and more people use English to navigate the World Wide Web.

"In the American Southwest, we already use two of these languages widely, but English is pandemic," he says. "It's the language

of the universe. We're beaming it into outer space. The pervasive nature of English will continue because it's all over the world, but we're the only country that believes things would be better if we only concentrated on English to the exclusion of all other languages. It's a very retrograde view.

"We don't know how to teach languages in this country, even our own. Each year there are more people who don't speak English, and we can't teach them fast enough — so it looks to the casual observer as if some people are refusing to speak English."

Because ASU is an epicenter of knowledge in the field of bilingual education, González tapped many of his colleagues for their contributions to the encyclopedia along with other national and international experts.

"We have a tremendous knowledge base with experts in linguistics, language, language methods and ESL at ASU," he says.

Martin, with the College of Education, can be reached at [verina.martin@asu.edu](mailto:verina.martin@asu.edu).

## In BRIEF

### Faculty-staff appreciation day set for Nov. 23

In appreciation for their support of the university's student-athletes and their academics, all ASU faculty and staff members are invited to the men's basketball team's Nov. 23 game against Pepperdine and can receive two free tickets to the game.

The free seats are located in the mezzanine level of Wells Fargo Arena on the Tempe campus.

To access the ASU Faculty/Staff Appreciation order form, visit the Web site [http://thesundevils.cstv.com/photos/schools/asu/sports/m-baskbl/auto\\_pdf/mbb-0809-fac-staff-day-info.pdf](http://thesundevils.cstv.com/photos/schools/asu/sports/m-baskbl/auto_pdf/mbb-0809-fac-staff-day-info.pdf).

ASU faculty and staff members should bring the completed order form to the Sun Devil Ticket Office on or before game day to receive the tickets. Complete redemption instructions are on the order form.

### Ad space available in orientation handbook

ASU and New Student Orientation will welcome more than 9,500 new students and 9,500 new parents to ASU's Downtown, Polytechnic, West and Tempe campuses next fall.

These students and parents will participate in ASU orientation programs before attending ASU. Each orientation attendee will receive an orientation handbook, which is the essential document for new students and parents to be used throughout their first year at ASU.

Advertising space is available for purchase in the "Sponsor" section of the handbook. This section of the handbook provides ASU departments with an opportunity to advertise services to new students and families.

Advertising space is limited, so please reserve space by Dec. 1.

For more information on space, sizing and pricing, contact Brett Ebling at (480) 965-2880 or [brett.ebling@asu.edu](mailto:brett.ebling@asu.edu).

### ASU Libraries officials issue friendly reminder

As the semester comes to a close, the ASU Libraries offer tools for faculty and students to manage their library accounts from anywhere in the world.

All users can log into their library account online at [www.asu.edu/lib](http://www.asu.edu/lib) to check due dates, renew items and verify that the correct e-mail address is associated with their account.

Users also can renew their items by phone at any time by calling (480) 965-2595. As material due dates may change because of recalls by other users, it is important to monitor online accounts and e-mail notifications to be alerted to those changes as soon as possible.

For users' convenience, the ASU Libraries offer several exterior book returns to return materials 24 hours a day, seven days a week. Materials can be returned to any library book return, regardless of which library they were checked out from.

Users are asked to note that library staff can process returned materials daily even if the library isn't open, so due dates will be enforced accordingly.

For more information about library services during the intersession and summer sessions, contact a specific library location. Contact information and hours for each location can be found on the ASU Libraries' Web site [www.asu.edu/lib](http://www.asu.edu/lib).

### Mail Services to continue courier service

University Mail Services has announced the continuation of its courier service operation for the ASU campus community.

Information previously released from Mail Services to faculty and staff indicated that, because of financial constraints, this service would be provided by an outside vendor. However, Mail Services administrators have arranged for the courier service to be sustained within the University. As a result, ASU colleges and departments can continue to rely on Mail Services to make same-day deliveries to recipients across all four ASU campuses.

Although a slight price increase of about 5 percent to 10 percent is necessary, the university-operated courier service will maintain its competitive rates.

Signature capture and tracking of items by the sender is an

added feature of this courier service. ASU business systems ordered from the ASU Print & Imaging Lab, such as letterhead, envelopes and business cards, also will continue to be sent via the Mail Services courier service.

To arrange for a courier pick-up, call (480) 965-1263, 7:30 a.m. to 4:30 p.m., Monday through Friday.

### Award application forms available on Web

Application forms for the President's Award for Innovation and the President's Medal for Social Embeddedness can be downloaded at the Web site [www.asu.edu/recognition.html](http://www.asu.edu/recognition.html). Teams and individuals who are working on projects or programs that meet the criteria for these awards are encouraged to apply.

The submission deadline is Jan. 15.

The President's Award for Innovation recognizes ASU employees for innovations that improve educational, administrative or other organizational processes through creative approaches. The innovation can be an original program, project, initiative or technique that has been implemented and has demonstrated sustained, positive results for at least one year.

The President's Medal for Social Embeddedness recognizes ASU employees who have worked as departmental, interdepartmental or transdisciplinary teams that have demonstrated excellence in embedding ASU in the social and cultural fabric of our surrounding communities.

Social embeddedness at ASU is an interactive and mutually beneficial partnership with the communities of Arizona. Only programs or projects that have been implemented since Aug. 1, 2002, and have demonstrated positive results will be considered for the award.

The project must be institutional work done in the name of ASU, rather than individual or group community service.

A writer's briefing will take place at ASU's Tempe campus from 10 a.m. to 11:30 a.m., Dec. 10, for those interested in submitting an application. This session will provide tips on organizing and writing applications.

To register, contact Linda Uhley at (480) 965-5089 or [uhley@asu.edu](mailto:uhley@asu.edu) at least three days before the session.



## New Orleans provides setting for Rhodes' 2nd book in voodoo trilogy



Jewell Parker Rhodes says her first love in literature is writing stories about significant events and people in the past. Her newest book, "Yellow Moon," is the second book in a trilogy about voodoo, set in contemporary New Orleans.

By Judith Smith

**K**ind Dog is back, as is Dr. Marie Laveau. But an unwelcome character joins them in Jewell Parker Rhodes' newest book, "Yellow Moon," the second book in a trilogy about voodoo, set in contemporary New Orleans.

Wazimamoto – a vampire who drains the blood out of innocent people – is the sinister presence in "Yellow Moon."

The creature begins to make his presence known as the book opens, giving the reader a clue that something supernatural is beginning to happen, and that it is not good.

"Drifting in darkness, lost in the vast Atlantic, it woke. Where had it been? Where was home? No answer. Only longing as it drifted in icy waters, among currents and tides, shipwrecks and murdered slaves' brittle bones.

"What was it? Who?"

"It couldn't remember."

Laveau, the fictional great-great-granddaughter of legendary 19th century voodoo queen Marie Laveau, is at home in her New Orleans apartment with Kind Dog, her good and faithful canine friend, and her adopted daughter, Marie-Claire, when she is summoned to Charity Hospital.

At the emergency room, however, she learns that she has been called to view a corpse, not a living patient in critical condition.

The victim, a dockworker, shows no apparent cause of death. But the body has been mysteriously drained of blood.

"The body wasn't much more than a skeleton, brown flesh stretched over bone. Lying on the gurney – bones stiff, skin deflated – the body seemed a cruel joke. A papier-mâché or woodcut of a body. A made thing, not a dead man."

More people are found dead, drained of blood, and it becomes apparent that the killer is after Laveau, too.

"Voodoo Season," the first book in the trilogy, introduces

the contemporary Laveau, who changes her name from Marie Levant to Marie Laveau after she begins to feel the stirrings of her spiritual gift, which she inherited from her great-great-grandmother, and moves from Chicago to New Orleans.

The murder-mystery series actually is a spinoff of Rhodes' first New Orleans book, "Voodoo Dreams: A Novel of Marie Laveau," which was historical fiction. (Those who have read "Voodoo Dreams" will begin to figure out who the murderer is in "Yellow Moon" as the book comes to an end.)

Writing the murder mysteries – which also contain a bit of romance – was a chance for Rhodes, who is known for her historical fiction, to "stretch her wings as a writer," she says.

She is working on the third book in the series, "Hurricane Levee Blues," which is about New Orleans post-Katrina – and the discriminatory practices and subsequent injustices residents suffered after the hurricane.

Rhodes additionally is writing a children's book, "The Ninth Ward," which also focuses on New Orleans' residents suffering after the hurricane.

The murder mysteries and children's stories are but a side road for Rhodes, whose first love still is writing stories about significant events and people in the past.

"I plan to write more young-adult literature, then go back to my historical fiction," Rhodes says.

Though she usually bases her stories on historic people and events, her segue into New Orleans after Katrina was accidental.

"'Voodoo Season' was published the day Hurricane Katrina hit New Orleans and the levees broke," Rhodes says. "I have never worked on a book where present-day history has influenced in so much."

Smith, with Media Relations, can be reached at (480) 965-4821 or [jps@asu.edu](mailto:jps@asu.edu).

## In PRINT

*In Print* highlights books written by ASU employees. To submit a summary of a recently published work, send it via e-mail to [asu.insight@asu.edu](mailto:asu.insight@asu.edu). A reproducible cover of the book may accompany the submission.

### "Javelinas" by Conrad Storad, director of ASU Research Publications, Lerner Publishing, 2008

The Sonoran Desert is filled with interesting creatures of many shapes and sizes. Myths abound. "Javelinas" is one of two new books by Storad, director of ASU's Office of Research Publications. The javelina is often misunderstood. Lots of folks think of it as a wild pig, but they should never call a javelina a pig.

Storad's easy-to-read text serves up plenty of facts and less fiction. "Javelinas" is part of Lerner Publishing's award-winning Early Bird Nature Book series for readers in the second through fourth grades.

### "Galápagos Tortoises" by Conrad Storad, director of ASU Research Publications, Lerner Publishing, 2008

Giants still roam the Earth, but people must travel to the Galápagos Islands to find them. "Galápagos Tortoises" is another new book by Storad, editor of the nationally acclaimed *ASU Research Magazine*. Charles Darwin was fascinated by the giant reptiles when he visited the islands in 1831, and so are young readers today. Storad uses easy-to-read language to describe the life cycle of these amazing, but endangered, creatures. The text is supported by lots of colorful photographs. This book is the newest addition to almost 100 titles in the Early Bird Nature Book series from Lerner Publishing.

### "Biophysical Chemistry" by professor of biochemistry James Allen, Wiley-Blackwell, 2008

This book is oriented specifically toward students with a biochemistry or biophysical background with extensive examples from biological systems. This book enables students to understand the importance of thermodynamics and physical chemistry in relation to recent advances in biochemistry. The text lays out the necessary calculus in a step-by-step fashion for students who are less mathematically inclined, leading them through fundamental concepts, rather than simply stating outcomes.

### "Introduction to Chemistry" by professor of chemistry Pamela Marks et al., McGraw-Hill Higher Education, 2009

Marks is co-author of "Introduction to Chemistry" with Richard Bauer and James Birk. The style and format of the textbook are based on the authors' many years of experience in the classroom, as well as educational research on how students learn. The book is very interactive, with a conceptual molecular-level emphasis. Many examples are introduced in each chapter to show how chemistry affects our daily lives.

### "Photosynthetic Protein Complexes" by professor of biology Petra Fromme, Wiley-Blackwell, 2008

Fromme is the editor of "Photosynthetic Protein Complexes" (published by Wiley-Blackwell), with contributions from other members of the department, including Ingo Grotjoham, James Allen, JoAnn Williams and Raimund Fromme. Fromme gives a comprehensive overview of photosynthesis, arguably the most important biological process on Earth.

This book is essential for anyone involved with photosynthesis and structural biology. The very complex photosynthetic process, apart from its obvious importance, is proving to be key as humans strive to replace fossil fuels with renewable resources. This book should prove very attractive to teachers and researchers for, among other things, its intricate color pictures of protein structures that are freely available to download.

### "Aztec City-State Capitals" by professor of archaeology Michael E. Smith, University of Florida Press, 2008

The Aztecs ruled much of Mexico from the 13th century until the Spanish conquest in 1521. Outside the imperial capital of Tenochtitlan, various urban centers ruled the numerous city-states that covered the central Mexican landscape.

"Aztec City-State Capitals" is the first work to focus attention outside Tenochtitlan, revealing that these dozens of smaller cities were the central hubs of political, economic and religious life integral to the grand infrastructure of the Aztec empire.

Focusing on building styles, urban townscapes, layout and design, Smith combines two archaeological approaches: monumental (excavations of pyramids, palaces and public buildings) and social (excavations of houses, workshops and fields). As a result, he is able to integrate the urban built environment and the lives of the Aztec

peoples as reconstructed from excavations.

Smith demonstrates the ways in which these city-state capitals were different from the imperial capital, Tenochtitlan, and convincingly argues that urban design was the direct result of decisions made by political leaders to legitimize their own power and political roles in the states of the Aztec empire.

This book is the inaugural volume in a new series.

### "A Guide to the Mammals of China," edited by associate professor of life sciences Andrew T. Smith and Yan Xie, Princeton University Press, 2008

China's stunning diversity of natural habitats – from parched deserts to lush tropical forests – is home to more than 10 percent of the world's mammal species. "A Guide to the Mammals of China" is the most comprehensive guide to all 556 species of mammals found there.

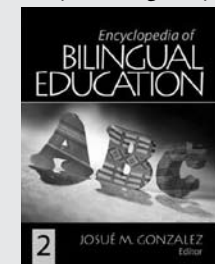
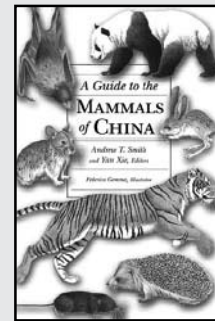
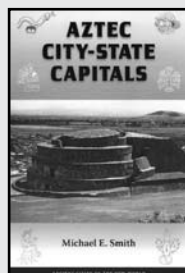
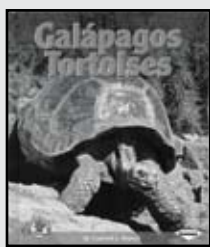
It is the only single-volume reference of its kind to fully describe the physical characteristics, geographic distribution, natural history and conservation status of every species.

An up-to-date distribution map accompanies each species account, and color plates illustrate a majority of species. It was written by a team of leading specialists, including professor Wang Sung, who provides a history of Chinese mammalogy.

### "Encyclopedia of Bilingual Education" by Josué M. González, professor of educational leadership and policy studies, Sage Reference, 2008

The encyclopedia links bilingual education to its many areas of direct socio-cultural impact, including issues of language and literacy, diversity, education equity and the effects of shifting demographics across the United States.

González selected expert authors as contributors for the project from a wide range of disciplines, including applied linguistics, politics, civil rights, history and education. He also developed a unique journalistic style, using essays rather than traditional encyclopedic entries as a way to communicate with lay readers. The encyclopedia is designed to be a first-stop library reference with cross-references to related works and bibliographic entries of more in-depth research. It contains more than 300 articles and 1,000 pages of text.





## 'Early literacy coaches' take their message to the streets

By Steve Des Georges

A field experience internship program in ASU's College of Teacher Education and Leadership (CTEL) is giving its students exposure to the importance of literacy in a child's early years, in addition to providing the professional development necessary for the next generation's teachers.

The program, like many featured in the West campus college's curriculum, is a hands-on, real-world experience. This one, the Early Childhood Community-Based Field Experience internship, features a unique partnership with the Burton Barr Central Library in downtown Phoenix.

One opportunity, "First Five Years/Book Bridges," places first-semester junior students in the library, providing one-to-one assistance to parents, families and center caregivers using the library's space, materials, activities and early literacy information. Another internship, the "Book Blast" program, gives the students a chance to provide literacy support for school-age children in Phoenix Afterschool Center (PAC) program sites.

Maureen Gerard, CTEL's director of professional field experience, says the internship closely mirrors the college's mission of meeting the needs of all children.

"Our goal is to enlarge the horizon of our students so that they recognize that the walls of a classroom are very 'permeable,' and that teaching and learning begin with and include the larger community," the second-year director says. "This internship is thoughtfully aligned with our mission, and 'all children' includes those who are in foster care and in high-needs districts."

The First Five Years/Book Bridges internship features students, "early literacy coaches," assisting library staff with developing and displaying early literature information, interactive display materials, signs, and other marketing materials. The coaches then conduct action research projects to determine the effectiveness of marketing in the First Five Years/Book Bridges space.

The projects also could identify the strengths and weaknesses of displays and programming targeted for families using the space. Some coaches also assist library staff with story hours, parent workshops, trainings, story times and baby times, and other early childhood programs.

"Early literacy interns work 'in-house' at the library, providing support and enthusiasm during heavily attended preschool-age storytime programs," says Erin MacFarlane, an assistant librarian at Burton Barr. "They develop valuable literature-based projects focused on early literacy traits to share with young children and parents visiting the First Five Years area of the library."

"Many families make a point of visiting the library when the interns are present, because they particularly enjoy the activities the interns provide."

The interns also visit Book Bridges library outreach sites,



ASU education student Danielle Gonzales is one of many College of Teacher Education and Leadership "early literacy coaches" taking an important message to the community's youth.

where they observe and contribute to preschool-age storytimes provided in child care settings.

Among the PAC sites receiving CTEL student support are Valley View Elementary School in the Roosevelt School District; Desert View Elementary in the Washington Elementary School District; Griffith Elementary in the Balsz Elementary School District; and Maryland Elementary in the Washington School District.

PAC is a city-funded after-school and summer recreation program that provides a variety of age-appropriate developmental activities for children at 90 school-based sites throughout Phoenix.

Book Blast interns plan and present weekly storytimes and related activities for small groups of school-age children in a recreational program setting. The interns are supervised by a PAC librarian at Burton Barr, and the library provides books, storytime materials, and related resources for the interns.

Book Blast interns meet weekly with the PAC librarian weekly and present Book Blast programs at two sites weekly.

"The student interns are wonderful," says Beth Van Kirk, Librarian I for Outreach at Burton Barr. "They are higher education role models for children in our after-school programs. Many of the children the interns work with are impressed and inspired by the fact the interns are attend-

ing college, and that college students are spending quality time with them.

"ASU interns bring enthusiasm, energy and creativity to their internships. They are motivated and excited about their contact with children, and by the practical experience they gain."

One student, senior Danielle Gonzales, has participated in the Book Blast program, worked with preschool children in another block and first-graders in another, and also tutors two young students in reading and writing.

"Book Blast gives you the tools to create a fun literary experience," she says. "Doing this during my first block really helped me come out of my shell. I learned lots of great songs and books, transitional techniques and strategies to make reading fun."

Gonzales, a graduate of Tolleson Union High School in 2004, expects to receive her bachelor's degree in early childhood education in May.

"The field experience internship program this college offers is so important because not only does it prepare you for teaching, it prepares you to be a leader in the field," Gonzales says. "The program has made my passion for teaching grow even stronger. In each internship experience, I have met someone and learned something that has really touched me."

"This has given me a foundation to work with all ages, from birth to eight years, and in diverse settings. I feel prepared for teaching, and that I will be ahead of the average first-year teacher."

At the end of her Book Blast participation, Gonzales was offered a permanent position with the Phoenix Afterschool Center, filling her summers with storytimes. She currently is running a "Step Into Reading" site featuring a unique, leveled readers series that offers books at four carefully developed skill levels.

The field experience program offered by the teacher education college leads to a student teaching experience (Block IV) in two different settings: eight weeks in a pre-kindergarten classroom, and eight weeks in a kindergarten-through-third-grade classroom.

"These opportunities for hands-on learning and experience are exposing tomorrow's teachers to the roots of literacy," Gerard says. "They are also contributing to professional development in the field."

For Gonzales, the program is her first step into a career in teaching.

"I now feel confident that with a few years teaching experience I can be a leader in my field," she says. "I hope to further my education, specializing in early literacy, and I hope to create a literacy program and direct its implementation in a school district."

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## ASU graduate inspires middle school students' interest in math, science

Twenty-two students in a science class at Toltec Middle School in Eloy stirred chemicals and water into test tubes and carefully charted rising and falling temperature changes in their notebooks.

Amy Stump, 37, their science teacher, told the girls they didn't have to pull their hair back "because this experiment doesn't produce flames."

But she warned the class that if they mixed two of the chemicals together — calcium chloride and ammonia chloride — they would make chlorine gas, and "we'd have to clear the room."

The eighth-graders laughed. But they paid attention to their tiny teacher, a former foster mother who "is not just teaching science but is teaching students to become scientists."

Student Kavan Castorena, 14, agrees.

"She's awesome, he says. "I like the way she explains things to us."

Stump's high-octane teaching style and connection to her rural students has caught the attention of her colleagues. The Arizona Science Teachers Association, based at Northern Arizona University, named Stump its New Science Teacher of the Year for her work last year at Toltec.

Stump, who was one of five finalists for the award, was nominated by Katy Wilkins, Toltec's assistant principal and an ASTA board member.

"She is bringing hands-on science with labs to our kids who are out here where they don't have the resources that kids in the city do," Wilkins says. "It is much easier to get financial support in the Phoenix metro area."

Stump, a second-year teacher and 2007



Amy Stump, second from right, a graduate of the Mary Lou Fulton College of Education's TEAMS program, was named New Science Teacher of the Year for her work last year at Toltec Middle School in Eloy.

SUZANNE STARR PHOTO

graduate of ASU's Mary Lou Fulton College of Education, found the money. She won a \$1,000 grant from General Motors and the Discovery Channel to allow students to delve into the emerging science of sustainability. In one or two projects, they will design more efficient model cars with less wind resistance, and experiment with new ways to power the cars using solar and other forms of energy.

They also will use a computer program as a blueprint to design three-dimensional, eco-friendly communities that could use bamboo flooring, and recycled building materials to conserve natural resources.

After they have finished their models, the young scientists will sharpen their language-arts skills to write a six-page letter to the Secretary General of the United Nations to explain which strategies "hold the most promise for our future," Stump says.

Meanwhile, on a recent afternoon, Stump was guiding her students through a

lab exercise using ammonia, sodium, and calcium chlorides, each mixed separately with water. At the end of the 15-minute experiment, they understood how chemical codes affect the complex science of energy.

A year ago, Morgan Winemiller, 13, and her lab partner, Kyla Russ, 13, might have been less enthusiastic about science.

"Now it's my favorite class," Morgan says.

Carlos Griffin, 14, said he used to dread science classes.

"All we did was worksheets," he says. "But I like science now, because these experiments make me feel like I know what is happening."

Stump says five years of fostering troubled teenage boys with her husband, Darrel, in California has helped her tune into students at Toltec Middle School, where 70 percent of the 726 students qualify for free or reduced lunches.

"A lot of times students have frustrations," Stump says. "They will shut down, get down on themselves. I am able to talk them through that. That is one of my stronger points."

Stump earned her teaching certification and a master's degree through the TEAMS (Teacher Education for Arizona Math and Science) program. Conceptualized and established by the Fulton College in 1995 through funding from the National Science Foundation, this one-calendar-year, post-baccalaureate program leads to middle school endorsement, secondary school teacher certification and a master's degree in curriculum and instruction with an emphasis in science and mathematics.

"The combination of endorsement and certification makes graduates, some of whom were attracted to the program from business, industry and other graduate programs, eligible for teaching science and math in grades seven through 12," says Karen Wellner, program coordinator for TEAMS.

Stump's specialized training makes her an attractive candidate for other districts scrambling to find science, math and technology teachers. She has been courted by another district. But she said she plans to stay at Toltec Middle School, just off Exit 203 of Interstate-10, backdropped by mountains and wide expanses of desert.

"I like the atmosphere here," she says. "There is a lot of teamwork, and the principal is fantastic."

That's good news for David Ascoli, the school's principal.

"She gets it," he says of Stump's teaching style. "She respects her students, and they understand that."



## Growth strains state infrastructure

(Continued from page 1)

expenses account for 25 percent of the state's gross domestic product, but this may need to rise to around 30 percent over the next 25 years.

"The overall gap between projected revenue and expected need will be shared across the private sector, federal government, and state and local governments, with the state and local government share about \$11 billion per year beyond what is already being spent," Hoffman says. "Even with this additional spending, Arizona's per capita state and local government expenditures would barely be above the middle of the states, up from near the bottom currently."

To maintain and improve Arizona's quality of life and economic prosperity over the next 25 years, Arizonans can choose to:

- Build a telecommunications infrastructure that provides broadband connectivity to rural areas without such services, and provide fiber-to-the-home networks across the state for faster service.
- Develop an energy infrastructure that accounts for rising oil and natural gas prices while reducing negative environmental impacts.
- Lead development of water conservation technologies and supply strategies, anticipating ever-greater competition over the West's limited supplies.
- Build an efficient, safe, advanced transportation infrastructure to carry the state's people and goods.
- Construct, furnish and staff education facilities to meet the changing needs of students, and create a highly skilled work force.
- Provide the police and fire protection resources, court facilities and correction systems necessary to ensure public safety.
- Support development of health care research, facilities and services.
- Provide libraries, parks and other quality-of-life services commensurate with Arizonans' expectations.

Mesa Mayor Scott Smith stressed the importance of managing sustainable growth rather than mass in-migration "that stresses everything to the point we'll never catch up."

"It really comes down to three to four fundamental questions," says ASU President Michael Crow. "Should we invest in an enhanced quality of life together, or is it everyone for themselves? Can we learn to understand the true nature of global competition? Can we learn that grade 'A' infrastructure is not an expense – it is the basis from which we will have economic prosperity? Can we find a way to de-stigmatize terms such as planning, user fees, tolls and market-driven solutions? If yes, we can innovate, rethink and redesign how we make decisions at every level."

Some speakers pointed out that local and state governments, and the private sector, must work together to fund infrastructure. The responsibility for planning, however, falls on local and state government officials who need to take a regional approach.

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## National Institutes of Health funds carpal tunnel research study at ASU

(Continued from page 1)

ing," Santello says. "If you have CTS, even in its mild severity, you have problems learning how to control digit (finger) forces as a function of object properties, such as weight and texture."

Santello said that current clinical methods of determining the severity of CTS focus on the state of a person's median nerve, which conveys sensation from the thumb, index, middle and part of the ring fingers, as well as motor commands to some of the hand muscles. One of the electro-diagnostics tests of the median nerve, where an electrical stimulus is administered to measure how fast the nerve can transmit the stimulus, tells doctors if the nerve is healthy – or, alternatively, the extent of its degeneration. But it doesn't provide information on the person's ability to control the hand.

"It is difficult to correlate that measurement with a person's dexterity," Santello says. "It might say, yes I have mild CTS, but how much does that affect my dexterity, my ability to manipulate?"

This information is important, because it could be used to measure the effectiveness of surgical intervention and physical rehabilitation to improve hand function.

Santello says a person with CTS might have intact sensory feedback from one-and-a-half of the five fingers on that person's right hand, for example. But when that person manipulates objects, the brain receives and integrates sensory inputs from all digits engaged in the task, so that movement and forces of the digits can be properly coordinated.

With the majority of the sensory inputs now not properly working, the brain has to compensate for the insufficient data coming to it. That often means over-grasping an object to secure it before picking it up. Over-grasping can result in an even greater compression of the median nerve, resulting in greater severity of CTS.

"If you are exerting more force than you



Marco Santello

need on a daily basis and you are not fully aware of it, it is likely to make CTS worse because you keep adding compression to the nerve," he says.

The project, which Santello will perform with Anthony Smith of Mayo Clinic in Arizona and Jamie Johnston of the University of Calgary, will use CTS as a research model to improve the understanding of how tactile, or touch, feedback is used by the central nervous system.

Santello says it also could provide insight into how electro-diagnostic measures of nerve function relate to specific aspects of grasp control – which, in turn, could improve the interpretability and applications of clinical assessments.

Additional support from Mayo Clinic will be provided by Mark Ross, who will screen and evaluate patients with CTS, and Amylou Dueck, who will assist with the statistical analysis.

Santello says the project grew out of an ASU-Mayo Clinic seed grant program that began in 2005. The program provides seed funding to teams of ASU-Mayo researchers working together with the goal of moving

## ASU organists earn notice in international contest

By Judith Smith

Many people travel to Italy to see the art treasures in Florence, or to take a gondola ride in Venice.

But few go to Italy to play on historic organs and compete for prizes.

Three ASU students did just that this fall – and one brought home second prize in the International Organ Competition, "Agati-Tronci," in Pistoia, in the Tuscany region of Italy.

Master's degree organ students Christina Hutten and Kristin Holten, and doctoral student Skye Hart, were named as semifinalists in the competition, and Hutten moved on to the finals. Hutten captured second place – and a prize of 2,000 euros.

The competition repertoire featured music from the 16th through the 18th centuries, including works by Frescobaldi, Froberger, Storace, Scheidemann, Bohm, Cabezon and Muffat, played on historic organs.

The organs were in the Propositura di San Marcello and the Pieve di Santa Maria Assunta in Gavinana, small towns near Pistoia.

Hutten says playing on ASU's own historic organ, the 1742 Traeri housed in Organ Hall, prepared her well for performing on the organs in Italy, with their "unique sound, specifications and keyboard action."

"Nevertheless, the opportunity to experience the instruments in their original acoustics, while being surrounded by breathtaking art and architecture and the beautiful Italian language, was priceless," she says. "I'd

like to thank Herberger College, the Graduate and Professional Student Association, and the ASU Organ Fund for making this trip possible for me."

Hutten says that though the competition performances were not well attended – they were held in the middle of the day – she says the closing ceremonies drew a large audience.

"Interested spectators, local dignitaries and local media filled the church for the closing ceremonies and winners' concert," she says. "In addition, the fact that both instruments used in the competition had been restored within the past 10 years suggests that strong support for these treasures still exists, even in tiny villages such as San Marcello and Gavinana. The competition received generous support from a wide variety of sources, including local governments, businesses and individuals."

"The presence of three ASU organists among the nine semifinalists of this major international competition is astounding and did not go unnoticed by the European arts community," adds Kimberly Marshall, Goldman Professor of Organ and director of the Herberger School of Music. "Our university's emphasis on excellence and impact was amply fulfilled by these ASU students in their performances. They all benefited from access to the Traeri baroque organ, built in 1742 and currently on loan to the Herberger College School of Music."

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## Athletes flash 'pitchfork' at White House

(Continued from page 1)

addressed the crowd and posed for pictures with the captains.

After the ceremony, both teams headed to Pennsylvania Avenue for pictures in front of the White House, where preparations are under way for the January inauguration of president-elect Barack Obama.

After a little down time, the Sun Devils made the trip to Arlington, Va., and Crystal City Sports Pub, where the ASU Alumni Association National Capital Chapter welcomed the teams for a reception. The chapter's members met with the coaches and athletes before Lisa Love, ASU's vice president for university athletics, track and field head coach Greg Kraft and softball coach Clint Myers addressed the crowd.

## ASU taps Cárdenas to be university's senior vice president and general counsel

(Continued from page 1)

his talent and dedication to be our senior vice president and general counsel."

"My colleagues at Lewis and Roca and I have had the privilege working for ASU and with Paul Ward, so we know that he is a tough act to follow," Cárdenas says. "But what I learned at Lewis and Roca – and from Paul – about excellence, integrity and the art of lawyering will help. I grew up at Lewis and Roca. It is one of the country's best law firms and I will miss it dearly, but I am excited about being part of the New American University and advancing President Crow's vision of access and excellence."

"We are proud of José's accomplishments, and we appreciate his commitment and contributions to the success of our firm," says Ken Van Winkle Jr., managing partner of Lewis and Roca. "This is an outstanding opportunity for José, and the university will benefit from his expertise and experience. We look forward to continuing our relationship with him and the university."

As senior vice president and general counsel, Cárdenas will serve as the chief legal officer of the university. He will be responsible for management of ASU Audit & Advisory Services, and he also will serve as a university representative on and to the boards of directors of ASU-affiliated and ASU-related entities, such as the ASU

Foundation, the Sun Angel Foundation and the ASU Alumni Association.

Cárdenas also will have responsibility for undertaking a set of activities to advance and support the public service and outreach mission of the university by participating in community organizations, representing the university in the business community and before local, regional and state constituencies, undertaking special projects as assigned by the president and helping coordinate the advancement of university initiatives.

Cárdenas received his bachelor's degree from the University of Nevada-Las Vegas in 1974. In 1977, he graduated from Stanford University Law School, where he served as an articles editor on the Stanford Law Review. He joined Lewis and Roca in 1978 following a one-year federal district court clerkship.

After becoming a partner in the firm in 1982, Cárdenas served in numerous management roles, including as the firm's managing partner (chief executive officer) from 1999 to 2003, at which point he was named the firm's first chairman.

Cárdenas has an AV ("Pre-eminent Attorney") rating from Martindale-Hubbell. He is listed in the 2007 and 2008 editions of Southwest Super Lawyers in the business litigation category, and in the 2009 edition of The Best Lawyers in America by Woodward/

White, Aiken, S.C., in the category of commercial litigation.

In 1995, he was elected to membership in the prestigious American Law Institute, and he is a member of the fellows of the American Bar Foundation. Cárdenas also has been recognized for his many community activities, including his selection in 2000 as the recipient of the Mexican government's Ohtli award, which is given to U.S. residents of Mexican descent in recognition of their service to Mexican communities in the United States.

Cárdenas has focused his practice primarily on commercial litigation matters. His litigation experience, however, has covered a wide range of complex matters, including toxic tort cases, leveraged buy-out litigation and representation of the state of Arizona in a variety of matters. He also has experience in the international arena.

Cárdenas has been admitted to practice law in Arizona, California, the Ninth Circuit Court of Appeals and the U.S. Supreme Court. He is a member of various bar associations, including the Hispanic National Bar Association. He has been a member of Los Abogados Hispanic Bar Association since 1978, having served for many years on its board of directors and as president from 1985 to 1988.

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## Going Global

ASU's worldwide outreach has gained new momentum with the appointment of Anthony "Bud" Rock as the first vice president for global engagement. Rock and his staff have welcomed international visitors to ASU in recent months, and have begun forging new ties with universities and governments in Vietnam and Germany while continuing involvement with Latin America, China and Singapore.

### Workshop focuses on genomic research

A dozen scholars from across the globe met recently at the Sandra Day O'Connor College of Law to discuss the promise and perils of efforts to transform indigenous people's governance of genomic research.

"This is a select group capable of drawing on their past experiences to envision the future," says Rebecca Tsosie, executive director of the Indian Legal Program at the College of Law, who is principal investigator of the National Science Foundation grant that funded the workshop, "Genomics, Governance, and Indigenous Peoples."

"Many people are writing about this issue, but you are actually doing things, putting things into practice," Tsosie told the group as the two-day workshop began Nov. 6.

Tsosie and her two fellow organizers – Kim TallBear, an assistant professor of science, technology and environmental policy at the University of California-Berkeley, and Jenny Reardon, an assistant professor of sociology and a faculty affiliate in the Center for Biomolecular Science and Engineering at the University of California-Santa Cruz – say they invited participants who were not afraid to seriously engage the issues.

"As genomic research becomes increasingly sophisticated, it is vital for all of us to think about how such research is used and controlled," says Paul Schiff Berman, dean of the College of Law. "As part of the new model for public legal education that we are building at the Sandra Day O'Connor College of Law, we are committed to having the College of Law provide opportunities for reasoned discourse on important matters of public concern.

"Moreover, we hope that this discourse will not be confined to academic debates, but will connect with communities, policymakers, judges and others who will be able to transform the discussion into tangible action that will bring positive change to the broader society."

The "no-PowerPoint" format of the workshop had participants share written responses to several questions before convening, and then participate in several recorded dialogues that will be used to produce a written document.

TallBear says the format was inspired by work she did on a book, titled "This Stretch of the River," in response to the celebration of the Lewis and Clark Expedition. In that book, several Lakota and Dakota writers taped their discussions.

"The conversations produced knowledge and experience that was not present in our written work," TallBear says.

She adds that the work to edit and compile the project meant the learning continued beyond the conversations.

Discussion topics at the genomics workshop included cultural harm and transforming the legal system; charitable trusts, biobanks and partnership governance of genetic research; and tribal-genetic research agreements, indigenous research and governance implications.

Participants included experts in human genetics and the social, legal and ethical aspects of genomics in different national and cultural contexts. They have experience working within existing regimes of governance, and see a need for policy innovation and change in relation to genomic research. Some participants already are engaged in efforts to create change.

The workshop, first conceived as being focused on the

*"As genomic research becomes increasingly sophisticated, it is vital for all of us to think about how such research is used and controlled."*

*– Paul Schiff Berman, dean of ASU's Sandra Day O'Connor College of Law*

United States and "tribal" governance of genomics, was broadened to include scholar practitioners working in other parts of the world in recognition that strategies for governing genomic research cannot be contained by national borders.

In addition to Tsosie, TallBear and Reardon, participants included:

- Laura Arbour, an associate professor in the Department of Medical Genetics and the Island Medical Program at the University of British Columbia based in Victoria, British Columbia.
- Philip "Sam" Deloria, director of the American Indian Graduate Center and former longtime director of the American Indian Law Center, Inc.
- Nanibaá Garrison, a doctoral candidate in the Department of Genetics at Stanford University working on the genetics of human pigmentary variation.
- Nadja Kanellopoulou, an academic lawyer who specializes in medical law, intellectual property and bioethics at the Arts & Humanities Research Council Research Centre for Intellectual Property and Technology Law at the University of Edinburgh in Scotland.
- Paul Oldham, a social anthropologist and researcher at CESAGen, a research center based at Lancaster University in England.
- Pilar Ossario, an associate professor of law and bioethics at the University of Wisconsin-Madison, who also serves on the Director's Advisory Council for the National Human Genome Research Institute and as an adviser for the 1,000 Genomes Project, the Human Microbiome Project and for NHGRI-related tissue banking activities at Coriell.
- Terry Powell, a member of the Alaska Area Institutional Review Board, whose interests include research ethics, health care research, and bioethics.
- Brett Lee Shelton, a partner in the law firm Shelton and Ragona of Louisville, Colo., who sits on the Oglala Sioux Tribal Research Review Board in Pine Ridge, S.D.
- Brian Wynne, associate director of the Centre for Economic and Social Aspects of Genomics, professor of science studies and research director of the Centre for the Study of Environmental Change at Lancaster University in England.

### Technology award takes grad student, lecturer abroad

By Chris Lambrakis

ASU's Adrian Teo and Trian Georgeou have been jetting to enviable destinations this fall and past summer. The two have visited Chicago and Italy to be recognized for a paper they co-wrote about machine tool technology.

The trips were part of the Italian Machine Tool Technology Awards, which are sponsored by the Italian Trade Commission and the Association of Italian Manufacturers Machine Tools, Robots, Automation Systems and Ancillary Products.

The award program challenges graduate students attending premier North American universities to write a thesis on the relative innovation taking place in metalworking industries and the issues they face.

"This paper is part of the work for my graduate thesis in high-speed, high-efficiency metal machining," says Teo, a graduate student in the manufacturing engineering technology program and also the director of Web consulting services in the University Technology Office. Using this methodology, we've effectively managed to triple the cutting speeds compared to traditional methods."

As part of the award, Teo and Georgeou spent a week in Italy during the summer touring top Italian companies in the machine tool industry to experience firsthand Italian machine tool machinery – and the technologies that have made Italian manufacturers recognized world leaders.

"The program enriches the engineering education of students and advances knowledge on issues of importance within the industry for the next generation of metalworking professionals," says Georgeou, a lecturer in the College of Technology and Innovation.

Italy is one of the world's main producers of machine tools and systems for a wide variety of sectors. The country has been providing companies around the globe with innovative metalworking technologies, ideas and solutions.

"I was very surprised and impressed with the amount of innovative technologies – and the extent of the manufacturing industry in Italy," Teo says.

Teo was one of three students selected for the award. The trip to Italy benefited these students, as well as the faculty members who accompanied them.

"I was able to experience and learn about Italian metalworking technology, which will enhance my teachings in the classrooms," Georgeou says.

Both also were welcomed at the recent Sixth Italian Machine Tool Conference in Chicago, held at the Harold Washington Library Center's Winter Garden, to be recognized by their peers, the Italian Trade Commission, the Association of Italian Manufacturers and the Society of Manufacturing Engineers.

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#### College of Public Programs

## ASU tourism expert Tyrrell travels to China to take part in forum

By Corey Schubert

Timothy Tyrrell, director of the Metropolitan Tourism Research Center in ASU's College of Public Programs, recently spoke about "balance as an economic development strategy" to 300 governmental officials, experts from international organizations, companies, media, universities and scholars at the 2008 Leisure Development International Forum in Hangzhou, China.

Tyrrell was one of two American scholars and four non-Chinese scholars who spoke to the group. Representatives from 10 international consulates in Shanghai also gave presentations.

The forum sported "leisure and the economy" as its central theme, exploring the practice of leisure industry in China, the strategic meaning of cultural, recreational and sports leisure to leisure economy, experience of regional leisure economy development, and the development of the leisure

economy after the 2008 Olympic Games in China.

The phrase "a rising tide floats all boats" is the unquestioned basis for many economic development strategies. It is assumed that each of the social and environmental goals of a community will be achieved if there is sufficient overall economic growth. Unfortunately, not all boats are floated by growth.

Carrying the metaphor further, Tyrrell suggests that development strategies should focus on the individual boats instead of on the tide. He argues that balanced development plans that seek positive economic, social and environmental impacts on many different community groups will lead to growth. Floating all boats may not require a rising tide.

"The balanced strategy is particularly important for development of sport, leisure and tourism industries because of

the many residential and visitor markets served and the many economic, social and environmental impacts that are generated," Tyrrell says. "The balance strategy is most important because it directly supports the community sustainability goals."

Tyrrell's presentation illustrated the proposed balance strategy by case studies in business, industry and community development related to sports, recreation and tourism.

One case described his analysis of employee productivity in 361 U.S. metropolitan areas where marginal productivity in the accommodations sector declined after the area exceeded 55,000 employees (Los Angeles, New York and Las Vegas).

Another case study of WaterFire, a tourist event in Providence, R.I., raised awareness of a redeveloped downtown waterfront. Interest by tourists led residents to use major public infrastructure development

that might otherwise have been ignored.

A third case described balanced investment by the ski industry in British Columbia in affordable housing for its employees through the Whistler Housing Authority. In each of these and three other cases, the role of balance was demonstrated as being more important than growth.

Tyrrell earned his doctorate from Cornell University and has been studying the economics of tourism for 30 years. He serves on the board of directors of the Travel and Tourism Research Association and the Leadership Council of the International Association of Tourism Economists. He is a member of the International Association of Scientific Experts in Tourism and recently was nominated to the International Academy for the Study of Tourism.

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