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## Student Report Card

Students are at the heart of ASU's mission of access, excellence and impact. From facility upgrades to implementing new curriculum to enhancing student services, ASU aims to accommodate its growing student body and ensure that its students graduate from a top-ranked school with a valuable degree.

This special section of *ASU Insight* highlights the many advances the university made in the 2007-2008 academic year to help students get the most out of their educational investment.

## 'Green' recognition

RSP Architects and DPR Construction Inc.'s project for ASU's Polytechnic Academic Complex was recognized by *Engineering News-Record* and the 11 regional publications of McGraw-Hill Construction in its first "Best of the Best Awards," titling it as the "Best of the Best 2008 – Best Green Building in the United States."

In December, the project was awarded winner of *Southwest Contractor Magazine's* "Best of 2008 Public 'Green' Project in Arizona."

The national competition recognizes design and construction excellence based on regional winners of *ENR's* 11 regional publications' "Best of 2008" awards. Out of 225 regional winners, just 23 were chosen by an independent jury of construction professionals as national winners. The projects were judged for innovation, contribution to the community, aesthetic quality and craftsmanship.

*ENR's* award comes on the heels of the 11th annual *Southwest Contractor* competition, which recognizes construction and design excellence in Arizona, Nevada and New Mexico. The 245,000-square-foot ASU Polytechnic Academic Complex was among 22 winning projects selected from 650 entries by an independent jury of design and construction professionals.

The design of the complex contains several ASU academic units. It includes laboratories, classrooms, faculty offices, a lecture hall and a fine arts performance space.

The project, which is situated on a decommissioned Air Force base, is seeking LEED-NC Silver designation but may qualify for LEED-NC Gold.

By integrating photovoltaic panels, recycled concrete and recycled building materials in its construction, the project used innovative techniques to make use of Arizona's abundant sunlight while simultaneously protecting students from the heat.

The new buildings were completed through the collaboration of RSP Architects, Lake|Flato and DPR Construction Inc. this past June.

"We are certainly celebrating the success of ASU Polytechnic," says RSP President David Norback. "The awards are just the last layer on this very successful project."

## Faculty members display breadth of ASU's research

**Editor's note:** This story includes information from *ASU communicators Margaret Coulombe, Skip Derra, Jody Guyot, Richard Harth, Carol Hughes, Joe Kullman and Nikki Staab.*

ASU faculty members showed off a wide range of research during the annual meeting of the American Association for the Advancement of Science in Chicago. Seven ASU faculty made presentations at the AAAS meeting (Feb. 12-16) on topics ranging from the genetics of diet to tomorrow's smart cities to weird life.

AAAS is the premier meeting in which scientists and researchers gather to discuss their latest findings. Here are the topics ASU researchers covered.

### Brilliant colors

"What you see is what you get" often is the mantra in the highly competitive life of birds, as they use brilliant displays of color to woo females for mating. Now researchers are finding that carotenoids – the compounds responsible for brightening the red, orange and yellow colors of birds – also could play a

role in color perception and in a bird's ability to reproduce, making it a cornerstone in birds' vitality.

Kevin McGraw, an ASU assistant professor in the School of Life Sciences, talked about his recent work in this area during a special session on evolutionary biology.

"Carotenoids play fascinating and multifaceted roles in the lives of animals," McGraw says. "For years we have known that, as antioxidants, they boost human health – and, as colorants, make birds colorful and sexually attractive. Now we are blending – as well as expanding – these paradigms and studying how

consumption of carotenoids can improve or 'tune' their color vision, promote the health of offspring as they develop in the egg and possibly improve male sperm quality."

### Smarter cities

The stability and livability of the world's growing urban regions is going to depend more than ever on advances in public-infrastructure engineering, says Brad Allenby, a professor of civil, environmental and sustainable engineering at ASU.

"The accelerating urbanization of (See **FACULTY** on page 7)

## ASU program to offer courses to high school seniors this fall

By Sarah Auffret

ASU is offering more than 100 classes this coming fall to qualified high school seniors, to give them a head start on a university career. Students can test their academic interests, and explore majors and career options, before they begin their freshman year.

The Collegiate Scholars Program offers courses in every college of the university, from composition to history, religion, math, sociology, psychology, economics and film. Students can study Chinese, Latin or Greek, or they can take an introductory course in electronics, engineering design, technology, or computing and gaming. Those who are career-focused can choose calculus for engineers, private pilot ground school, pre-nursing or pre-education, or design.

A selection of courses is offered at all four ASU campuses. Students will be concurrently enrolled as a non-degree-seeking ASU student, allowing for many of the opportunities and benefits other ASU students receive, including library resources and access to the Student Recreation Center. Tuition will be the same as for other ASU students, based on a per-credit-hour basis.

"These classes were selected to attract the best and brightest students in the Valley, and to get them connected to ASU early on," says Mark Duplissis, executive director for high school relations. "Most classes will be offered in the late afternoons and evenings. In most cases, the high school seniors will be taking the courses with ASU freshmen.

(See **ASU SET TO OFFER** on page 7)

The Biodesign Institute at ASU was the site of Arizona Technology Enterprises' ASU Technology Forum Feb. 13. Joe Caspermeyer, top right, the chief science writer for the Biodesign Institute, led one of the tours for the forum's participants.

TOM STORY PHOTO



## Event showcases ASU technology

More than 50 venture capitalists, "angel investors" and industry executives came to campus with the sole purpose of looking under ASU's innovation hood to see what gems of technologies are ready to come out of its laboratories.

After taking part in the first ASU Tech Forum Feb. 12-13, they came away impressed.

"The world-class science facilities and the integrated interdisciplinary approach being adopted by the ASU faculty should yield

significant innovations in the years to come," says Chau Khuong, from OrbiMed Advisers. "As a health care venture capital investor, I'm excited by the prospect of working with the dynamic, commercially focused administration to develop scientific discoveries into meaningful applications that advance human health."

"University inventions are critically important to venture capitalists who want to build great companies," adds John Diekman,

(See **EVENT** on page 7)

## Biodesign Institute taps Harvard scientist

## LaBaer to lead Piper Center for Personalized Diagnostics

By Joe Caspermeyer

In a significant boost for an Arizona-based personalized medicine initiative, the Biodesign Institute at ASU and the Virginia G. Piper Charitable Trust have announced Joshua LaBaer as director of the new Virginia G. Piper Center for Personalized Diagnostics.

LaBaer most recently served as director of the Harvard Institute of Proteomics.

The center, funded by a multi-million gift from Piper Trust, will pursue earlier and more accurate diagnosis of diseases, including lung cancer and diabetes. It will make

use of the latest capabilities in personalized medicine, an emerging field with potential to improve patient treatments and outcomes by factoring in an individual's unique genetic and metabolic profile.

The center occupies 8,000 square feet within the Biodesign Institute. In addition to the recruitment of LaBaer, the Piper Trust's philanthropic investment supports development of the research team and laboratory infrastructure such as a state-of-the-art robotic system for gene cloning.

"Dr. LaBaer is one of a handful of innovators who could be labeled

trailblazers in the relatively new field of proteomics, which is a crucial technology for profiling the molecular changes in disease and a key for more personalized approaches to medicine," says George Poste, director of the Biodesign Institute and chief scientist for ASU's Complex Adaptive Systems Initiative. "The generosity of the Piper Trust enabled us to recruit a true leader in the field and provide his team with the sophisticated laboratory needed to do this type of research. I am confident Dr. LaBaer and his team will help place Arizona at the forefront of personalized medicine

research."

"In the future, we will look back at our current list of illnesses as a gross oversimplification," LaBaer says. "Already, in our modern era of molecular medicine, we are learning that what we have thought about as single diseases, such as inflammatory bowel disease or breast cancer, actually include many different molecular variations, each with a different root cause, a different prognosis and a response to specific therapies. Our lab hopes to help develop new diagnostic tools that pinpoint the specific molecular disease for each (See **BIODESIGN** on page 7)

## Tribal council taps ASU project for use in schools

By Corey Schubert

The Pascua Yaqui Tribal Council recently chose an early education pilot project developed by ASU's School of Social Work for use in elementary schools on tribal lands in Pima County, and for tribal members living in the Phoenix-area community of Guadalupe.

The Urban American Indian Early Education Pilot Project works with Native American children ages 3-4 and their families to provide a high-quality early learning program with a culturally appropriate curriculum developed by the Indigenous Early Intervention Alliance (IEIA). It is designed to enhance school-readiness skills, promote school achievement in later years, and to support family involvement in children's education.

"This is an example of building a relationship between ASU and nearby Native American tribes," says social work assistant professor Mike Niles in the school's Office of American Indian Projects, which founded the IEIA to promote effective early education in Native American and other indigenous populations worldwide.

The community-based intervention project also provides ASU with data that helps identify how early education programs can adjust to address cultural issues, and how curriculum for indigenous populations can include culturally appropriate material. For example, this version of the project includes a program in which tribal elders will teach families of the Pascua Yaqui tribe their native language.

This partnership will use language-teaching labs in the Tucson area that already were set up and funded through the Inter Tribal Council of Arizona, and will accommodate participants in the early education pilot project at no extra charge.

Seed funding from the Alcoa Foundation for this project is now in its second year, with a recent \$45,000 grant.

For information about the Office of American Indian Projects, call (602) 496-0099 or visit the Web site <http://ssw.asu.edu/portal/research/oaip2>. The Indigenous Early Intervention Alliance Web site is <http://indigenous-early-intervention.com>.

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## Researcher: Culling whales won't boost fisheries

By Margaret Coulombe

For decades, there has been a controversy about whales eating fish in the tropics. The "whales eat fish" debate has been at the heart of policy decisions about the culling of whales and is pivotal to the future of commercial whaling in the region.

Today, however, chalk one up for the whales.

The controversy appears to be nothing more than a whale of a tale, according to research by ASU scientist Leah Gerber. In a paper supported by the Lenfest Ocean Program and Pew Charitable Trusts and published in the journal *Science*, Gerber and her co-authors show that the controversial practice of culling whales to attempt to restore dwindling fish populations in tropical oceans is not scientifically sound.

"Culling whales will not increase fisheries catches in tropical waters," says Gerber, the paper's lead author and an associate professor of ecology, evolution and environmental science in the School of Life Sciences in ASU's College of Liberal Arts and Sciences.

For years, Japan has argued that reducing the number of baleen whales in the oceans would improve fisheries, because whales eat fish that fishing industries could catch. The study, published Feb. 12, found that even a complete eradication of whale populations in tropical waters would not lead to any significant increase in fish populations.

Many countries in western Africa and the Caribbean have been persuaded by Japan to

join the International Whaling Commission (IWC) and vote in favor of resuming commercial whaling under the understanding that culling whales would result in increased fisheries catches.

"Our models unequivocally show that whales do not significantly contribute to the decline of fish populations in tropical oceans," Gerber says. "Instead, we find that fishing has far greater bearing on the health of the fish stocks in the region. Interestingly, when whales were more abundant before World War II, the fisheries were in good shape."

"The assertion that whales are competing with fisheries for food is, on the surface, very persuasive, because it seems intuitive that these very large animals must be consuming enormous amounts of food," adds co-author Kristin Kaschner, who is based at the Evolutionary Biology and Ecology Lab at the University of Freiburg, Germany. "However, competition within ecosystems is a complex issue and needs to be investigated using the appropriate scientific tools."

The authors constructed ecosystem models, which account for feeding interactions between whales and fish, to understand the role that baleen whales play in tropical marine ecosystems in western Africa and the Caribbean, where baleen whales are known to breed. The scientists used global and regional data, validated through scientific workshops in Senegal and Barbados, to determine whether competition was occurring.

"An ocean ecosystem is greater than the

sum of its parts," notes Lyne Morissette, a co-author on the paper and a researcher with the Institut des Sciences de la Mer de Rimouski in Canada. "Removing whales from the equation does not increase the number of fish and affects the health of the overall system. We need to focus on truly effective and sustainable management approaches to recover our fisheries."

The researchers suggest that these results underscore the important role that science should play in policy decisions about whales and fisheries interactions. They also emphasize that the goal of ecosystem-based management should not be to manipulate individual components of food webs in an attempt to maximize the productivity of fisheries, but to manage the whole system for long-term sustainability.

"All countries should adopt leadership roles in a common effort to manage our fisheries better," says Daniel Pauly, a co-author from the University of British Columbia. "The assertion that fish supply is in peril is legitimate, but the problem is resolved with better management, not whaling."

"It is important for countries that are dependent on marine fisheries to have the best information available based on sound science," adds Gerber. "Our hope is that our study provides guidance for future policy decisions."

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## 5 high schools join ASU's Stardust program

Five Arizona high schools have been selected for the Stardust High School Journalism Program, bringing to 10 the number of schools that are part of a unique initiative to create newsrooms in underserved Arizona high schools.

The program is operated by ASU's Walter Cronkite School of Journalism and Mass Communication under a grant from the Stardust Foundation of Scottsdale.

The new schools in the program are Betty H. Fairfax and Maryvale high schools in Phoenix; Sierra Linda High School in Tolleson, southwest of Phoenix; Maricopa High School in Maricopa, southeast of Phoenix; and Monument Valley High School in Kayenta on the Navajo reservation in northeast Arizona.

These schools join Buckeye Union High School, Coolidge High School, Douglas High School, Miami High School and Snowflake High School, all of which have launched student multimedia news Web sites and expanded their journalism offerings over the past year.

Each of the schools is equipped with computers, scanners, video cameras, digital cameras, lighting, audio gear and the software necessary for publishing and managing an online news site.

Cronkite School staff installs the equipment and manages the servers that contain the school's Web sites. Teachers and students also attend training at the Cronkite School's new state-of-the-art building in downtown Phoenix. The training covers writing, reporting, editing, Web production, videography and photography, as well as journalism ethics, values and First Amendment issues.

The Cronkite School will install multimedia newsrooms and provide equipment to Monument Valley and the four other new schools this summer, says Dave Cornelius, director of the Stardust Program.

"The gear is important for most schools, because resources are always

limited," he says. "However the professional guidance and curricular support is even more important."

Cornelius makes frequent visits to the schools, providing technical and journalistic training. He is aided by Jennifer Johnson, an editor at the Arizona Republic, who evaluates students' grammar and writing abilities, and provides training and materials aimed at bolstering their skills.

That kind of support is critical, says Thom Luedemann, chair of the English department at Sierra Linda High School.

"We wanted to become a Stardust partner because we believe this program will spark an interest in language-based learning by providing unique experiences," he says.

This fall, Sierra Linda students will get to choose from a number of classes in print media and broadcast journalism, he says. The school also will launch a news Web site for students to post their work.

The program, which serves about 200 students, will grow to nearly 400 students in various classes this fall. All of the schools serve large minority populations and have either lacked a journalism program or have had trouble maintaining a journalism program, mostly because of a shortage of funds.

"More than twice the number of students we hoped for enrolled and accepted the challenge at our first schools," Cornelius says. "That's exciting. And all of our first schools were fully online in the first semester. I expected that, but it's still pretty cool."

The Stardust Foundation is a nonprofit corporation founded by Arizona real estate developer and philanthropist Jerry Bisgrove in 1993, with headquarters in Scottsdale.

The foundation is designed to selectively provide grants to organizations that affect the linked concepts of family and neighborhood stability.

For more information about the Stardust program at the Cronkite School, contact Cornelius at (602) 496-9710 or [david.cornelius@asu.edu](mailto:david.cornelius@asu.edu).

Morrison Institute for Public Policy's 'Criminal Justice Issues for Arizona' series

## Anti-domestic-violence project shows promise

A grassroots dialogue-to-action program has succeeded in inspiring bottom-up collaboration on issues of domestic abuse and domestic homicide, according to "The Purple Ribbon Study Circles Pilot Project Evaluation," the fourth issue in the Morrison Institute for Public Policy's "Criminal Justice Issues for Arizona" series.

The Purple Ribbon Council to Cut Out Domestic Abuse, a volunteer-led organization formed in metropolitan Phoenix, aims to take the program nationwide – and perhaps even internationally – by 2010.

The Morrison Institute report offers several important lessons to help full implementation. For example, as the program goes forward, greater efforts must be made to recruit a more representative group of participants, beyond those directly involved in the issue personally or professionally. To read the briefing, visit the Web site [www.morrisoninstitute.org](http://www.morrisoninstitute.org).

The pilot project, which ran in six Arizona cities from September through December (Phoenix, Chandler, Peoria, Gilbert, Good-year and Tempe), was the first known Study Circles initiative in the United States specifically focused on domestic abuse. A study circle is a small, diverse group of people led by a neutral facilitator trained to manage discussion.

In four sessions lasting two hours each, the study circle participants examined domestic violence from diverse points of view, explored possible solutions, and developed ideas for action and

change. The specific aim was to bring people together to talk about ways local communities can develop and implement action agendas to lessen domestic homicide and domestic abuse.

Other findings included:

- All participants said they would like to stay involved in the action plan devised by their group.
- Ninety-two percent said that participation in the study circle meetings made them more aware of what their community could do to combat domestic violence, and that they would recommend others become involved in future study circles on domestic violence.
- Nine percent said that participation in the study circle meetings changed their views about domestic violence.
- The facilitators felt that the participatory goals of the program were fully met.

The Criminal Justice Issues for Arizona series is an example of the economic benefit a research university can bring to its state. In this case, the benefit has short- and long-term consequences.

Each year, Arizona universities pump almost \$1 billion into the Arizona economy from their research, most of which is funded by the U.S. government and entities from outside the state. Research money brought in by universities is restricted money that can only be used for the research activity it supports. It cannot be used to compensate for cuts in other parts of the university's budget.

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## Time at the 'Gym' helps musicians breathe better

By Judith Smith

When he was 17, Sam Pilafian was privileged to have one lesson with Arnold Jacobs – the principal tubist for the Chicago Symphony Orchestra from 1944 until 1988 – who is known as the “dean of American tuba players.” What Jacobs told the 5-foot-6-inch-Pilafian was to change his life – and it fueled a revolution in the way wind instruments are played.

“He told me I had half the air I needed to be a professional tuba player,” Pilafian says.

Pilafian became obsessed with learning how to breathe better.

“I studied martial arts, and anything and everything I could about breathing,” he says.

The result of his work over the years is the “Breathing Gym,” a system of stretching and airflow exercises that promote maximum use of lung capacity.

Pilafian’s system – which he developed with Patrick Sheridan, a fellow tubist who is a visiting professor at ASU this year – is built on groundwork laid by Jacobs.

According to a Web biography of Jacobs, it was rumored that he had only one lung.

“He did, in fact, have both of his lungs,” reads the biography. “Due to childhood illness and adult-onset asthma, his lung capacity was significantly impaired.”

While it might seem that tuba players use much more air than those who play the smallest instruments, Sheridan says that is not the case.

“All wind-instrument players need to develop their breathing to use between 25 percent and 95 percent of their lung capacity,” he says. “Most people use 10 percent to 25 percent of their air for conversation and so forth. Even athletes only use 25 percent to 65 percent.”

Pilafian and Sheridan, who have known each other for many years, use the Breathing Gym techniques in their teaching. Their book, “The Breathing Gym,” published in 2002, and 54-minute DVD (a new one came out Feb. 12) are used by numerous schools worldwide, from elementary school level up to universities.

So what difference does Breathing Gym training make for wind players, beyond allowing them to go longer without taking a breath?

Put two tubists on stage together, one with Breathing Gym experience and the other without, and the difference will be apparent from the first notes they play, Pilafian says.

“The notes played by the one with training are smoother, and there is more music coming out of the instrument,” he says. “There is less huffing and puffing.”

Band teachers and professional musicians worldwide are beginning to incorporate the Breathing Gym into their classrooms and performances, putting ASU in “an enviable place” among universities with music schools, Pilafian says.

Since almost every wind player who graduates from ASU has gym train-



KEN HOWIE STUDIOS PHOTO

Sam Pilafian, right, teaches his “Breathing Gym” techniques to an aspiring tuba player.

ing, they are hot prospects on the teaching and performance job markets.

Christopher Hulett, who based his doctoral research at ASU on the Breathing Gym and now is the band director at Scottsdale Community College, says the technique is “accessible event to students at the elementary level. I’ve seen fourth-graders really get into it.”

He adds that a good band director already uses breathing exercises, but the Breathing Gym uses imagery to give a feel for what these exercises are trying to do.

As music teachers began to learn about Pilafian and Sheridan’s book and DVD, the effects started to ripple out from ASU like a stone dropped in water.

The Breathing Gym even is gaining the attention of medical professionals. In 1978, Jacob made the first overture to medicine when he lectured at Chicago’s Michael Reese Hospital about how playing wind instruments was therapeutic for children with asthma.

Now, researchers from the Indiana University Simon Cancer Center and the Indiana University School of Nursing have teamed up with Pilafian and Sheridan to study how exercises from the Breathing Gym can help menopausal and post-menopausal women manage and reduce hot flashes.

Cancer treatments often reduce or eliminate the effectiveness of traditional hot-flash treatments, note Debra Burns and Janet Carpenter.

“We hope to find effective non-drug treatments for hot flashes, particularly regimens that can coincide with radiation therapy and pharmaceutical cancer treatments,” Burns says.

Burns and Carpenter also have help from the National Cancer Institute, which awarded them a \$1 million research grant for the study.

Sports will be the next frontier. Pilafian says golf and football coaches also have expressed interest in learning more about the Breathing Gym.

“It’s just getting bigger and bigger,” he says.

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## Mock Trial Academy draws 200 students to ASU

Nearly 200 middle and high school students raised their voices asking questions, putting forward arguments and holding discussions at the second annual Sun Devil Mock Trial Academy Jan. 24 at the Sandra Day O’Connor College of Law.

The academy provided the students with an opportunity to sharpen their skills in trial advocacy in preparation for their upcoming regional mock-trial tournaments.

“One of the hallmarks of the new model of public legal education we are creating at the law school is that legal education extends far beyond traditional (law degree) training,” says Paul Schiff Berman, the college’s dean. “I am therefore thrilled that we are bringing the excitement of mock-trial competition to high school and middle school students, many of whom are surely destined to become leaders of the state and the nation.”

The event more than doubled in size from last year, welcoming students from 10 high schools and four middle schools from Casa Grande to Flagstaff. The event featured two tracks: all-day

programming for high school students on topics ranging from acting as a witness, to cross-examination, to opening and closing argument; and a half-day for middle school students focusing on the trial process and public speaking.

The event was coordinated through the university’s undergraduate mock-trial program ([www.sundevilmocktrial.org](http://www.sundevilmocktrial.org)) and the law school’s new Youth Mentoring Board. The sessions were taught by College of Law students James Cool and Sarah Barrios-Cool, along with University of Arizona law student Laura Seelau, local attorneys Peter Whitney (Class of 2008) and Deborah Williams, and Illinois federal court judge and law school adjunct faculty Jim Plunkett. The event, which was free for students, included a lunch provided by the Hispanic National Bar Association and with a grant from the Law School Admissions Counsel.

“It’s a wonderful opportunity for the students to get excited about higher education and passionate about mock trial and the law,” says Cool, who is the Sun Devil Mock Trial associate coach and helped plan the event.

Cool’s wife, Sarah Barrios-Cool, was a co-event coordinator, and she echoed her husband’s sentiments.

“Our goal is to build bridges between the law school and the community, and to introduce these high school and middle school students to the remarkable, young individuals who participate in Sun Devil Mock Trial,” she says.

Both of them say they will continue the event as long as there is interest, and they also hope to start a mock trial summer camp.

Their enthusiasm was matched by the students who attended.

Dinah DeWald, a 16-year-old junior from the Arizona School for the Arts who attended the camp for the first time, said the experience took her by surprise.

“In a few hours, I got a completely different perspective on how to craft a witness’ character, an effective closing argument and a knockout cross-examination,” DeWald says. “I’m inspired and excited to work harder on the case, and now I want to continue mock trial in college.”

## Tempe event seeks to ‘Reclaim the Commons’

By Jodi Guyot

Each year, while representatives of the world’s wealthiest business interests and governments meet at the World Economic Forum, some 100,000 citizen delegates converge on the people’s World Social Forum to discuss alternatives to the dominant economic model that increasingly favors the privileged few while it marginalizes the masses.

Since 2002, Arizonans have been attending a similar social forum at ASU’s Tempe campus. Local to Global Justice, a registered ASU student organization that includes faculty and community activists, organizes an annual weekend “teach-in” with invited guest speakers, workshops, musical entertainment, films, creative activities, and free vegan food.

This year’s teach-in workshops and events take place from 8:30 a.m. to 6 p.m., Feb. 28-March 1. The entire event is free and open to the public and includes a full lineup of activities for children and teens ages 3-17.

As the name implies, Local to Global Justice is committed to addressing local human rights and social justice issues with an understanding of their greater global context.

Much like the World Social Forum, the goal of the teach-in is to create a space for raising the people’s voice, learning from one another and forming

alliances and networks among “affinity” groups. Participants represent a broad range of social issues, from indigenous rights to the green revolution, and generally coalesce around the notion that respect for human dignity, diversity and the natural world should be top priorities when establishing policies and institutions.

This year’s theme, “Reclaim the Commons,” focuses on regaining democratic control of the spaces and resources that were once shared freely but are increasingly being privatized and commodified. The lineup of speakers, workshops and musicians reflects upon the need to reclaim public spaces and common goods.

“Whether applied to the physical environment, education, labor issues, human rights or the Internet, the need to reclaim the common good is timely,” says Beth Blue Swadener, professor of education at ASU Tempe campus and co-founder of Local to Global Justice.

A complete schedule of events, directions and parking information are available online at [www.localtoglobal.org](http://www.localtoglobal.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.

New research shows a warm-up of 15 to 20 minutes with simple surgical exercises before an operation leads to a substantial increase in proficiency of surgical skills in surgeons of all experience levels. “Warm-up exercises are a ‘common sense’ practice in many high-stakes professions, such as professional sports or dance,” says **Kanav Kahol**, an assistant professor of biomedical informatics at ASU. “This study begins to lay a scientific foundation for adopting this approach in routine surgical practice, which has become increasingly rigorous and demanding.” *Medical News Today*, Feb. 4.

Experts say that Phoenix should look to the savings-and-loan collapse of the late 1980s to learn how to handle the housing market today. “What Arizona went through in 1989 involved a lot of failed commercial properties,” says **Jay Butler**, ASU’s director of realty studies. “But now it’s the residential market, which affects a lot more people.” Butler has been tracking the real-estate market for ASU since the early 1970s. “Back then, the economy slowed, but it didn’t slam into the wall like it seems to be doing now,” he says. *Arizona Republic*, Feb. 8.

An ASU marketing expert cautions Internet marketing fans to not completely jettison print, broadcast and direct-mail campaigns. “You still need a two-pronged strategy,” says **Nancy Stephens**, an ASU associate professor of marketing. “You need traditional marketing to drive traffic to the Web.” Stephens also believes that too many young marketers forget that a large segment of the population still rely heavily on print media, television and radio. “What we forget is that there’s a large amount of buyers who don’t surf the Web every day, and they represent a lot of purchasing power,” she says. *Phoenix Business Journal*, Jan. 30.

For the first time, the NBA bought green-energy credits to offset the power that it expected to use for its All-Star Game in Phoenix. Sports marketing professor **Ray Artigue** says sports teams could be extremely influential environmental figures. “They can use the amazing interest in sports as an educational platform to change people’s habits,” Artigue says. *Arizona Republic*, Feb. 9.

## EMPLOYMENT

The following positions are available as of Feb. 20 and are subject to change. All positions will be advertised in *ASU 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

#### Technical and computer

**Research Technician #22238 (O)** – College of Liberal Arts and Sciences (March 13).

### ACADEMIC POSITIONS

#### TEMPE CAMPUS

**Assistant Research Scientist #9267** – College of Liberal Arts & Sciences – Physics Department (March 1).

**Assistant/Associate Full Professor #9274** – College of Liberal Arts & Sciences – School of Earth & Space Exploration (March 27).



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>.

## Lectures

### Friday, Feb. 20

**"Social Studies: Project 4,"** 11 a.m., ASU Art Museum. Speakers: artist Paulo Nenflidio and John Spiak, ASU Art Museum curator. Part of the Conversations @11 Lecture Series. Information: (480) 965-2787.

**"The Shadow of Words: Literature's Transformational Labor in Times of Global Distress,"** 1-2:30 p.m., Social Sciences Building (SS) room 109. Speaker: Gabriele Schwab, visiting IHR fellow, Chancellor's Professor of English and Comparative Literature, and former director of the Critical Theory Institute, University of California-Irvine. Information: (480) 965-7660 or [Claudia.sadowski-smith@asu.edu](mailto:Claudia.sadowski-smith@asu.edu).

**"100 Million Years of Evolution Meet the Personal Genome,"** 2 p.m., Life Sciences Center (LS) E-104. Speaker: Arend Sidow, associate professor of genetics and pathology, Stanford Medical School. Sponsored by School of Life Sciences.

**"Rendering the Transient Hot Wire Experimental Method to Dual Phase and its Application to Nano-Fluids,"** 2:30-3:30 p.m., Schwada Classroom Office Building (SCOB) room 252. Speaker: Peter Vadasz, Northern Arizona University. Sponsored by Mechanical and Aerospace Engineering Department. Information: (480) 727-0476.

**"Plasticity and Performance of the Skull and Feeding Apparatus,"** 3:30-4:30 p.m., School of Human Evolution and Social Change (SHESC) room 340. Speaker: Matthew Ravosa, Department of Pathology and Anatomical Sciences, University of Missouri-Columbia. Sponsored by the School of Human Evolution and Social Change. Information: <http://shesc.asu.edu/colloquia>.

**"Unnatural Peptides: Past, Present and Future,"** 3:30 p.m., Bateman Physical Sciences Center (PS) H-150. Speaker: Matthew Hartman, Department of Chemistry, Massey Cancer Center, Virginia Commonwealth University. Sponsored by Department of Chemistry and Biochemistry. Information: (480) 965-2093.

**"Evolution and Faith Revisited: Can the Two Be Reconciled?"** 5:30-7 p.m., Arizona Science Center, 600 E. Washington St., Phoenix. The Center's Science Cafe program joins with ASU Darwinfest for this unique event. Join in the discussion with biologist and historian of biology John Lynch and Jewish philosopher and historian of Western religions Norbert Samuelson, ASU College of Liberal Arts. Information: (602) 716-2000.

### Monday, Feb. 23

**"From Dante to the Internet: Body and Soul as Aspects of Being,"** 12:15 p.m., Armstrong Hall (LAW) Great Hall. Speaker: Margaret Wertheim, internationally known science writer and commentator. Part of the Templeton Research Lectures: Facing the Challenges of Transhumanism. Sponsored by the Center for the Study of Religion and Conflict. Information: (480) 727-6736.

### Wednesday, Feb. 25

**"Writing the Codex: Gloria Anzaldúa, Mestiza Consciousness, and Composing in Colonial Situations,"** noon-1 p.m., assistant professor of English, University of Arizona. Part of the Arizona Universities Faculty Exchange Lecture Series. Information: (480) 727-6096 or [joe.lockard@asu.edu](mailto:joe.lockard@asu.edu).

**"Cost, Conflict and Climate: U.S. Challenges in the World Oil Market,"** 3 p.m., Global Institute of Sustainability (GIOS) room 481. Speaker: Severin Borenstein, professor, University of California-Berkeley, and director, University of California Energy Institute. Sponsored by Global Institute of Sustainability. Information: (480) 965-9301 or [rod.groff@asu.edu](mailto:rod.groff@asu.edu).

**"Deciphering the Embryo's Biomechanical Morphogenetic Code,"** 4 p.m., Biodesign Institute Auditorium. Speaker: Brenda Rongish, assistant professor, Department of Anatomy and Cell Biology, University of Kansas Medical Center. Sponsored by Biodesign Institute. Information: (480) 727-0370.

### Wednesday, Feb. 25

**Ecosystem Engineering Seminar,** 4:40 p.m., GIOS room 401. Speaker: Lord Julian Hunt, University College,

London. Sponsored by Global Institute of Sustainability and the Center for Environmental Fluid Dynamics. Information: (480) 965-2490.

**"Aliens Under Our Noses?"** 5:30-6:30 p.m., Arizona Science Center, 600 E. Washington St., Phoenix. Paul Davies, director of ASU's Beyond: Center for Fundamental Concepts in Science asks, "Is life on Earth a freak side-show, or a natural and common product of a universe that has intrinsically bio-friendly laws?" Information: (602) 716-2000.

### Thursday, Feb. 26

**"The Importance of Intellectual Property in Advancing Science,"** 12:10-1 p.m., LAW room 114. Speaker: Rod Fuller, a member of Fennemore Craig's intellectual property and life sciences practice, which includes biotechnology, pharmaceuticals, medical devices, and diagnostics. Sponsored by the Law and Science Student Association. Information: (480) 965-2465 or [Andrew.Askland@asu.edu](mailto:Andrew.Askland@asu.edu).

**"bein' alive & bein' a woman & bein' colored is a metaphysical dilemma I haven't conquered yet: African-American Women Writing their Lives and Experiences,"** 5:30-7 p.m., Cronkite School room 128, ASU Downtown Phoenix campus. Speaker: Neal Lester, professor and chair, ASU Department of English. Sponsored by School of Letters and Sciences. Information: (480) 965-7611.

**"Inherit the Wind,"** 5:40 p.m., LS E-104. The film continues the spring semester Life Sciences Bioethics and Film Series, with the theme "Evolution and Its Discontents." A discussion follows the film. Information: (480) 965-8927 or <http://sols.asu.edu/cbs/events>.

**John J. Rhodes Lecture,** 7:30 p.m., ASU Gammage. Speaker: Jonathan Alter, *Newsweek* columnist and author. Alter, known at the podium for his insight, wit and firsthand anecdotes, offers an incisive, entertaining and compelling view of national and world affairs, and how media and politics interact. Sponsored by Barrett, the Honors College. Information: (480) 965-0161.

### Friday, Feb. 27

**"Building a Large-Scale Urban Model to Simulate Future Patterns of Population, Housing and Jobs: The Brisbane-SEQ Model,"** noon, Education Lecture Hall (DC) room 117. Speaker: Robert Stimson, University of Queensland. Sponsored by School of Geographical Sciences Colloquium Series. Information: (814) 591-6421 or [bpompeii@asu.edu](mailto:bpompeii@asu.edu).

**"From Primary Metabolism to Secondary Metabolism and Beyond: A Role for Intragenomic Homologs,"** 3:30 p.m., PS H-150. Speaker: Vahe Bandarian, Department of Biochemistry and Molecular Biophysics, University of Arizona. Sponsored by Department of Chemistry and Biochemistry. Information: (480) 965-2093.

**"Primate Origins: Is the Fossil Record Worth Looking At?"** 3:30-4:30 p.m., SHESC room 340. Speaker: Gregg Gunnell, Museum of Paleontology, University of Michigan. Sponsored by the School of Human Evolution and Social Change. Information: <http://shesc.asu.edu/colloquia>.

### Tuesday, March 3

**"Health Care Entrepreneurism-Legal Challenges,"** 12:10 p.m., LAW room 114. Speaker: John Shufeldt, chief executive officer of HealthCare Urgent Care. Co-sponsored by the Law and Science Student Association and the Center for the Study of Law, Science and Technology. Information: (480) 965-2465 or [Andrew.Askland@asu.edu](mailto:Andrew.Askland@asu.edu)

### Friday, March 6

**"Photoinduced Charge Transfer in Efficient Molecular Solar Cells,"** 3:30 p.m., PS H-150. Speaker: Gerald Meyer, Johns Hopkins, departments of chemistry, and materials science and engineering. Sponsored by Department of Chemistry and Biochemistry. Information: (480) 965-2093.

## Conferences

### Friday, Feb. 27

**"Parameters and Typology: Hierarchies, Features, and UG,"** 9:30 a.m.-5 p.m., Durham Language and Literature Building (LL) room 316. A linguistics symposium. Concludes with dinner. Topics include "Agreement parameters and Models of Case Assignment" and "Phases and Templates in Georgian Agreement." Sponsored by College of Liberal Arts and Sciences and the Department of English. Information: (480) 965-2563 or [ellyvangelderen@asu.edu](mailto:ellyvangelderen@asu.edu).

## Miscellaneous

### Friday, Feb. 20

**Reception for "MOVING TARGETS Breathing Is Free:**

**New Works by Jun Nguyen-Hatsushiba" and "Eden Revisited: The Ceramic Art of Kurt Weiser,"** 7-9 p.m., ASU Art Museum. Information: (480) 965-2787.

**Readings by nonfiction writer Meredith Hall and poet Natasha Trethewey,** 7:30 p.m., Old Main Carson Ballroom. Part of "Desert Nights, Rising Stars" writers conference sponsored by Virginia G. Piper Center for Creative Writing. Admission: \$10 at the door. Information: (480) 965-6018.

### Saturday, Feb. 21

**Reading by novelist Alice Sebold,** 7:30 p.m., Old Main Carson Ballroom. Part of "Desert Nights, Rising Stars" writers conference sponsored by Virginia G. Piper Center for Creative Writing. Admission: \$10 at the door. Information: (480) 965-6018.

### Tuesday, Feb. 24

**National Service Opportunity Fair,** noon-1:30 p.m., Memorial Union (MU) Mohave Room (236). Programs represented will include Guadalupe YYAP, AmeriCorps, Hands On Greater Phoenix, Notre Dame AmeriCorps, Project Ayuda, Public Allies Arizona, Senior Service Corps and VISTA. Sponsored by ASU Community Service Program. Information: (480) 965-9511.

**"Extra Students; Extra Classes: Managing Your Time,"** 12:15-1:30 p.m., Discovery Hall room 212. This workshop is designed to assist members of the teaching corps to learn to use time management skills to make choices about how they use their time and avoid overload. Sponsored by the Center for Learning and Teaching Excellence. Information and registration: <http://clte.asu.edu>.

**International Reading Association Poetry Olio,** 7:30-9:30 p.m., Phoenix Convention Center room 207. Poet readings will include Alberto Rios, Nikki Grimes, Simon Ortiz, Laura Tohe, Margriet Ruurs, Michael Salinger and Kyle Wilson. Information: [Jim.Blasingame@asu.edu](mailto:Jim.Blasingame@asu.edu).

### Wednesday, Feb. 25

**"F&A Reconciliation,"** 9-10 a.m., Centerpoint (CTRPT) room 3120B. Sponsored by Office for Research and Sponsored Projects Administration. Information: (480) 727-0765 or [ORSPA-Training@asu.edu](mailto:ORSPA-Training@asu.edu).

**Exhibits@Noon,** noon-1 p.m., Space Photography Lab, Bateman Physical Sciences Center F-556. Tour the lab, one of a network of 18 Regional Planetary Image Facility data centers established by NASA to archive planetary images for use in research by the scientific and educational communities. Sponsored by Museums, Galleries & Collections Committee. Information: [www.asu.edu/museums](http://www.asu.edu/museums).

**"August in April: A Tribute,"** 7:30 p.m., La Sala Ballroom, West campus. A free one-hour sneak preview of the soon-to-be-released documentary about the late August Wilson's 10 plays known as the "Pittsburgh Cycle." Information: (602) 543-5306. Part of Black History Month.

**Outlaw Comedy,** 8 p.m., Herberger Theater, 222 E. Monroe St., Phoenix. Nationally known comedians appear at this event. Admission: \$10. Free for ASU students with current university identification. Part of February Faithfest sponsored by ASU Student Life. Information: (480) 965-6547.

### Thursday, Feb. 26

**World Festival,** 10:30 a.m.-2:30 p.m., Hayden Lawn. Enjoy food, crafts and entertainment from the many countries represented by the university's international students. ASU International Student Office. Information: (480) 965-7451.

**"Long-Term Care Planning,"** noon-1 p.m., MU Gila Room (224). Sponsored by ASU Family Resources. R.S.V.P.: [Maureen.Duane@asu.edu](mailto:Maureen.Duane@asu.edu).

### Saturday, Feb. 28

**Pioneer Award Dinner,** 6 p.m., La Sala Ballrooms, West campus. Jean Williams, Arizona's first African-American woman judge, is honored. Free, but R.S.V.P. required: (602) 543-5311. Part of Black History Month at the West campus.

### Monday, March 2

**"Stress Management,"** 12:15-1:30 p.m., Discovery Hall room 212. This workshop, co-sponsored by CLTE and Counseling and Consultation, will provide participants an opportunity to reflect and regroup for managing stress in and outside the classroom. Sponsored by the Center for Learning and Teaching Excellence. Information and registration: <http://clte.asu.edu>.

### Tuesday, March 3

**Research Proposal SharePoint Training,** 10:30 a.m.-noon, CTRPT room 310A. Sponsored by Office of Research and Sponsored Projects Administration. Information: (480) 965-1225 or <http://researchadmin.asu.edu/training/workshops>.

### Wednesday, March 4

**Faculty Book Club,** 2-4 p.m., Discovery Hall room 212. Sponsored by the Center for Learning and Teaching Excellence. Information/registration: <http://clte.asu.edu>.

## 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.

\*\*\*Indicates tickets are available at the ASU West box office, 4701 W. Thunderbird Road, Phoenix, (602) 543-2787.

### Friday, Feb. 20

**"House With No Walls,"** 7:30 p.m., Second Stage West, West campus. This provocative play directed by ASU's Charles St. Clair presents two intertwined stories set in Philadelphia. The first involves the controversial events surrounding the opening of the American Museum of Liberty, while the second story is the tale of a slave who decides to escape from her master, President George Washington. Other performances: 7:30 p.m., Feb. 21.\*\*

**Acclaimed Hispano-Baroque ensemble El Mundo,** 7:30 p.m., Organ Hall. The ensemble performs Jesuit music from missions in Paraguay, as well as a *zarzuela* and other secular works by Latin-American and Spanish composers (circa 1700). Co-sponsored by the Phoenix Early Music Society. Admission. Information: (480) 965-8863.

**Site-specific staging of "Eurydice,"** 7:30 p.m., Atrium Lobby, University Center building, 411 N. Central Ave., Phoenix. Other performances: 7:30 p.m., Feb. 21, 26-28; 2 p.m., Feb. 22, March 1. Admission. Box Office: (480) 965-6447.

**David Copperfield,** 8:30 p.m., ASU Gammage. Copperfield will present "Grand Illusion," featuring such illusions as "Squeezebox," "The Lottery" and "Man Versus Steel." Continues Feb. 21 with performances at 3, 6 and 9 p.m.\*\*

**"Langston Speaks (4),"** 8 p.m., ASU Kerr Cultural Center, Scottsdale. The Charles Lewis Quintet & Guests present poems by Langston Hughes set to the music of jazz pianist Lewis.\*\*

### Sunday, Feb. 22

**Oboist Martin Schuring,** 2:30 p.m., Katzin Concert Hall.\*

**Young Sounds of Arizona,** 3 p.m., ASU Kerr Cultural Center, Scottsdale. A Big Band and jazz combo featuring youths ages 14-19.\*\*

### Thursday, Feb. 26

**Black History Month play, "Footsteps Leading the Way,"** 6 p.m., Memorial Union (MU) Pima Auditorium (230). Sponsored by S.T.A.R.S. student success organization. Information: 965-6060.

### Friday, Feb. 27

**Coffee at Kerr,** 10:30 a.m., ASU Kerr Cultural Center, Scottsdale. Brad Richter and Viktor Uzer preview their 8 p.m. concert. 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.

**Puccini Double Bill: "Suor Angelica" and "Gianni Schicchi,"** 7:30 p.m., Evelyn Smith Music Theatre. "Suor Angelica" is the tragic tale of a young girl sent to a convent. Hardships and her family's lack of forgiveness lead Sister Angelica to poison herself. "Gianni Schicchi" is a comic opera in which a greedy family gets what they deserve after they conceal the death of their wealthy relative and engage a rogue to change the will. Other performances: 7:30 p.m., Feb. 28; 2 and 7:30 p.m., March 1.\*

**Guitar-cello duo Brad Richter & Viktor Uzer,** 8 p.m., ASU Kerr Cultural Center, Scottsdale\*\*

### Saturday, Feb. 28

**Shana and Joe Bousard,** 8 p.m., ASU Kerr Cultural Center, Scottsdale. They'll play and sing everything from jazz to Broadway.\*\*

## Exhibitions

**Archives, Luhrs Gallery**—8 a.m.-5 p.m., Monday-Friday. Hayden Library, fourth floor. Information: (480) 965-3145.

**Arizona State Credit Union**—9 a.m.-5 p.m., Monday-Friday. Memorial Union, Lower Level. Information: (602) 644-4786.

**Art Café, Memorial Union**—7 a.m.-9 p.m., Monday-Thursday; 7 a.m.-3 p.m., Friday; 8 a.m.-3 p.m., Saturday; 4-8 p.m., Sunday. Information: (480) 965-9600.

**ASU Art Museum, Nelson Fine Arts Center**—Regular

hours: 11 a.m.-9 p.m., Tuesday; 11 a.m.-5 p.m., Wednesday-Saturday; 1-5 p.m., Sunday. Summer hours: 10 a.m.-5 p.m. Tuesday-Saturday. Information: (480) 965-2787.

Through May 16, "Eden Revisited: The Ceramic Art of Kurt Weiser." Reception: Feb. 20, 7-9 p.m. Also: "Friday Conversations in the Gallery," Feb. 20, 11 a.m., with Weiser. This mid-career retrospective and accompanying exhibition catalogue examines the stylistic development of Weiser's ceramic work from the 1970s to the present. Weiser, who is internationally recognized as an innovator in the field, also is known for his technical virtuosity with porcelain forms, and his use of china painting techniques in a distinct contemporary style. His subject matter illustrates lush, mysterious landscapes and distorted narratives set amidst color-saturated flora and fauna that read as voyeuristic snapshots of the human condition. The exhibition comprises 50 ceramic objects and drawings. Weiser is a Regents' Professor of Art in the Herberger College of the Arts. Information: Diane Wallace, (480) 965-0014.

Through April 26, "Breathing is Free: 12,756.3; New Work by Jun Nguyen-Hatsushiba" Reception: Feb. 20, 7-9 p.m. Japanese-American-Vietnamese artist Nguyen-Hatsushiba is well-known on the international art circuit for his striking video installations. This exhibition presents new work and examines his abiding interest in the evolution of cultures in the face of globalization and interpretations in the idea of "memorial." Each venue, co-organized with the School of the Art Institute of Chicago, will serve as the host for the ongoing piece in which the artist is running the equivalent distance of the diameter of the Earth (12,756.3 kilometers) in cities of the world at different times. "Breathing is Free: 12,756.3" is a virtual Earth drawing that places the artist as the subject, running to create a memorial project for refugees and exploring how their movement affects the refugee populations and those they leave behind. The accompanying museum installation will include video, photography, maps and other details. The ASU Art Museum exhibition is the U.S. premiere of the "Breathing is Free: 12,756.3" project.

Ongoing: Americas Gallery is organized topically, presenting ideas that are addressed by works from all of the Americas. The gallery's diversity of art forms creates interactions among works of art, suggesting new affinities between contemporary and historic, painting and video, and Latin and North American artists. The gallery includes two components that periodically change: Spotlight features an artwork of special interest, while the Interdisciplinary Gallery displays work selected by guest curators who can demonstrate a link between the art, their own lives and their disciplines.

Ongoing: "Permanent Collection: Loans, Acquisitions and Gifts" is a revolving exhibition of items from the museum's own contemporary collection, as well as items on loan.

**ASU Art Museum Ceramics Research Center**—11 a.m.-5 p.m., Tuesday-Saturday, Tempe Center.

Through Feb. 28, "Midstream: New Ceramics from the Heartland" uncovers the work of three artists who are defining a new generation of clay workers, reflecting diverse backgrounds working with new issues of identity. Their work is bold in its commentary on global issues and moves to a broader examination of humanity through humor, fantasy or direct honesty.

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

Through April 12, Acrylic on canvas and Plexiglas by Tom Stephenson; oil on canvas by Edie Daldrup; digital photography by Carlos Encinas.

**ASU Kerr Cultural Center**—10 a.m.-5 p.m., Monday-Friday, and during performances at 6110 N. Scottsdale Road, Scottsdale. Exhibition hours are subject to change. Information: (480) 596-2660.

**Deer Valley Rock Art Center**—9 a.m.-5 p.m., Tuesday-Saturday; noon-5 p.m., Sunday, 3711 W. Deer Valley Road, two miles west of I-17. Information: (623) 582-8007.

Through Sept. 30, "The Rock Art Paintings of Hueco Tanks" is an exhibition of 19 photographs by artist Clay Martin, the 1997 winner of the American Rock Art Research Association's Oliver Award. Martin's photo essay aims to educate visitors about Hueco Tanks, a spectacular site of 3,000 pictographs. "The astonishing abundance, cultural diversity and degree of aesthetic achievement found in these pictographs have few parallels," Martin says. Information: (623) 582-8007.

**Fletcher Library, West campus**—Exhibits open during library hours. Information: (602) 543-8500.

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

Through February, "Different Strokes" Glendale Community College art professor Sharon Forsmo presents a wide range of paintings and drawings on a variety of media, such as paper, linen and hardboard. The artwork is inspired by Forsmo's ongoing exploration of different media and their relationship to a variety of surface grounds. The paintings represented include oil and water-based media, and display the color characteristics and expressive quali-

ties that are unique to them.

**Gallery of Design**—8 a.m.-5 p.m., Monday-Friday, College of Design South. Information: (480) 965-6384.

**Gallery 100**—1-5 p.m., Monday-Thursday; 1-3 p.m., Friday. Tempe Center, suite 199. Information: (480) 965-2380.

Through Feb. 27, "Printstravaganza! IV." This fourth annual juried student print show is a venue for students across artistic disciplines to explore the definition of a print. A communal exhibition gives the ability for students to see each other's work, to understand common media ties and to open a conversation about work being created with in the ASU School of Art.

**R.S. Dietz Museum of Geology**—9 a.m.-noon, Monday-Friday, Physical Sciences Center F-wing foyer. Information: (480) 965-7065.

More than 200 fossil teeth stud the life-sized re-creation of a prehistoric shark's jaws. Among other exhibits are bones of Columbian mammoths discovered in Chandler, a six-story Foucault pendulum, and mineral, gem and fossil displays.

**Harry Wood Gallery**—9 a.m.-5 p.m., Monday-Thursday, 9 a.m.-3 p.m., Friday, Art Building, first floor. Information: (480) 965-3468.

Through Feb. 27, "Handle With Care," Marco Rosicelli's, master's degree in fine arts thesis exhibition. Rosicelli's thesis exhibition in the Harry Wood Gallery features 25,000 multicolored plastic balls, which will provide an opportunity for adults to play, have fun and interact.

**Hayden Library Arizona Collection**—11 a.m.-7 p.m., Monday; 8 a.m.-7 p.m., Tuesday and Wednesday; 8 a.m.-5 p.m., Thursday-Friday; 1-5 p.m., Saturday. Information: (480) 965-3145.

The collection includes books, manuscripts, maps, photographs and other materials relating to the history and culture of Arizona and the Southwest.

**Hayden Library Concourse**—normal library hours. Information: (480) 965-6164.

**Hayden Library Rotunda**—normal library hours. Information: (480) 965-6164.

**Hayden Library Arizona Historical Foundation Collection**—8 a.m.-5 p.m., Monday-Friday. Information: (480) 965-3283.

The AHF collection includes political papers and business records of the Goldwater family and other prominent Arizona individuals and enterprises. Maps, books, photographs and ephemera address Arizona and Southwest history.

**Hayden Library Labriola National American Indian Data Center**—11 a.m.-5 p.m., Monday-Friday, and by appointment. Second floor, Hayden Library. Information: (480) 965-6490.

**Hispanic Research Center**—8:30 a.m.-5 p.m., Monday-Friday, Interdisciplinary second floor, A wing. Information: (480) 965-3990.

**Interdisciplinary Arts and Performance Gallery**—11 a.m.-2 p.m., Monday-Thursday, University Center Building, room 228, West campus. Information: (602) 543-ARTS. Tours: (602) 543-8152.

**Museum of Anthropology**—11 a.m.-3 p.m., Monday-Friday, Cady and Tyler Malls. Information: (480) 965-6224.

Through March 13, "Arte Popular: A Preview of the New Latin-American Folk Art Collection" is a new exhibition of Latin-American folk art, recently acquired by the School of Human Evolution and Social Change from ASU's Center for Latin-American Studies. To give visitors a taste of the larger collection, 20 pieces of folk art collected in countries throughout Latin America will be displayed in the exhibition. From a brightly painted Costa Rican tea cart made in the style of the famous ox carts originally engineered to transport coffee, to two papier-mache *alebrijes* (ferocious and fantastic creatures first created by Mexican folk artist Pedro Linares), this exhibition invites visual exploration of craft and relates information about the cultural context of folk art to visitors. *Arte Popular* exemplifies the Museum of Anthropology's teaching mission: to provide hands-on museum experience to students and encourage innovative approaches to display, interpretation and education. Guided by museum staff, undergraduate and graduate students conduct object research, write labels and install objects, sharpening their curatorial and object-handling skills.

## Defenses

**Zofia Wosinska,** PhD, Chem., 10 a.m., Feb. 20, PSC 101.

**Cynthia Swann,** Mech. Engr., 1:30 p.m., Feb. 20, ERC 490.

**Patrick Finan,** PhD, Psy. (Cln. Psy.), 2 p.m., Feb. 20, PSY 244.

**Annegret Hannawa,** PhD, Comm., 10 a.m., Feb. 23, STAUF 431.

## In BRIEF

### ASU serves as host for education conference

ASU educators will focus on the positives, and share stories of academic and community success, at a national conference Feb. 20-21 in downtown Phoenix.

The Office of Vice President for Education Partnerships (VEPE), located on ASU's Downtown Phoenix campus, is serving as the host for the "What Works" National Conference at the Hyatt Regency, located at 122 N. Second St. in Phoenix. More than 150 expert educators from about 60 colleges and universities nationwide will discuss educational approaches, strategies, and programs and partnerships at their respective institutions.

Founded in 2003, the VEPE's mission is to strategically engage in efforts that will enhance the academic performance of Arizona's students, and collaborate with community and corporate entities to take advantage of the power of combined resources. The result has been the establishment of five formal partnerships, three developing partnerships involving more than 20 ASU academic units, 60 faculty members and 18 school districts.

For more information, call (480) 965-3538 or visit the Web site <http://educationpartnerships.asu.edu>.

### Student poster display runs Feb. 23-March 4

Students working on their master's degrees in nonprofit studies (MNP) who enroll in the NLM 620 capstone class, titled "Critical Issues in Nonprofit Management," are required to complete a final capstone report synthesizing their knowledge of a critical issue facing the nonprofit sector.

Capstone reports provide an overview of the issue, how it affects nonprofit organizations and recommendations to nonprofit executives for managing the issue in their organizations.

MNP students in last fall's capstone class created poster representations of their reports for display at the ASU Lodestar Center's 16th annual Nonprofit Conference on Sustainability Strategies in December. The posters will be on display for a limited showing Feb. 23-March 4 on the second-floor mezzanine of the University Center at ASU's Downtown Phoenix campus.

For more information on the MNP program, visit the Web site <http://nonprofit.asu.edu>.

### Speech to examine cyberspace 'heaven'

Star Trek fans recognize space as "the final frontier." But author Margaret Wertheim suggests that space also might be the "new heaven."

In a free 12:15 p.m. lecture at ASU Feb. 23, titled "Body and Soul as Aspects of Being: From Dante to the Internet," Wertheim will trace the evolution of the concept of space in science, religion and the imagination – and reveal how some people now view cyberspace as a new resting place for human beings.

In her book, "The Pearly Gates of Cyberspace: A History of Space from Dante to the Internet," Wertheim says: "Indeed, many cyber-fantasies imply that in the end we will not need physical bodies at all, for we will be able to reconstruct ourselves totally in cyberspace."

The lecture will take place in the Great Hall of the College of Law, and it is sponsored by the Center for the Study of Religion and Conflict. For more information, call (480) 727-6736 or visit the Web site <http://csrc.asu.edu/events>.

The talk is part of the Templeton Research Lectures at ASU, themed "Facing the Challenges of Transhumanism: Religion, Science and Technology," sponsored by the Metanexus Institute and John Templeton Foundation. For more information on the Templeton Research Lectures, visit the Web site [www.asu.edu/transhumanism](http://www.asu.edu/transhumanism).

### 3rd annual Beowulf Symposium nears

Beowulf is back. But, then again, he's never gone away.

Some best-selling authors today – particularly poets – would be thrilled with the longevity of this epic poem, which was written sometime around the late 10th century or early 11th century.

Scholars and lovers of Beowulf, hero of the Geats, are invited to gather Feb. 27-28 for the third annual Beowulf Symposium, sponsored by the ASU Department of English, the English Club and the Arizona Center for Medieval and Renaissance Studies. The symposium includes student performances, a lecture, and an epic reading of the epic.

The symposium begins Feb. 27 with "Beowulf in Bits: Student Performances," featuring Cora Fox's English 221 class, Robert Bjork's English 531 class, and students from Fountain Hills Middle School, Veritas Preparatory Academy and James Sandoval Preparatory High School, from noon to 3 p.m. in the Memorial Union's Pima Auditorium.

Following the performances, Bjork will give a lecture from 3 p.m. to 4 p.m., also in the Pima Auditorium, titled "The Many Guises of Beowulf (and Grendel, too)."

The symposium concludes with "An Epic Event: A Commu-

nal Reading of 'Beowulf' in Old and Modern English," from 4 p.m. to 9 p.m. Feb. 28 at Bob's Mead Hall (Bjork's home).

In the poem, Beowulf, a hero of the Geats, battles three antagonists: Grendel, who has been attacking the mead hall in Denmark called Heorot and its inhabitants; Grendel's mother; and, later in life after returning to Geatland (modern southern Sweden) and becoming a king, he fights an unnamed dragon. Beowulf is fatally wounded in the final battle, and after his death he is buried in a barrow in Geatland by his retainer.

Those wishing to attend the "Epic Event" should send an R.S.V.P. via e-mail to [heather.maring@asu.edu](mailto:heather.maring@asu.edu).

### Crime prevention seminar set for March 3

ASU Police Department officers will conduct a crime prevention seminar March 3 for faculty, staff and students at the university's New College (formerly the West campus).

The discussion, organized to provide education and information about crime prevention strategies, safety awareness, and the resources available to ensure a safe learning and working environment, gets under way at noon in La Sala A in the University Center Building (UCB).

The seminar is sponsored by the New College Public Safety Advisory Committee.

"This is the fourth year we have presented this important information relative to safety and prevention," says ASU's New College Cmdr. Michael Thompson. "It's important for the campus community to be informed and to understand the role each one of us plays in our own safety. The better informed we are about crime prevention and the ways we can ensure a safer learning and working environment, the greater impact we can have on reducing the chances of being victimized."

The seminar has been modified over the years to attract a larger campus audience, and the information shared by officers is specific to the campus community.

The 90-minute seminar will include a question-answer session that will allow attendees to ask questions or raise concerns they might have about campus safety and security.

Materials and promotional literature will be available, and light refreshments will be served.

Additional information is available by calling (602) 543-3450.

### Lecture focuses spotlight on desert foods

The Deer Valley Rock Art Center, an archaeology museum located in northwest Phoenix, will be the site of a lecture from 1 p.m. to 2 p.m., March 7, that will focus on many of the foods eaten by Native Americans and other desert populations.

The lecture, by Colleen O'Brien, will include methods for gathering, preparing, and storing these foods. Changes in wild food knowledge and diet also will be discussed, including some of the current effects of delocalization of food on regional health issues.

O'Brien is an environmental anthropologist, and her research interests involve the dynamics of culture change, cultural foodways, and conservation and sustainability, particularly in the desert Southwest.

O'Brien, who received her doctorate in anthropology from the University of Georgia, is a visiting lecturer in ASU's School of Human Evolution and Social Change. She teaches courses in food and culture, cultural anthropology, and ecological and environmental anthropology.

The event is free, and everyone is welcome. For more details, call (623) 582-8007 or visit the Web site [www.asu.edu/clas/shesc/dvrac](http://www.asu.edu/clas/shesc/dvrac).

### Junior faculty fellowship nominations open

The Ewing Marion Kauffman Foundation, in its efforts to promote entrepreneurship at U.S. universities, has opened the nomination period for the Kauffman Junior Faculty Fellowship in Entrepreneurship Research.

This annual program recognizes junior faculty members who are beginning to establish a record of scholarship, and who exhibit the potential to make significant contributions to the body of research in the field of entrepreneurship.

The Kauffman Foundation will award up to five fellowships to junior faculty members from universities across the United States. Each fellow's university will receive a grant of \$50,000 over two years to support the research activities of the fellow.

Nominations will be accepted online up to 11 a.m. Arizona time, March 9.

To see the complete call for nominations, including submission guidelines, visit the Web site [www.kauffman.org/kjff](http://www.kauffman.org/kjff). All questions can be directed via e-mail to [kjff@kauffman.org](mailto:kjff@kauffman.org).

### Loo tapped as ASU's deputy general counsel

Lisa Loo has been appointed ASU's deputy general counsel. Her appointment took effect Jan. 1.

Loo joined ASU's Office of General Counsel in 1993 as associate general counsel, focusing on commercial transactions, real estate, procurement, financings, immigration, special projects and international matters.

She was appointed senior associate general counsel in 2007.

As deputy general counsel, Loo will have administrative responsibilities as well as the authority to act in the general counsel's absence, as appropriate.

Before joining ASU, Loo was in private practice for eight years. She obtained her law degree from the University of Virginia in 1985, and her undergraduate degree from Fordham University in 1982.

Loo is active in community and State Bar of Arizona activities, and she was the recipient of the 2008 State Bar of Arizona award for advancing opportunities for minorities and women in the legal profession.

### Anthology includes Rosen's short story

A short story by Corie Rosen, director of the academic support program at ASU's Sandra Day O'Connor College of Law, recently was published in the book "Powwow: Charting the Fault Lines in the American Experience – Short Fiction from Then to Now."

The book, published by Da Capo Press, includes Rosen's short story, "The Funeral."

Rosen has a bachelor's degree in English literature and theater from the University of California-Berkeley, where she received the H. Hill Award for excellence in English literature and the Barestage Award for superior dramaturgy.

She received a law degree from the University of California-Los Angeles, where she was one of the first graduates of the school's Entertainment Law and Media Policy Program.

Her work has been featured on National Public Radio and has appeared in a variety of publications, including nationally distributed anthologies.

### ASU's Denhardt receives leadership award

Robert Denhardt, director of the ASU School of Public Affairs, recently received the new Associate Award for Excellence in Leadership from the Arizona City-County Management Association, or ACMA.

He was honored for his leadership in addressing issues that contribute to improving the quality of public administration in local government.

Denhardt was presented with the award Feb. 6 at an ACMA conference in Sedona.

Also during this event, two School of Public Affairs graduate students earned scholarships. Daniel Ortiz-Hernandez was awarded the Charles A. Esser scholarship, and Joseph Brehm received the Marvin A. Andrews scholarship.

### No spots left for retirees association trip

The ASU Retirees Association (ASURA) travel committee has announced that its trip to Canyon de Chelly April 13-15 is full.

The committee has some great trips being organized for next year, and members are urged to watch for announcements. A survey also will be distributed soon to members to assess travel interests and destinations.

For more information, contact either Bill Stasi, chair, at [william.stasi@asu.edu](mailto:william.stasi@asu.edu) or Gary Anderson at [gwander@asu.edu](mailto:gwander@asu.edu).

### Symposium highlights Canalscape project

Historians, planners, urban designers, engineers, attorneys, architects, artists, policy makers and developers gathered Feb. 6 at the Canalscape symposium on ASU's Downtown Phoenix campus to discuss the potential for one of the region's most important pieces of critical infrastructure: the canals.

Under the direction of Nan Ellin, director of the urban and metropolitan studies program in the School of Public Affairs, the Canalscape project is exploring the possibility of an authentic, sustainable desert urbanism for metropolitan Phoenix comprising vital urban hubs where canals meet major streets.

A Canalscape workshop run by Ellin is under way, with 22 students from 10 different programs across ASU, in tandem with a studio of 15 additional students from the University of Colorado taught by landscape architect Lori Catalano.

The event was co-conducted by ASU's urban and metropolitan studies program, and the Global Institute of Sustainability, in conjunction with other ASU and community partners.

For more information about Canalscape, contact Ellin via e-mail at [nan.ellin@asu.edu](mailto:nan.ellin@asu.edu).

## Biodesign Institute taps LaBaer to lead Piper Center for Personalized Diagnostics

(Continued from page 1)

patient and directs physicians to the right therapeutic strategy for that individual.”

With this appointment, LaBaer also becomes ASU's first Virginia G. Piper Chair of Personalized Medicine. The partnership is a broad effort launched in 2007 by the Piper Trust and Flinn Foundation to take advantage of Arizona's emerging strengths in the area of personalized medicine.

“The promise of personalized medicine is twofold: to increase patient outcomes and to reduce health care costs,” says Judy Mohraz, the president and chief executive officer of the Piper Trust. “The Piper trustees have made \$35 million in investments in this area of research because we believe it is the future of medicine, and that Arizona is uniquely positioned to become a leader in this arena. Dr. LaBaer's appointment is a major boost to this effort.”

“We are especially excited to be doing this in Arizona, where there is a strong collaborative atmosphere and a palpable excitement about this new direction for medicine,” LaBaer says. “Arizona's interest in new technological approaches and the willingness of its various clinical stakeholders to come together to build a statewide biorepository are just what we need to be successful.”

LaBaer's team will play a major role in biomarker discovery and validation for lung cancer and diabetes, in collaboration with the larger Partnership for Personalized Medicine, which also includes TGen in Phoenix and the Fred Hutchinson Cancer Research Institute in Seattle.

LaBaer created the Institute of Proteomics as a research program within the Harvard Medical School to promote collaborative research and discoveries. Using new, high-throughput technologies, his team advanced the discipline of functional proteomics, which seeks to understand the roles of all the proteins made in the human body.

The team also developed new technologies to discover new disease targets, including the identification of blood-borne markers to discover the molecular signatures of the autoimmune cause of Type I diabetes as well as identification of cancer markers.

An underpinning of this work has been the creation of vast repositories of protein expression-ready clones for genes in human and other commonly studied organisms that are maintained in a rapid-access storage facility and usable in the widest possible range of experimental protocols. More than 100,000 clones have been sent to laboratories worldwide.

The Piper Center for Personalized Diagnostics at ASU will be the focal part of biomarker discovery and validation in a high-throughput and high-quality control manner. Effective biomarkers have the potential to improve health care and reduce costs by detecting diseases at an earlier stage when they are more easily managed, and by more effectively managing patients to handle disease.

Currently, one out of every seven U.S. dollars is spent on health care, and 75 percent of health care costs are for treating five chronic diseases (diabetes, congestive heart failure, coronary artery disease, asthma and depression).

LaBaer was educated at Washington High School in Phoenix,

attended the University of California-Berkeley as an undergraduate Regents Scholar and completed medical school and graduate school at the University of California-San Francisco, where he studied steroid regulation of DNA transcription and protein-DNA interactions.

LaBaer completed his internship and residency at the Brigham and Women's Hospital and a clinical fellowship in oncology at the Dana-Farber Cancer Institute, both in Boston. He is a board certified physician in internal medicine and medical oncology and was an instructor and clinical fellow in medicine at Harvard Medical School.

LaBaer has contributed more than 60 original research publications, reviews and chapters. He is an associate editor of the *Journal of Proteome Research*, *Analytical Biochemistry*, and a member of the scientific advisory boards for the Proteome Society, Promega Corp., Lumera-Plexera Corp. and the Barnett Institute, and he is a founding member of the Human Proteome Organization.

This announcement demonstrates the benefit that a research university such as ASU provides to the state. Each year, Arizona's universities pump almost \$1 billion into the state's economy through research projects, which are funded by the U.S. government and other organizations such as the Piper Charitable Trust. Research funds are legally restricted and may not be used for instructional purposes.

Caspermeyer, with the Biodesign Institute, can be reached at (480) 727-0369 or joe.caspermeyer@asu.edu.

## Faculty members display width, breadth, depth of research at university

(Continued from page 1)

the species is rapidly increasing the complexity of the urban environment for humanity as a whole,” he says. “This makes urban-system infrastructure a critical component in maintaining stable, functioning societies and ensuring quality of life.”

Responding to the challenges emerging from the world's rapid urban population growth will fundamentally change how the engineering of public infrastructure is conducted, Allenby says. The accelerating growth is driving an increasing reliance on information and communications technology – in everything from “smart buildings” that manage themselves to reduce energy consumption, to transportation networks that monitor themselves to prevent traffic and instruct drivers how to avoid congestion.

### Universal life

How did the universe begin? How will it end? Do other universes exist? Generations of researchers have brought us to our current point of understanding, but our picture of the universe has changed more in the past decade or so than it did in the past century. The changes have had a significant effect upon our understanding of the future of the universe – and life within it.

Lawrence Krauss, an ASU theoretical physicist and cosmologist, describes how these revolutionary discoveries in cosmology have dramatically altered our views on the universe.

In his lecture, “Our Miserable Future,” Krauss discussed the impact of new discoveries, including the key facts that the universe is flat and that the dominant form of energy in the universe resides in empty space. While significantly affecting our understanding of the future of our universe, these changes also have influenced questions asked in modern cosmology, forcing researchers to confront several profound questions.

“Revolutionary developments of the past de-

cade have forced us to confront truly fundamental questions at the basis of science,” Krauss says. “In the far future, all evidence of the ‘Big Bang’ will disappear, and scientists will think we live in a static, eternal universe.”

### Weird life

Astrobiologists often ponder “life as we do not know it” in the context of extraterrestrial life, says ASU theoretical physicist and cosmologist Paul Davies.

“But has there been a blind spot to the possibility of ‘alien’ life on Earth,” he says.

Davies challenged the orthodox view that there is only one form of life in his lecture, titled “Weird Life.”

“Life as we know it appears to have had a single common ancestor,” he says. “Yet could life on Earth have started many times? Might it exist on Earth today in extreme environments and remain undetected because our techniques are customized to the biochemistry of known life?” asked Davies, director of the BEYOND Center.

Davies referenced a 2007 report by the National Research Council that looked at whether the search for life should include “weird life,” which it described as “life with an alternative biochemistry to that of life on Earth.”

The concept of a shadow biosphere, Davies says, “is still just a theory.”

“If someone discovers shadow life or weird life, it will be the biggest sensation in biology since Darwin,” he says. “We are simply saying, ‘Why not take a look for it? It doesn't cost much (compared to looking for weird life on Mars), and it might be right under our noses.’”

### We are what we eat

At the symposium, Anne Stone, an ASU associate professor of anthropology, discussed how diet holds keys to understanding who we

are, how we live and form societies, and how we evolved from hunter-gatherers to agriculturists to city dwellers.

Researchers such as Stone look to our close animal relatives – chimpanzees and other primates – for comparisons to humans to understand the development of the human body, and how our bodies are affected by diseases and the environment.

“One area we look at is starch consumption, something prominent in both agriculturalists and hunter-gatherers,” Stone says.

A study she led on the amylase gene (AMY1) copy number variation – the gene responsible for starch hydrolysis – produced one of the first examples of positive selection on a copy-number-variable gene in the human genome. The results show how different levels of AMY1 copy number differentiation is unusual in a population, and that individuals with high starch diets have more copies than those with low starch diets.

“We discovered that the average human has about three times more AMY1 copies than chimpanzees, which eat mostly fruit and far less starch than humans,” Stone says. “This human-specific increase may have occurred with a dietary shift early in hominin evolutionary history. We know that starch-rich root plants were a critical food for early hominins, and may even have facilitated the initial spread of Homo erectus out of Africa.”

### Species invasion

Global trade brings blueberries from South America and oranges from Israel, but the business of trading in these goods also carries significant costs, says Charles Perrings, an ASU professor of environmental economics. These products also bring invasive species.

These exotics often overtake native species, ravage crops, fisheries and forests and damage

ecosystems as well as economics. Especially hurt are the economies of developing countries, Perrings says.

So how can what seems like just a few zebra mussels and Mediterranean fruit flies (medfly) have such a large economic effect? Besides obvious direct impacts of pathogens and losses to biodiversity, disrupted ecosystems also lose resilience – the ability to spring back from environmental challenges and human-based insults.

The solution, in a nutshell, is to think locally and act globally, Perrings says.

“Individual countries need to consider how to contain trade-related species dispersal and international cooperation needs to act to reduce the invasive species risks of trade – especially those stemming from poor country exports,” he says.

### Plant biotech

The use of plant biotechnology as a biomanufacturing tool was discussed by Charles Arntzen of ASU's Biodesign Institute, a pioneer in the development of plant-based vaccines for disease prevention in humans and animals. One aspect of Arntzen's work is the development of new vaccines based upon virus-like particles (VLPs).

Consisting of just a single viral protein of the infectious agent, VLPs trigger a strong immune response while being non-infectious. These vaccines are highly effective and are extremely safe, since they lack genetic material required for the virus to multiply in the host, Arntzen says. They have been introduced for the prevention of hepatitis B (a virally-induced inflammation of the liver) and human papillomavirus, (the most common sexually transmitted infection, which has linked with cervical cancer and other afflictions).

Arntzen used his talk to address the challenges to translating this technology for public health programs.

## Event showcases technology opportunities at ASU

(Continued from page 1)

founder and managing partner of 5AM Ventures. “AzTE gave us one of the best ‘venture capital days’ I have seen. It was comprehensive, informative, efficient and well-presented.”

Jason Avery, founder of Rockpool Ventures in Cambridge, U.K. notes: “I now consider ASU as one of the most forward-thinking science faculties in the United States.”

The Tech Forum was organized by Arizona Technology Enterprises (AzTE), the technology venturing arm of ASU in collaboration with ASU SkySong. It introduced the investment and corporate communities to selected research programs, technologies and startup opportunities from ASU and the University of Pennsylvania.

In what is believed to be a unique relationship in higher education, ASU and Penn entered into a partnership this year to assist one another with commercialization of selected technologies for their respective universities.

“This event was a terrific way of connecting with ASU – a fast-rising research star in the university world – and Penn, an established Ivy League research center, as well as with the rest of the venture community,” says Matthew McCooe, a founder and managing partner of Chart Venture Partners.

Several faculty members made presentations on their new tech-

nologies in the life sciences, physical sciences and sustainability fields. Some of the innovations included biofuels and biomaterials derived from photosynthetic organisms, DNA and protein sequencing and detection platforms, neurostimulation technologies, synthetic antibodies, advanced battery technologies, light emitting diode substrates and low-power design methodologies.

This was ASU's first technology forum. The event attracted more than 130 people, including more than 80 external attendees, to see some of ASU's commercially promising technologies. It was sponsored by Silicon Valley Bank, Squire Sanders and Ernst & Young.

Guests included national and international venture capitalists, angel investors, entrepreneurs and corporate executives. Venture firms represented included Harris & Harris Group, Khosla Ventures, Kleiner Perkins Caufield & Byers, Redpoint Ventures, Sevin Rosen Funds and Sofinnova Ventures. Companies attending included ATMI, Boeing, Dow Chemical, Johnson & Johnson, Medtronic and Merck.

“All of these technologies are at the point of moving out from the university and into the marketplace,” says Charlie Lewis, vice president of venture development at AzTE. “We are creating an opportunity for venture capitalists to potentially invest in very early stage technologies.”

## ASU set to offer courses to high school seniors

(Continued from page 1)

“This is an additional opportunity for students to challenge themselves and to experience the adventure of a college course taught by ASU professors at an ASU campus. We will still be partnering with area high schools to offer specific courses at the schools, which is something we'd like to increase as the program grows.”

Eligibility for the program is based on a student's grade-point average, class rank and test scores. In addition to meeting ASU admission requirements, students must have met most high school graduation requirements at the time they enroll and have flexible schedules.

Once eligibility is confirmed, students can apply for admission to ASU and register for a course. Some prerequisite requirements could apply, depending on the class.

For a full listing of courses, visit the Web site <http://promise.asu.edu/csp>. For more information, contact Mark Duplissis at (480) 965-2621 or mark.duplissis@asu.edu.

Auffret, with Media Relations, can be reached at (480) 965-6991 or sauffret@asu.edu.

## Bioengineering students use research talents to aid disabled Africans

By Joe Kullman

Whatever endeavors she pursues in her career, Mona Aoufe wants them to be as fulfilling as her final major assignment to earn an undergraduate engineering degree at ASU.

She joined about 20 students in the Harrington Department of Bioengineering in the Ira A. Fulton School of Engineering in senior-year research projects to design and assemble medical devices for disabled villagers in a poverty-stricken south-central region of the African country of Malawi.

"We put a lot of passion into it," Aoufe says. "It wasn't your typical class project. We were working for more than a good grade. We wanted to provide things for people to make their lives better."

Customized wheelchairs, orthopedic braces and therapeutic instruments are among the devices to be delivered to the village of Njewa. It will be the second shipment in the past three years of devices made by ASU engineering students and brought to Malawi by Jan Snyder, a science education program manager in ASU's School of Materials.

The project grew out of Snyder's travels to Africa – first as a biology student in the 1960s, and later to visit one of his daughters, Jessi Jean, who worked with the Peace Corps in Malawi from 2003 to 2005.

Snyder's wife, Clarice, and their three other children went along on the latter visit and lived for six weeks in a village in the Nkhota-kota region of central Malawi.

The family saw the problems of poor sanitation and a severe lack

of health care. AIDS, tuberculosis, malaria and polio still afflict many, and estimates are that 7 percent to 10 percent of the more than 13 million Malawians are physically disabled in some way, Snyder says.

Vincent Pizziconi, an ASU associate professor of bioengineering, learned of Snyder's desire to help the Malawians and suggested Snyder videotape interviews with villagers about their disabilities when he again visited Africa in 2006.

Pizziconi showed the videos to his students and challenged them with assignments for their senior-year "capstone" research projects to produce devices for the disabled individuals.

"When we saw the people on the videos, we began to feel a connection to them," recalls Leila Kabiri, who earned her bioengineering degree in 2008. "It made us want to be successful for them."

Kabiri helped design and build a customized wheelchair for a Mawali woman named Ida, who had been partially paralyzed at age 20 from a condition that was never diagnosed.

Monica Lopez helped make an orthotic device for a young Malawian girl with an arm crippled by polio when she was an infant.

The project teams consulted specialists in medical fields focused on treating the disabled. They also had to test the devices to ensure the instruments adhered to design specifications stipulated by government regulatory agencies.

"It was hard, but it was an experience that gave us a real idea of what kinds of challenges you're going face as a bioengineer," says

Lopez, who plans to go to medical school. "It wasn't just something we were doing for ourselves. That made it meaningful."

Aoufe, who plans to pursue a dual master's degree in business and health care administration, worked with a team that built a customized tricycle for another partially paralyzed Malawi woman, whose name is Elizabeth.

"The project was one of the most rewarding experiences I've had, because this was a selfless act," Aoufe says. "All we cared about was making something for Elizabeth."

Snyder wants to make the medical-device project a first step toward larger efforts. He's talking to educators in Malawi about teaming with ASU to help the country train its own engineers, and to learn to provide villagers with better infrastructure and sources of energy.

He hopes to see establishment of a college-level technical school, and a school for Malawian women and girls, who rarely get formal education beyond early elementary grades.

"Education and the sharing of technology can offer the people in African countries opportunities to become economically sustainable," Snyder says. "The solution to their problems has to start with instilling in them the spirit of innovation, imagination and self-sufficiency."

For more information about the project, visit the Web site [www.sustainableltd.org](http://www.sustainableltd.org).

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

## Metals students create works of endurance, beauty at ASU

By Judith Smith

In the Bible and various works of literature, one finds many references to the "refiner's fire." It's the idea that out of flame and heat comes beauty.

No one knows this better than Becky McDonah, assistant professor in the Herberger College School of Art, who holds sway in the well-equipped metals studio, tucked away in the Art Warehouse.

There, her students use open flames as they create objects of beauty through practicing the blacksmithing and silversmithing techniques they are learning in class.

The students don't just make rings and earrings to sell at art fairs, though. These are serious artists who create sculpture, utilitarian objects, wearable art out of gold, silver, copper, brass, bronze and, occasionally steel – and, yes, rings and earrings on occasion.

ASU has one of the best-equipped metals studios in the United States for a wide range of metalworking techniques, thanks to the efforts of David Pimentel, the longtime metals professor who died in 2004.

Pimentel, who created ASU's ceremonial mace and president's medallion, was an expert in "raising," McDonah says.

"Raising" is an ancient process in which a flat sheet of metal is hammered over a hard surface or form, called a "stake," to force it into a volumetric form such as a vessel or bowl," she says. "This process can produce a seamless vessel."

For the past three years, the ASU Metalworking Department has conducted the annual Intercollegiate Metals Exhibition, which brings work from eight universities across the nation to show the work of their graduate and undergraduate metals students, as well as faculty.

The most recent exhibition, in October, fea-



Members of the Phoenix-area Boy Scout Troop 630 work for their merit badges in metals at the metals studio in the Art Warehouse in ASU's Herberger College School of Art. The workshop is in keeping with ASU's commitment as the New American University to be part of the community.

tured work from ASU, Bowling Green State University, the Cranbrook Academy of Art, Indiana University, Kent State University, the Rhode Island School of Design, San Diego State University and the University of North Texas.

What is happening nationwide in metals studios is an increasing use of other media such as fibers, plastics and resins, along with the metals, McDonah says.

McDonah, who earned her graduate degree at ASU and taught at Bowling Green State University for four years before returning to ASU, creates "reliquaries," or vessels that showcase "things that are important or symbolic to me," she says.

One reliquary, for example, contains thorns, cactus spikes and Arizona peridot. Her environmental concern is illustrated in a reliquary with disposable diapers, titled "Venerable Vestment: Cloth v. Convenience," which points out how many disposable diapers end up in landfills.

Her most ambitious reliquary, "Digging for Gold," is made of raised copper, shaped into trowel-like edges with a globe containing dandelion fluff as a centerpiece.

McDonah didn't always plan to have a career in metals. In college, she was a mass communication major and worked in a television studio.

"That wasn't much fun," she says. "I took a class in metals, and that was it."

That beginning metals class changed her life in more ways than one. She met and married a fel-

low student, Tedd McDonah, who also went on to teach metals, first at the University of Toledo and now in the Phoenix area. He augments the ASU program by teaching special topics such as blacksmithing, mokume-gane, enameling and Damascus steel.

Becky McDonah teaches advanced fabrication techniques, casting, raising, fold-forming, the Korean Keum-boo technique, chasing, repoussé, chainmaking, tool-making and an ancient technique known as "granulation," among other topics.

In keeping with ASU's commitment as the New American University to being part of the community, McDonah and her students do a public-service project every year.

This year, the metals department conducted a daylong metalworking merit badge workshop for local Boy Scout Troop 630.

McDonah and her student volunteers taught the Scouts how to make center punches out of tool steel, and harden and temper them for lasting durability.

Then, each Scout and Boy Scout leader made a belt buckle by using the jeweler's saw to cut out designs in brass that they later soldered to the buckle plates that they had formed with a hydraulic press. Their final step was to clean up the metal surface and use patina for coloration.

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

## Student center offers blend of fun, tranquility

By Marshall Terrill

The ASU Wells Fargo Student Center is one of the best-kept secrets on the Downtown Phoenix campus, but that certainly is not by design.

The center is located in the Arizona Center at 455 N. Third St., directly above the AMC Theaters box office. It serves as the Downtown Phoenix campus' official student union, but not many students know of its existence or use the facility as much as administrators would like.

"The student center is a bit tucked away from the beaten path, but once students know how to find us, they are pleasantly surprised at the comfortable surroundings and the variety of amenities we offer," says Dora Tompkins, the center's coordinator. "It's a place where students can have a cup of coffee or tea or hang out with friends in between classes. We are hoping that more students take advantage of these benefits."

The facility offers several activities and programming for students. The center includes plasma televisions, crafts and board games, a Wii, a Playstation 3, a sound system, pool and pingpong tables, and a meeting room for various student organizations.

"I like to go there when I want to get away from the dorm or school," says Jasmine Dean, an 18-year-old freshman who resides at nearby Taylor

Place. "It's very quiet and relaxing, and a place where I can study, play pool or watch TV."

Activities include the popular Spoken Word Coffee House, Craft Corners, karaoke, free movie Fridays, P.O.W.E.R. leadership seminars and talent shows. Tompkins says the center will conduct several events this semester, including a Super Bowl party, an Oscar night bash, a murder mystery dinner, and outings to Phoenix Suns and Arizona Diamondback games.

For more information on events on the Downtown Phoenix campus, visit the Web site <http://asuevents.asu.edu/events>.

The center also serves as an informational resource for students, offering tips on off-campus housing, job opportunities, volunteer opportunities, scholarships, internships and how to get involved in student organizations.

Hours of operation are 10 a.m. to 10 p.m. Monday through Friday, and noon to 7 p.m. on weekends.

To learn more about the ASU Wells Fargo Student Center in the Arizona Center, call (480) 496-0973 or visit the Web site <http://campus.asu.edu/downtown/student-life>.

Terrill, with the Downtown Phoenix campus, can be reached at (602) 496-1005 or [marshall.terryll@asu.edu](mailto:marshall.terryll@asu.edu).

## Contest offers way to walk to sweet trip

By Chris Lambrakis

For those who need a little extra incentive to maintain their New Year's resolution to get fit, ASU's Department of Exercise and Wellness has an opportunity that's too easy to be true.

Participants could even win a trip to Sweden, it's that sweet.

Except eating sweets is not part of the program. ASU and the Karolinska Institute (KI) in Stockholm, Sweden, are collaborating to challenge faculty and staff members at their respective higher education institutions to walk in a program called ASU-KI Step.

"We are partnering with KI not only to help the faculty and staff at our respective institutions get fit and stay healthy, but we are also conducting research on physical activity," says Barabra Ainsworth, an exercise and wellness professor at ASU's Polytechnic campus.

The goal is to have 1,000 participants in teams of three or four from ASU wearing pedometers to track their steps. The teams with the most days over 10,000 steps at the end of the competition will be eligible to win a trip to Sweden. The winning team from KI gets a trip to Arizona.

"The only thing ASU faculty and staff need to do is form a team, register, get measured and walk," Ainsworth says. "It's a fun, inexpensive way to reduce your risk of disease, get to know your co-workers and increase your activity level."

Registration began Feb. 19 and will end March 11. Three informational kickoff events are being planned as follows:

- Feb. 24 – Polytechnic campus, noon to 1 p.m., Physical Activity Center (PAC).

- Feb. 25 – Downtown campus, noon to 1 p.m., College of Nursing Room 344/345.

- Feb. 26 – Tempe campus, noon to 1 p.m., Student Recreation Center. Employees at the West campus will participate as the control group.

The competition begins March 16 and will continue through Sept. 16. For more information, and to register, visit the Web site [www.asukistep.org](http://www.asukistep.org), call (480) 727-1933 or send an e-mail to [asukistep@gmail.com](mailto:asukistep@gmail.com).

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