ASU among nation’s ‘greenest’ schools

By Sharon Keeler

ASU has been named one of the nation’s ‘greenest’ universities by The Princeton Review in its second annual rating of environmentally-friendly institutions. This is the second year in a row that ASU made the list.

The Princeton Review named 15 colleges to its “2010 Green Rating: Home Run Roll” – a list that sauces the institutions that received the highest possible score – 99 – in this year’s rating tally.

In addition to ASU, 14 other colleges were named to the honor roll including Bates College, Lewiston, ME; Binghamton University, Binghamton, N.Y.; College of the Atlantic, Bar Harbor, ME; Colorado College, Colorado Springs, Colo.; Dickinson College, Carlisle, Pa.; Evergreen State College, Olympia, Wash.; Georgia Institute of Technology, Atlanta; Harvard College, Cambridge, Mass.; Middlebury College, Middlebury, Vt.; Northeastern University, Boston; University of California–Berkeley; University of New Hampshire, Durham; University of Washington, Seattle; and Yale University, New Haven, Conn.

The Green Ratings of Colleges measures how eco-friendly the institutions are on a scale of 60 to 99. The company tallied its Green Ratings for 697 institutions based on data it collected from the colleges in 2008-2009 concerning their environmentally-related policies, practices and academic offerings.

The Green Rating scores appear in the Web site profiles of the schools that are posted at The Princeton Review.

“Arizona State University is honored by this recognition,” says Rob Melnick, the executive dean of the Global Institute of Sustainability. “We are thrilled to be among the leaders of the nation’s growing number of higher education institutions that understand the critically important responsibility colleges and universities have in addressing the local and global challenges of sustainability. The Global Institute of Sustainability and School of Sustainability exemplify ASU’s commitment to education, discovery and service.”

(See ASU on page 8)

Study: Ants more rational than humans

"Collective wisdom" findings offer insight into robotics development

By Margaret Coulombe

In a study released online July 22 in the Proceedings of the Royal Society: Biological Sciences, researchers at ASU and Princeton University show that ants can accomplish a task more rationally than out – multimodal, egg-headed, tool-using, bipedal, opposing-thumbed – selves.

This is not the case of humans being "stouter" than ants. Humans and animals alike make irrational choices when faced with very challenging decisions, says Stephen Pratt and Susan Edwards, the study’s authors.

"This paradoxical outcome is based on apparent constraint: most individual ants know only a single option, and the colony’s collective choice self-organizes from interactions among many poorly-informed individuals," Pratt says.

The authors’ insights arose from an examination of the process of nest selection in the ant, Temnothorax curvispinosus. These ants colonies live in small cavities, as small as an acorn, and are skillful in finding new places to roost. The challenge before the colony was to "choose" a nest, when offered two options with very similar advantages.

What the authors found is that in collective decision-making in ants, the lack of individual options translated into more accurate outcomes by minimizing the chances for individuals to make mistakes. "A ‘wisdom of crowds’ approach emerges," Pratt says.

“Rationality in this case should be thought of as meaning that a decision-maker, who is trying to maximize something, should simply be consistent in its preferences," Pratt says. "For animals trying to maximize their fitness, for example, they should always rank options, whether these are food sources, mates or nests sites, according to their fitness contribution.

"Which means that it would be irrational to prefer choice A to B on Tuesday and then to prefer B to A on Wednesday, if the fitness returns of the two options have not changed." (See FINDINGS on page 9)
Phoenix home prices ‘close to bottom’

New ASU study confirms Valley home prices falling at slower pace

By Debbie Freeman

Phoenix area home prices are “at or close to a market bottom,” according to a new ASU study that offers hope to many Valley homeowners.

The Arizona State University-Real Estate Center’s new ASU-REI Home Price Index (ASU-REI HPI) shows home prices in the Valley have continued to slide into negative territory for 28 of the last 29 months. However, the August report is the 12th in a row to show an improvement in the annual rate of decline.

According to the August ASU-REI HPI, Phoenix area home prices fell 1 percent in August, bringing the cumulative home price loss since the market peak in 2006 to 37 percent. Compared to the market bottom in early 2009, home prices have gained 1 percent.

“Buyers and sellers are getting a better sense of where the market has bottomed,” said Amy Hillman, assistant professor of real estate and ASU’s director of the Lodestar Center.

“People are very focused and concerned about their individual interactions with the health care system, rather than the bigger picture,” Baldwin says. “I think this sends a signal to politicians about how personal the health care reform debate deems it to be.”

Baldwin says much of the reform talk centers on making sure all Americans have access to coverage without exclusions for pre-existing health conditions, but the hope is insurers will be allowed to offer discounts to people who live healthy lifestyles and use preventive services.

“It just makes sense that if you pay less for homeowners insurance when you have a security alarm and pay less for car insurance when you have a good driving record, then you should pay less for health insurance when you take care of yourself and follow guidelines for preventive care,” Baldwin says.

She also wants to make sure any reform plan includes an integrated approach to mental and physical health.

“Psychiatric conditions have been treated in a separate system, with different reimbursement rates, for far too long, helping to perpetuate the stigma of mental illness,” she says.

Baldwin has an especially keen interest in these issues as she prepares to head up the nation’s first public university Master of Public Health program that focuses specifically on urban health.

The new program will address the issues of homelessness, mental health and access to affordable health care that have been brought even more to the forefront because of the recession and the health care reform movement.

The first classes will be held at ASU’s Downtown Phoenix campus this fall semester through the nationally ranked W. P. Carey School of Business, in collaboration with the College of Nursing and Health Innovation. Freeman, with the W. P. Carey School of Business, can be reached at (480) 965-9327 or debbie.freeman@asu.edu.

By Amy Cox O’Hara

The ASU Lodestar Center for Philanthropy & Nonprofit Innovation has announced that its nonprofit leadership and management offerings, encompassing over 30 years of development, have met all eight criteria required for the Nonprofit Quarterly’s review of a fully comprehensive nonprofit management program.

To be named a fully comprehensive program, institutions had to offer noncredit programs, undergraduate certificates, graduate certificates, graduate concentration leading to a master’s degree in nonprofit degree, and noncredit courses, and online courses.

Hundreds of programs from across the country were reviewed, with only ASU and North Park University in Chicago fulfilling all eight criteria.

“There is no question that ASU has led the nation in the field of nonprofit management education given the array of degree programs, certificate programs and other opportunities we provide for students at all levels,” says Robert F. Ashcraft, the director of the ASU Center of nonprofit studies in the School of Community Resources and Development.

“When considering the full range of activities we provide including professional development (noncredit) options, research projects, community capacity initiatives, conferences and other parts of our center’s portfolio means that this university clearly has the most comprehensive nonprofit portfolio, fulfilling our mission, among any university in the nation,” Ashcraft says.

The ASU Lodestar Center for Philanthropy and Nonprofit Innovation (formerly the ASU Center for Nonprofit Leadership and Management), is recognized as a national leader in undergraduate and graduate nonprofit education, research and technical assistance.

The ASU Lodestar Center exists to enhance the quality of life in communities through the advancement of nonprofit institutions and the leadership practices and values that build the capacity of nonprofit organizations, professionals, board members, donors, local government and others.

For more information, visit the Web site http://nonprofit.asu.edu.

By Amy Hillman

Amy Hillman, an assistant professor of management at the W. P. Carey School of Business, has numerous national awards as an outstanding researcher and reviewer. Students and colleagues consider her to be an exceptional teacher, having won two Outstanding Professor Awards, two Outstanding Teaching Awards and a Dean’s Council of 100 Distinguished Scholar designation. She also was voted one of the most popular students in the School of Business/West’s rankings of MBA faculty in 1998.

“I feel like one of my biggest accomplishments has been helping to shape the critical thinking of so many students over the years,” Hillman says. “In my new position, I want to focus on working with faculty and students to help the W. P. Carey School of Business become an even more top-flight business school, in regard to teaching and research prominence.

With a background as a general manager of a small retail and manufacturing business, Hillman also recently played a key role in advancing the Spirit of Entrepreneurship Center at ASU’s W. P. Carey School of Business, which helps incubate businesses each year. The center offers companies access to student-team consulting projects, which pairs students with valuable work and the students with hands-on business experience.

Hillman previously taught at the University of Western Ontario, Michigan State University, Johannes Kepler University in Austria, Arizona State University and Trinity University. She has a doctorate from Texas A&M University, where she was named Outstanding Doctoral Alumna.

In her new position, Hillman replaces Phillip Reper, who is being promoted to executive vice provost and dean of Arizona State University Online and Extended Education. He will be responsible for all of ASU’s Web-based and off-campus classroom-based academic programs.

For more information on the W. P. Carey School of Business, can be reached at (480) 965-9530 or debbie.freeman@asu.edu.
ASU researchers are frequently called upon by the local and national news media for expert insight and opinion on current events and issues of public interest. Following are excerpts of recent news features featuring ASU representatives.

ASU Insight

Researchers aim to break barriers with lasers

Nanoscale lasers hold promise of faster, more efficient computers and Internet access

By Joe Kullman

Engineers are trying to make lasers smaller because it would enable the devices to work seamlessly with smaller electronic components. The more lasers that can be used with these components, the faster and more reliable electronics could perform. This would do things such as speed up the workings of computers and Internet access.

Signals can be transmitted between computer components much faster by a light wave rather than by metal wires so being able to use more lasers offers "the ultimate solution for improving on semiconductor chip communications," Ning says.

Nanoscale lasers also can be integrated with other biomedical diagnostic tools—as such as molecular detection and medical imaging devices—making them work faster and more efficiently, he says.

These advances also represent a major step in nanophotonics—the study of the behavior of light on the nanometer scale and the ability to fabricate devices in nanoscale.

"Nanolasers can be used for many applications," Ning says. "But the most exciting possibilities are for communications on a central processing unit (CPU) of a computer chip." Research such as this is expected to be fostered by the Defense Advanced Research Projects Agency (DARPA), the central U.S. government's research and development agency. DARPA's goal is to combine the enhanced capabilities of the U.S. Department of Defense. The agency is supporting a collaborative team partnering researchers at ASU, the University of California at Berkeley and the University of Illinois, Urbana-Champaign.

ASU's collaboration with professor Martin Hillman's team at Eindhoven happened by coincidence, Ning says.

"We discovered we were working on the same problems and trying to achieve similar goals using similar ideas," he says. "So the partnership developed." For more information, visit the Ira A. Fulton Schools of Engineering Web site at http://engineering.asu.edu/news/5554.

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

ASU in the News

N.J. Tao, the director of the Center for Bioelectronics and Biosensors at the Biodesign Institute, has experimentally measured an important property of graphene—a two-dimensional crystal lattice with broad potential for electronic applications.

ASU IN PHOTOS

The curious oddity.

ASU researchers are helping discover ways to manipulate the properties of new types of materials by using them to make computers operate more quickly and efficiently, and enabling quality control using nanoscale devices.

Working with a research team at the Technical University of Eindhoven in the Netherlands, an ASU team by Richard Harth, with the Biodesign Institute, can be reached at richard.harth@asu.edu.

"When they found it, it was a stable material at room temperature," Tao says. "Everyone was surprised."

In the current study, two electrodes were attached to graphene, and a voltage applied across the material's two-dimensional surface to see if it could conduct electrical charge. "The experimental results have turned out to be better than expected," Tao says.

Scientists have been looking for decades, the discovery of real graphene did not precisely duplicate the quantum capacitance of graphene. This ability to store charge according to the laws of quantum capacitance, and a voltage applied across the material's two-dimensional surface once the first level is occupied," Tao explains.

"Research is being done to see if it can be used to make lasers smaller because it would enable the devices to work seamlessly with smaller electronic components. The more lasers that can be used with these components, the faster and more reliable electronics could perform. This would do things such as speed up the workings of computers and Internet access.

"Nanolasers can be used for many applications," Ning says. "But the most exciting possibilities are for communications on a central processing unit (CPU) of a computer chip." Research such as this is expected to be fostered by the Defense Advanced Research Projects Agency (DARPA), the central U.S. government's research and development agency. DARPA's goal is to combine the enhanced capabilities of the U.S. Department of Defense. The agency is supporting a collaborative team partnering researchers at ASU, the University of California at Berkeley and the University of Illinois, Urbana-Champaign.

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New program helps sun ‘SET’ on waste

By Judith Smith

Let’s say your office has 300 white binders with the ASU logo on them. They’re likely left on a table at a conference, and you’re not planning on using them for a long time to come. You don’t want to throw them away, but they can’t be re-ycled…or can they? What should you do with them?

Put them on ASU’s newly debuted version of “Craigslist” – SunSET. SunSET – Sun (Devils) Surplus Exchange and Transfer – is a new way for ASU departments to re-use office supplies, lab supplies, some types of furniture or other items no longer needed, while reducing the university’s waste handling costs. It’s a simple process. You need something, put up a note. You have a surplus, put up a note. Make a deal and pass the goods along.

“The primary focus of the site is for items that are readily usable, but provide greater benefit to the university by reusing them rather than disposing of or selling them,” says John Chapman, the systems analyst associate for Business Applications and Fiscal Control.

“This includes office supplies, office furniture, specialty lab equipment that can be reused on campus,” he says. “Items that are currently not sent to Surplus Property and provide a greater benefit by selling them will not be included, such as computers and most furniture. Obviously, Chapman says, items that are leased or don’t belong to ASU cannot be posted on SunSET. Items with an ASU property control asset tag can be transferred when paperwork is filed with Property Control.

The idea for SunSET originated with Bonny Bentzin, ASU’s director of university sustainability practices, and Kerry Suson, the director of Surplus Properties.

“We’ve been floating the idea for a while, but the timing wasn’t right,” Bentzin says. “About six months ago, I was at a meeting with Jeremy Gonzalez, chair of the University Staff Council Sustainability Committee, and the idea came up again and things fell into place.”

After five months of planning, the Web site was rolled out for testing July 1. Departments can use it while the kinks are being worked out.

The Web site is designed to take care of items that are too small to be sent to Surplus Property.

“The tendency for departments is to throw items such as binders or small office supplies in the trash,” Susan says. “While Surplus can still pick these items up, we would be happy to see the items go to use in other areas of the university.”

“With this new option, it will be up to the departments to transfer the goods they want to donate and they can support the university as a whole,” she says. “We will use the honor system – are you abiding by the Property Control rules?”

Bentzin says the idea is to reduce waste tonnage fees at ASU and to help the university along on its path toward sustainability.

Though ASU has been planning SunSET for months, another school actually was the first to inaugurate such a program.

“The University of Florida rolled out one last week,” Bentzin says.

Though ASU’s Web site is primarily sponsored by Surplus Property and Purchasing, with further support from the Global Institute of Sustainability, SunSET may be accessed online at www.asu.edu/sunset.

Bonny Bentzin

Cronkite students win awards for public relations, news efforts

By Julie Newberg

Students in the Walter Cronkite School of Journalism and Mass Communication at ASU are winning recognition for work ranging from public awareness campaigns to international news reporting and multimedia projects.

The recent accolades include several awards, including a Webbys, a multimedia reporting project that is being highlighted by the Online News Association; and a national student magazine contest.

Best of the West Award

Andrew Premtis, a Cronkite student, won the 2009 Best of the West college award for sports reporting. His story, “Letting go of it all,” profiles ASU pitcher Josh Snouw. Judge Corydon Ireland Witter of The Howard University Gazette, said: “The writer draws a series of pictures that created a you-are-there feeling, listening alongside the reporter. Good writing and, at the heat, short paragraphs kept the narrative moving.”

The Best of the West contest awards college journalists in the West in three areas: sports writing, feature writing and general reporting. It is one of the West’s most prestigious contests, drawing nearly 2,000 entries each year from journalists in 50 states from the Rockies west to Alaska and Hawaii. The college contest began in 2005 and covers the same region.

Robert Novak Collegiate Journalism Award

Cronkite student James Kindle took second place in the 2009 Robert Novak Collegiate Journalism Award, an annual contest of excellence for collegiate student reporting that demonstrates an understanding of the basics that support a free society.

Kindle was part of a group of students who went to South Africa last summer to report on the lives of immigrants. He wrote about a Zimbabwe woman who was beaten, raped and nearly killed for her political activism; refugees from Angola who fled their country because of violence and now live in a displacement camp in South Africa; and a high-rise apartment building in Johannesburg that teams with dozens of nationalities struggling to live in peace.

The award is one of three sponsored by the Institute on Political Journalism, the collegiate journalism program of The Fund for American Studies. Kindle was awarded $2,500.

Kindle’s work includes “Scarred,” “Divided They Stand,” and “Johannesburg’s Babel Falls.”

Public Awareness Campaign

Cronkite students took second in a national College STD Awareness Month campaign contest for their work creating a public awareness campaign that warns of the danger of sexually transmitted diseases.

The award was given by the Centers for Disease Control and Prevention and the National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention.

The campaign was developed by three graduate students in the Cronkite public relations lab under the direction of assistant professor Xu Wu. The students are Ashley Panter, Katie Charland and Cindy Koczecisz. Wu says the award was especially meaningful because it came in the lab’s very first semester of operation. It is, he said, “proof that we can compete with any school at the national level.” First place went to the University of Missouri.

Webby Award

A Cronkite student project on South Africa is one of the honorees of the 2009 Webby Awards in the student category.

The project, “South Africa: At the Crossroads of Hate and Hope,” can be seen on the Cronkite Zine site online at http://cronkitezine.asu.edu/SouthAfrica/index.html.

The multimedia project is the work of 10 Cronkite students and two professors – Carol Schwalbe and Susan Green – who traveled to South Africa in June 2008 to document the lives of immigrants. Their work, which was funded by a generous grant from the Howard G. Buffett Foundation, was selected for top recognition from among nearly 7,000 entries received from all 50 states and more than 60 countries.

The official honor site is awarded to the top 15 percent of all work that entered that exhibits remarkable achievement.

ONA Showcase

A project on families divided by the U.S.-Mexico border has been selected by the Online News Association as an example of effective multimedia storytelling.

The project, “Divided Families,” was produced by students in an in-depth reporting class taught by Kristen Gilgen, an assistant dean, and developed for the Web by an advanced online media class taught by Carol Schwalbe, an assistant professor, with assistance from student Nancie Dodge.

The ONA chose the project for inclusion in its “Interactive Narratives: The Best in Multimedia Storytelling” in this year’s collection.

Association for Education in Journalism and Mass Communication

For the third year in a row, students in the Walter Cronkite School of Journalism and Mass Communication came out on top in a national student magazine contest.

Students won a total of seven awards in the 2009 contest sponsored by the Magazine Division of the Association for Education in Journalism and Mass Communication (AEJMC), tying with Northwestern University and Drake University. ASU students won more awards than any other school in the country in each of the last two years. This year, Cronkite students took two first-place awards in the contest and, for the second year in a row, swept the Specialized Business Press Article category.

Winning first were James Kindle and W. J. Henning, who graduated from the Cronkite School in May. They will each receive $100. “Healthy Environments, Elements, Experiences,” a health magazine created by a magazine class co-taught by Kristen Gilgen and Jamil AlShraiky, an assistant professor, won awards for magazine design and editorial content.

AEJMC is the nation’s leading journalism education organization. It is made up of about 3,500 journalism and mass communication faculty, administrators, students and media professionals from around the world.

Newberg, with Media Relations, can be reached at (480) 772-3156 or julie.newberg@asu.edu.

Professor to study social impacts of emerging military technology

By Matt Evans

Brad Allenby, a professor in the School of Sustainabil- ity, Engineering and the Environment, has been selected to be a Stockdale Fellow for the U.S. Naval Academy Stockdale Center for Ethical Leadership.

The Stockdale Fellowship program brings together scholars and teachers with senior career military officer, civilians, surgeons and others to collaborate on understanding and improving understanding in areas involving war, military and leadership ethics.

Allenby will investigate the social, cultural, ethical and operational implications of emerging military and national security technologies. The result of these investigations will be published articles, lectures and detailed research on emerging technologies and their implications.

“Many people don’t understand how important military conflict has always been to the development of new technology,” Allenby says. He points to such technological advances as the rapidly increasing proliferation of combat situations, miniaturized surveillance mechanisms, development of ‘telepathic’ headgear, and smart drugs that enhance cognitive function.

The Stockdale Fellowship “offers an opportunity to explore the implications of such technologies so that we can manage their effects on society nationally and ethically,” Allenby says.

Candidates for an academic Stockdale Fellowship typically are established scholars who have achieved considerable publications of their work and have gained significant teaching experience in the areas of philosophy, leadership, international relations, behavioral science, and/or public policy.

Evans, with the Ira A. Fulton Schools of Engineering, can be reached at matthew.evans@asu.edu.

August 7, 2009

4
New certificate program brings religion to the discussion table  

By Judith Smith  

When a student brings up a controversial issue surrounding religion in a university class, the response of many professors is to change the subject— or risk finding themselves engaged in a discussion that can become uncomfortable, or even hostile.

The case of Linell Cady, the director of the Center for the Study of Religion and Conflict, calls "the paradox of constrained inquiry." Cady is a professor in the new School of Historical, Philosophical and Religious Studies at ASU's College of Liberal Arts and Sciences.

"In the institution that should be most committed to free speech and academic freedom, we can, at times, fail to address the issues that matter most to people and warrant our deepest engagement," Cady says.

The center is working on the second phase of a $200,000 project funded by the Ford Foundation's Disciplinary Dialogues initiative, "Teaching and Talking About Religion in Public," to avoid that paradox.

The centerpiece of the project is an 18-credit undergraduate certificate program in religion and conflict, which started last year. Six students completed the initial program and received their certificates this spring.

Certificate awardees were Rae Brendecke, Brian Hoblit, Sabrina LaZare, Whitney Meshay, Kristin Stelfox and Michelle Ritchie.

Creating the program required months of meetings to define what the certificate would be, identify appropriate courses from across the university for inclusion, and to secure faculty, departmental and college support for the plan. The faculty members who were involved are the program’s founder and director, and the associate director of the center and coordinator of the certificate program.

But it was more complicated than just "plucking" existing courses from the catalog to include in the certificate. New courses were developed and existing ones revamped by the 15 participants in the inaugural faculty development seminar, which focused on the challenges faced when teaching about religion and the various dimensions of religion.

In the second phase of development, the center will offer a series of pedagogy workshops that will "reflect further on our deepest engagement," Cady says. "We had very strong opinions. He liked to say things that were painfully false."

Had he had the student in class after he participated in the faculty development seminar, Cady says he would have known better how to confront the student in a way that promoted dialogue and teaching for the class as a whole.

The second phase of the grant also will include the development of a core course and approximately eight modules that can be tailored to fit various disciplines.

"The goal of the core course is to ensure that students are exposed to a rigorous analysis of theoretical issues and real-world cases each year," Cady says.

Courses will focus on topics such as religion and the state, religion and identity, race and ethnicity, and religion and human rights.

A focus on religion in the university today is crucial, Cady says. Because the American population is growing more and more diverse, religion is playing an increasingly public and politicized role nationally and globally. To not address it across a wider spectrum of classes in academia has become "increasingly problematic." Cady says long-term goals for the Disciplinary Dialogues program are twofold: to better prepare faculty to teach in religiously pluralistic classrooms, and to better prepare students to "live in a world of religious diversity and to understand how religion can be -- but need not be -- a factor in human conflict."

Five of the six students who received the first certificates had double or triple majors, including religious studies. They found that the certificate classes meshed their areas of interest and brought them new insights.

Whitney Medhay of Mesa, whose majors were political science, German and religious studies, says she discovered that the subject of religious conflict was "exceptionally interesting" after taking a class solely devoted to religious violence and conflict negotiation.

I realized that this field was a perfect fit with my majors," Medhay says. "I then attended a peace building and human rights study abroad in South Africa, where I continued to learn about religion and conflict on a first-hand basis."

Sabrina LaZare, who was born in Concord, Calif., but has lived in Arizona for the past eight years, majored in political science, German and religious studies.

"I decided to get the certificate because it blended my two majors perfectly," she says. "You really can't understand politics without their religious undertones. The two claim to function in complete tandem, yet wars and national crisis erupt if one goes out of the balance."

Rae Brendecke, a Tempe native who majored in history and religious studies, says she has always loved history, and especially likes learning about times of conflict and tragedy, such as the Holocaust.

"I love studying these time periods because, in my opinion, they show the endurance of the human spirit, that even facing the most atrocious situations, with the right heart and attitude, you can survive and possibly change the world," she says.

"The world is full of all types of conflicts, struggles against society, environment, tyranny, stereotypes, and so forth," Brendecke says. "Religion just seems to amplify the problems, taking the conflict from the worldly plane to the heavenly, and also makes solving the conflict a lot more complicated."

I think studying the relationship between religion and conflict is crucial to changing the world we live in, considering both are in the headlines daily."

Smith, with Media Relations, can be reached at (480) 965-4821 or jps@asu.edu.
Events are free, unless otherwise noted. Items in the “Exhibitions” section run at exhibit opening and on the first of each month only. Building abbreviations are listed according to the official ASU phone directory. Send story to Journalism Smith at james@asu.edu or fax (480) 965-2191 for information about ASU events, visit the Web at events.asu.edu.

Lectures


Saturday, Aug. 15

“Qualifications From the Whirlwind: A Jewish Response to Climate Change,” 3:30-5 p.m., Memorial Union (MLJ) Aumni Lounge (D22). Speaker: Mark Iacovone, professor, Department of Psychiatry and Biobehavioral Sciences, and director, Transcranial Magnetic Stimulation Lab, Ahmanson-Lovelace Brain Mapping Center, David Geffen School of Medicine at UCLA. Sponsored by Department of Psychology. Information: psychology@asu.edu.

Thursday, Aug. 27

“Invitation and Socializing: The Role of Neural Mirror-Neurons,” 3:30-5 p.m., Memorial Union (MLU) Aumni Lounge (D22). Speaker: Marco Iacoboni, professor, Department of Psychiatry and Biobehavioral Sciences, and director, Transcranial Magnetic Stimulation Lab, Ahmanson-Lovelace Brain Mapping Center, David Geffen School of Medicine at UCLA. Sponsored by Department of Psychology. Information: psychology@asu.edu.

Conferences

Tuesday, Sept. 1


Saturday, Aug. 8

Summer Twilight Tour, 7-8 p.m., Deer Valley Rock Art Center, 3711 W. Deer Valley Road, Phoenix. Take a tour of the center’s spectacular rock art and learn about archeology, desert plants and animals, and Native American cultures. Tickets: $6.50 for adults; $3.50 for seniors and $2.50 for children 12 and younger. Information: (623) 582-8007 or http://rbvac.asu.edu.

Exhibitions

Archives, Luhu Gallery—4 p.m.-5 p.m., Monday-Friday. Hayden Library, fourth floor. Information: (480) 965-4925.

“Native Mexican Manuscripts” Through Aug. 31. See colorful and unusual facsimiles of Aztec, Acolhua, Mixtec and Maya court manuscripts, and Pre-Hispanic records of text and imagery of several pre-Hispanic cultures. Tickets: $6.50 for adults; $3.50 for seniors and $2.50 for children 12 and younger. Information: (623) 582-8007 or info@archives.asu.edu.

Friday, Aug. 28

Ninth Annual Sun Devil Football Kick-Off Luncheon, 11 a.m.-1:30 p.m., Tempe Mission Palms Hotel, 60 E. St. Timpe, Tempe. Sponsored by Timpe of Chamber of Commerce and ASU Alumni Association. Tickets: $65 ($60 table of 10). Reservations: (480) 967-7881 or info@timpechin.com.

Defenses

Editor’s note: Defense listings can be found on the ASU College Web site http://graduate.asu.edu/ defense.

EMPLOYMENT

The following positions are available as of Aug. 7, and subject to change. All positions within Arizona State University. The staff employment office will contact each position indicated in the P/T category. All ASU staff are required to participate in active shooter training.

ASU POSITIONS

A complete job announcement for classified, administrative and service professional positions is available on Arizona State University: Phoenix, Tempe, and West campuses can be obtained in the Human Resources Web page at www.asuhr.asu.edu or the Telecommunication Directory for the Campus (480) 965-8882. For complete position description and applications requirements for academic positions, contact the appropriate department listed. Faculty, faculty-staff, academic and graduate assistant positions are listed on the Human Resources Web site and details may be obtained by calling (480) 965-8882. For non-faculty classified staff positions, contact the appropriate department listed. For administrative and service professional positions, contact the appropriate department listed. For P/T positions, contact (480) 965-8882. For more information about open classified positions, the Arizona State University Human Resources Web site (www.asuhr.asu.edu) is available.

STATE POSITIONS

TENTCAMS

Professional

Coordinated Education #22926 (O) – U.S. Representative (Aug. 14)
Office Specialist #22903 (O) – Financial Services (Aug. 14)
Program Manager #22817 (O) – VP Research and Economy (Aug. 14)
Research Specialist PSN (Part Time) #22925 (O) – College of Education - First Things First (FTF) (Aug. 14), for $12/hr, then every two weeks through until search is closed.
Student Recruitment/Recruitment Coordinator #22035 (O) – The College of Teacher Education and Leadership (TTE) (Aug. 14).

Technical and computer


ADMINISTRATIVE SUPPORT

Administrative support

Executive Assistant #22725 (O) – In A. Hubbard School of Engineering (Aug. 14)

Service/field craft/maintenance

Custodian 1st shift (Facilities Management) #22875 (O) – U.S. University Services (Aug. 14)

Custodian 2nd shift (Facilities Management) #22877 (O) – U.S. University Services (Aug. 14)

Doorman #9218 – U.S. University Services (Aug. 14)

Sweeper #9220 (O) – U.S. University Services (Aug. 14)

Parking Enforcement Officers – Afternoon and Evening Shifts #22927 (O) – U.S. University Services (Aug. 14)

Parking Enforcement Officers – Day Shift #22914 (O) – U.S. University Services (Aug. 14)

Ticket Sales Representative #22879 (O) – Athletics-Cashier (Aug. 14), if not filled, then every two weeks through until search is closed.

WEST CAMPUS

Professional

Academic Success Specialist #22915 – The Office of Advising, Recruitment, Reenrollment, and Retention of Minority Students (Aug. 14)
Academic Success Specialist-Graduate Programs #22911 – The Office of Advising, Recruitment, Reenrollment, and Retention of the College of Teacher Education and Leadership (Aug. 14)

DOWNTOWN PHOENIX CAMPUS

Professional

Student Support specialist #22802 (O) – College of Teacher Education and Leadership (Aug. 14)

POLYTECHNIC CAMPUS

Service/field craft/maintenance

Materials Handler #22895 (O) – U.S. Mail Service (Aug. 14)

ACADEMIC POSITIONS

Tempe campus

Instructor/Research Assistant Professor #22950 – College of Liberal Arts and Sciences-Physics (Aug. 14), if not filled, then every two weeks through until search is closed.
Graduate Research Assistant Professor #22951 – College of Liberal Arts and Sciences-Humanities Research Center (Aug. 14), if not filled, then every two weeks through until search is closed.
Assistant Professor #22956 – College of Liberal Arts and Sciences – New College of Interdisciplinary Arts & Sciences (Dec. 12), if not filled, then every two weeks through until search is closed.

Phoenix campus

Assistant/Associate/Full Professor #22954 – Division of Educational Leadership & Innovation (Nov. 15), if not filled, then week thereafter until search closed.
Assistant Professor #22958 – Division of Humanities, Art & Cultural Studies – New College of Interdisciplinary Arts & Sciences (Dec. 12), if not filled, then every two weeks through until search is closed.
Assistant Professor #22960 – Division of Humanities, Art & Cultural Studies – New College of Interdisciplinary Arts & Sciences (Dec. 12), if not filled, then every two weeks through until search is closed.

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

Through Aug. 8, “Titans II: Viola Frey & Robert Arneson” presents ceramic pieces by renowned ceramic artists Robert Arneson and Viola Frey move into both the Ceramic Research Center and to the museum’s outdoor sculpture courts for the summer in a continuation of this popular exhibition.

Deer Valley Rock Art Center—9 a.m.-5 p.m., Tuesday-Saturday, noon-5 p.m., Sunday. 3711 W. Deer Valley Road, 2 miles west of I-17. Information: (480) 582-8007.

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

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

July-August, “Creations ’09” Artists: Reception: Friday, Aug. 7, 6-9 p.m. “Creations” is a group exhibit showcasing fine art, photography, quilting and multimedia from talented artists in the Arizona Community for the Arts.
New book reveals impact of globalization on early childhood ed

By Lori Baker

Joseph Tobin, a professor in the Mary Lou Fulton Institute and Graduate School of Education, provides new insights into the impact of globalization and sweeping social transformation on preschool education in his new book, “Preschool in Three Cultures Revisited: China, Japan, and the United States.”

Published in July by The University of Chicago Press, the book adds a historical dimension to Tobin’s earlier research published in the original “Preschool in Three Cultures,” which was heralded as a landmark study in education in 1989 largely due to its ingenious method for exploring how preschools were taught in China, Japan, and the United States.

Armed with a video camera to capture a typical preschool day, Tobin and his colleagues at the time, David Wu and Dana Davidson, recorded children saying goodbye to their parents, misbehaving, playing and fighting, as well as moments of intimacy that portrayed teachers comforting crying students. The researchers, then, showed the videotapes to educators within each school community and asked them what they saw—a technique the researchers call “video-cued ethnography.”

The educators’ responses provided key insights into their cultural approach to early childhood education.

Twenty years ago, education systems in Asia attracted worldwide attention because people were particularly curious about what factors had shaped the dramatic economic growth in Japan and China. Tobin and his collaborators provided insights by videotaping activities in a place where the citizens of tomorrow are shaped—in preschools. Recent dramatic changes in Chinese culture lured Tobin back for a second look, as well as another book.

“As a society has changed so much, it’s not surprising that their early childhood education system also had changed,” says Tobin, who joined ASU in 2001 as the Fulton Institute and Graduate School of Education’s first Nadine Mathis Bashford Professor of Early Childhood Education.

But Tobin and his new collaborators Yeh Hsuch and Mayumi Karasawa also discovered intriguing changes in the American preschool system and how the Japanese were using preschools to preserve traditional values.

“What makes this book unusual—even unique—is that it’s simultaneously a cross-cultural study of three countries and a historical study of two time periods,” Tobin says. “It’s still very rare for a researcher to go back to the same place 20 years later. The first book asked the very basic question, ‘Why are preschools different in different cultures?’ The new book asks that question, plus how and why preschools in different cultures stay the same and change.”

Tobin’s findings

In China, preschool directors told the researchers that to compete in global capitalism, China needed citizens who were more creative and entrepreneurial.

The early childhood education system had to change to produce children who were creative and more individualistic to become the driving force of the future economy,” he says. But in the past couple of years, educators became concerned that China had gone too far.

“The new concern is how can you produce children who will become this new kind of successful entrepreneur, but who also will have the traditional Chinese values and the concern for society that was characteristic of the People’s Republic of China,” Tobin says.

“We were borrowing Japan’s business practices and education ideas just so we could catch up,” he says.

Since that time, Japan has been shaded by an economic downturn and a host of new social problems blamed on post-modernization.

“The preschool in this context has become an oasis or preserve for protecting traditional Japanese values,” Tobin says.

“There is almost no academic emphasis and very little formal curriculum. Instead, there is a development of social and emotional competencies, such as empathy and social-mindedness, which means learning how to be a member of a group.”

The United States has seen an explosive expansion in early childhood education over the last two decades. While one-third of four-year-olds attended preschool 20 years ago, that ratio is more than two-thirds today.

“Meanwhile, preschool teachers feel increased pressure to move in different directions,” Tobin says.

The tug-of-war is being created by No Child Left Behind’s emphasis on academic readiness and skill-based instruction, while national organizations that license preschools, such as the National Association for the Education of Young Children, increasingly emphasize “developmentally appropriate practice,” with a greater focus on play and social relationships.

“Preschool in Three Cultures Revisited” has been reviewed by educators around the country.

“It is fascinating to see how much does change, even in 20 years, in the preschools studied by Tobin, Hsuch and Karasawa,” says Catherine Ladd, dean of the College of Education at Mills College in Oakland, Calif., in a moderated discussion published in the Comparative Education Review. “The sequel videotapes remind us that people create culture, and people can change culture.”

In the same discussion, Gita Steiner-Khamsi, a professor of comparative and international education at Teachers College, Columbia University in New York, called Tobin’s research a “methodological masterpiece.”

“The new ethnography breaks new ground in terms of methodology, preschool research and also globalization studies in education,” she says.

ASU’s Joseph Tobin has written a new book, “Preschool in Three Cultures Revisited: China, Japan, and the United States,” that sheds light on the impact of globalization and social transformation on preschool education in three cultures.

ASU’s Pinney to lead education association

Poly Pinney, the executive director of Facilities Management, has been named president of APPA, an international association dedicated to maintaining, protecting and promoting the quality of educational facilities.

APPA, whose mission is “to support educational excellence with quality leadership and professional management through education, research, and recognition,” was founded in 1917 by 14 representatives from 14 Midwest institutions.

Over the past 95 years, the organization has grown in scope and size, and changed its name several times to reflect the expanding responsibilities of facilities-management departments.

There are more than 100,000 members today, and the organization, which has its headquarters in Washington, D.C., has a budget of more than $2 million. APPA’s goal is to elevate educational facilities professionals into “higher performing managers and leaders and help them transform their institutions into more innovative and supportive environments, which further the recognition and value of the field,” Pinney said.

Individuals who have the recruitment and retention of students, faculty and staff.

She served as APPA vice president for educational programs from 2006 to 2008.
In BRIEF

Professor invited to lecture at Cambridge

Jeffrie Murphy, a Regents’ Professor of Law, Philosophy and Religious Studies, will deliver four Stanton Lectures of the university’s Divinity Faculty. The title of the Stanton series is “Remorse, Apology and Forgiveness.” Murphy’s primary teaching and research areas are philosophers of law and jurisprudence, criminal law, ethics and moral philosophy (including moral psychology), philosophy in literature and law, and Kant’s moral, political and legal philosophy. He is the author of over 30 books and articles on the theory of punishment, forgiveness and mercy, and the moral emotions. Most recently, he has written the book, “Getting Even: Understanding and Promoting Justice in an Insecure World.” Murphy will teach new media skills that are needed to communicate effectively in today’s world.

New vending machines on campus

More than 100 Canyons vending machines will be placed throughout the four Canyons areas in the coming weeks. All machines are Energy Star products, which means they meet strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. Canyons vending machines offer a wide assortment of snacks, beverages and non-food items. To provide even greater variety, ASU community members also will see an increase in the number of selections available through vending machines compared to what is currently found in campus vending machines.

“We are excited to have acquired this contract with ASU,” said Robert Bjork, an ASU English professor, and its sister company, Canteen’s vending machines will replace the North County Canteen’s vending machines which, as these beverages are covered under ASU’s contract with PepsiCo Inc. The new machines will be installed beginning in September. The machines are Energy Star products, which means they meet strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

Discoun ted rates at Camp Tontozona

An escape from the Valley’s summer heat is within reach by way of a short drive to Camp Tontozona, ASU’s exclusive, 36-acre campsite nestled in the pines of the Tonto National Forest. “The university sees this site as an important client for us, and we look forward to a mutually beneficial partnership,” said Murphy. Camp Tontozona will replace the North County Canteen’s vending machines with new, more efficient, energy-effective models, as these beverages are covered under ASU’s contract with PepsiCo Inc. The new machines will be installed beginning in September. The machines are Energy Star products, which means they meet strict energy efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

“ASU employees are invited to experience for themselves all that Camp T has to offer. Book anytime for a weekday stay (minimum two nights), and receive a 20 percent discount. Space may be available for those who wish to see a list of parking locations where fall semester-only permits are available, and to purchase this or any other permits available.

Adding to the list of evening permits already available at the Tempe and Downtown Phoenix campuses, are evening permits offered at the West campus. ASU employees who purchase the parking permits are eligible for a 20 percent discount. Space may be available for those who wish to see a list of parking locations where fall semester-only permits are available, and to purchase this or any other permits available.

Required lab class for employees

Employees who work in a campus biology or chemical laboratory, and who are affiliated with the Fulton School of Engineering, the Department of Chemistry and Biochemistry, the Department of Earth and Environmental Systems, the Department of Physics or the School of Life Sciences, must take at least one introductory laboratory class and hazardous waste management courses each year or be subject to dismissal. Employees must take at least one class and hazardous waste management course each year or be subject to dismissal.

New parking options available at ASU

The new MyParking Online Services application is now available for customers to purchase permits online for the 2009-2010 academic year. With the new online system, there will be additional permit offerings and payment options for employees.

In addition to the many existing permit options, PTS now offers a new permit that is available only to employees of the Fulton School of Engineering, the Department of Chemistry and Biochemistry, the Department of Earth and Environmental Systems, the Department of Physics or the School of Life Sciences. The new permit is designed for those employees who are responsible for laboratories, or those who are responsible for a laboratory.

The safety courses are designed for all employees who work in branches where portable fire extinguishers are available for use. The safety course is available online for those who regularly perform work in a laboratory, or those who are responsible for a laboratory.

MyParking Online Services can be accessed online at http://ps.asu.edu or by logging into one’s MyASU account.

Robert Bjork

ASU named one of nation’s most sustainable universities

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ASUAGUStse7, 2009
By Debbie Freeman
Small business owners struggling in the rough economy will receive valued education from top professors through a special program at the W. P. Carey School of Business at Arizona State University.

“Typically, we think having many individual options, strategies and approaches are beneficial,” Pratt says. “But irrational errors are more likely to arise when individuals make direct comparisons among options.”

Studies of how or why irrationality arises can give insight into cognitive mechanisms and constraints, as well as how collective decision-making occurs. Insights such as Pratt’s and Edward’s errors could also translate into new approaches in the development of artificial intelligence.

“A key idea in collective robotics is that the individual robots can be relatively simple and unsophisticated, but you can still get a complex, intelligent result out of the whole group,” says Pratt. “The opportunity to function in a complex central control system is really desirable in an artificial system and the idea that limitations at the individual level can actually help at the group level is potentially very useful.”

Pratt is a member of Heterogeneous Unmanned Networked Team (HUNT), a project funded by the Office of Naval Research (ONR) to enable the development of bio-inspired solutions to engineering problems.

“What do these findings potentially say about understanding human social systems?”

“It is hard to say,” Pratt says. “But it’s at least worth entertaining the possibility that the strategic limitation on individual knowledge could improve the performance of a large and complex group that is trying to accomplish something collectively.”

Pratt was supported in part by a grant from the Pentastar Charitable Trusts.

Researchers at ASU and Princeton University have illustrated that ants can accomplish a task more rationally than humans. Stephen Pratt, an assistant professor in the School of Life Sciences in ASU’s College of Liberal Arts and Sciences, and co-author of the study, finds that collective decision-making in ants accounts for fewer mistakes, an idea that could translate into new approaches in the development of artificial intelligence.

School of Life Sciences

Findings inform development of artificial intelligence

(Continued from page 1)

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Workshop exposes students to robotics

By Carol Sworos

The sleek remote-control cars spanning over an ASU classroom on a recent summer day looked and sounded like toys. They were far from that. Instead, this battlefield of cars and student operators was part of a technologically centered, discovery-based three-day research internship intended to expose students to the Junior High Robotics Camp held this summer at Young Junior High School in Mesa to sophisticated technologies and computational concepts. Each stage of the internship allows students to apply and transform their understanding of programming and use a Texas Instrument Graphic Calculator as a computational and analytical tool, says Turgutpalan Ganesh, the program director and assistant dean for information systems with the Mary Lou Fulton Institute and Graduate School of Education.

Parsons says that the participants get to keep the TI graphing calculator and the robot to chase and use on their own time at home and at school.

Wesley Burnham, 14, and Khoi Nguyen, 14, program a graphing calculator using a toy car.

"To foster innovation and creativity, students need to have access to the technologies when they need it and given opportunities to play with those tools," Ganesh says. "One of the goals of this project is to place technologies in the hands of the students that wouldn't otherwise be available to them at their homes or in their junior high schools."

After completing the task, the students were divided into small groups and reflect on mine," says Jeffrey LaBelle, a researcher at Biodesign. "Science is like learning about the way our brain or our psyche and the con- nections between that field and music, but they also learned about college-level writing, conducted research, and shared their results. Additionally, they got a first-hand look at ASU's comprehensive West campus and learned about their options for financing their higher education needs."

Teso Threeth, a senior at Phoenix Union Bioscience High School, scooping up enzymes and proteins was a lot different from her first job experience scooping ice cream.

ASU graduate student tuna Drury works with Ariana Raza, who will be a senior this fall at Ahlambra High School in Phoenix.

Putting their brains to the test, more than 20 high school students worked alongside Biodesign Institute scientists as part of a summer high school internship at ASU. Students from 13 Phoenix-area high schools worked on research projects that address world-class problems in biotechnology, neuroscience, and information technologies.

Students from Carson Junior High School in Phoenix and Graduate School of Education.

"I thought working in a lab would be scary," Therrien says. "But I thought it would be like what it would be like should they pursue a career in research. "Hands-on experience is not obtained easily, so it is valuable," says William Curt, a Biodesign mentor and researcher. "My interesting work, they treated each other like scientific colleagues by exchanging ideas about the background of our project, its potential significance, and future studies to end."

The internship program, now in its fourth year, supports a Valley-wide initiative to strengthen the area’s bioscience/biotechnology industry. Initials had the opportunity to complete their summer work experience by presenting their research in front of their classmates, mentors, and participating companies.

"Working in the lab has made a big difference in their lives and on mine," says Jeffery LaBelle, a researcher at Biodesign.

ASU students are part of a technologically centered, discovery-based research team identified and overcame challenges they ran into while performing this activity. The students were divided into small groups and received support from five undergraduate and graduate teaching assistants in preparing PowerPoint presentations. Group top-
Students share research at international conference

By Matt Crum

ASU's commitment to providing meaningful research opportunities to undergraduate students was on display in June when two West campus students made a trip to the 16th annual Conference on Frontiers in Applied and Computational Mathematics (FACM). Jo Deegert and Anthony Witten were among some 600 individuals in attendance who spent the week presenting detailed reports of the work they were engaged in with faculty members at ASU New College of Interdisciplinary Arts and Sciences.

Deegert and Witten are pursuing degrees through New College's Division of Mathematical and Natural Sciences, and their research project involves applying mathematical modeling to gene functions in cells. Working as members of a team with biology and mathematics professors, the students aim to identify predictable patterns in the way genes in yeast cells respond to changes in the concentration of calcium outside the cell. Their goal is to devise mathematical models to predict how changes in calcium concentration will affect the cell's responses.

"Ultimately this could serve as a model for other cells," says Deegert, who has been trained in cell biology and is majoring in molecular biology and bioinformatics.

"For example, contractions in the human heart respond to calcium concentration changes," Witten says. "While this work is in its preliminary stage, someday it could point the way to treatments for heart disease."

At the New Jersey conference, the two undergraduate students presented a poster detailing the project’s goals and current status. This year’s conference emphasized interaction with research in a specialty of mathematics, with sessions focusing on topics that included neuroscience, ecology, biophysics and biostatistics.

"I had the pleasure of interacting with scientists from around the world, and I made contacts that will be invaluable in my future life," Deegert says. "I am maintaining correspondence with researchers from around the world, and am currently planning a trip to meet with some of them in person.

Witten, a 2006 graduate of Shadow Mountain High School in Phoenix, aspires to attend medical school after earning his bachelor’s degree in life sciences with a chemistry minor in 2010.

"I came to ASU's West campus as an exploratory student with no idea what I wanted to do," he says. "My research with Dr. Marshall helped me determine that I want to combine patient interaction with research in a specialty of medicine, which is not something I had considered prior to my involvement in this project."

Deegert, who previously earned degrees in both mathematics and biostatistics, returned to school after employment experience in project management. "Through my involvement in this research project, I have found the type of work that I would like to pursue for the rest of my career," Deegert says. "I hope to gain entry into a graduate program at ASU’s Tempe campus that will enable me to conduct research with Yongtao. My professor in the School of Mathematics, Dr. Marshall, who is principally interested in a grant from the National Science Foundation's Undergraduates in Biology and Mathematical Sciences (UBM) program, whom is goal is to better prepare undergraduate students to pursue graduate study and careers in fields that integrate the mathematical and biological sciences.

Information about academic programs offered by ASU’s Division of Mathematical and Natural Sciences is available online at http://newcollege.asu.edu/divisions/facm.

Crum, with Public Affairs at the West campus, can be reached at (480) 965-4827 or mcrum@asu.edu.

By Judith Smith

The Chinese language is one of the four most difficult languages for English speakers to master, according to The Defense Language Institute. Not only are there more than 3,000 characters to learn, Chinese’s “tone” language, where one syllable can mean different things, depending on which tone is pronounced, explains Xia Zhang, a senior lecturer in the School of International Letters and Cultures.

If Chinese is such a complicated language to learn, why were 29 high school students so eager to spend 15 days at ASU this summer learning introductory Chinese language and culture, instead of working at a part-time job, or kiting the summer away? Several parents said they will be a senior at Westwood High School in Mesa, she decided to use part of her summer vacation learning Chinese because she hopes to be able to talk in each English in China some day. Thomas Liu, a senior at McClintock High School in Mesa, would like to converse more easily with his four grandparents in China, and Patti Okariki likes to “think Chinese.”

If you have studied Chinese in high school, and could read and write some Chinese. The third group was for students who have studied Chinese in school.
By Nikki Staab

We live in a hierarchical universe where small structures join into larger ones. Earth is a planet in our solar system, the solar system resides in the Milky Way Galaxy, and galaxies combine into groups and clusters.

Clusters are the largest structures in the universe, but sadly our knowledge of them is not proportional to their size. Researchers have long known that the gas in the centers of some galaxy clusters is rapidly cooling and condensing, but were puzzled why this condensed gas did not form into stars. Until recently, no model existed that successfully explained how this was possible.

Evan Scannapieco, a theoretical astrophysicist, has spent much of his career studying the evolution of galaxies and clusters.

“There are two types of clusters: cool-core clusters and non-cool-core clusters,” he says. “Non-cool-core clusters haven’t been around long enough to cool, whereas cool-core clusters are rapidly cooling, although by our standards they are still very hot.”

Scannapieco is an assistant professor in ASU’s School of Earth and Space Exploration in the College of Liberal Arts and Sciences.

X-ray telescopes have revolutionized our understanding of the activity occurring within cool-core clusters. Although these clusters can contain hundreds or even thousands of galaxies, they are mostly made up of a diffuse, but very hot gas known as the intracluster medium. This intergalactic gas is only visible to X-ray telescopes, which are able to map out its temperature and structure. These observations show that the diffuse gas is rapidly cooling into the centers of cool-core clusters.

At the core of each of these clusters is a black hole, billions of times more massive than the Sun. Some of the gas in the center of cool-core clusters.

Turbulence responsible for black holes’ balancing act

By Dr. King, initially

A 3-D computer simulation illustrates the gas temperatures of a cool-core cluster.

Itself, and some of it is shot outward. X-ray images clearly show jet-like bursts of ejected material, which occur in regular cycles.

But why were these outbursts so regular, and why did the cooling gas never drop to colder temperatures that lead to the formation of stars? Some unknown mechanism was creating an impressive balancing act.

“It looked like the jets coming from black holes were somehow responsible for stopping the cooling,” Scannapieco says. “But until now, no one was able to determine exactly how.”

Scannapieco and Marcus Brüggen, a professor at Jacobs University in Bremen, Germany, used the powerful supercomputers at ASU to develop their own 3-D simulation of the galaxy cluster surrounding one of the universe’s biggest black holes. By adapting an approach developed by Guy Damon at Los Alamos National Laboratory and Robert Tipton at Lawrence Livermore National Laboratory, Scannapieco and Brüggen added the component of turbulence to the simulations, which was never accounted for in the past.

That was the key ingredient.

Turbulence works in partnership with the black hole to maintain the balance. Without the turbulence, the jets coming from around the black hole would grow stronger, and the gas would cool catastrophically into a swarm of new stars. When turbulence is accounted for, the black hole not only balances the cooling, but goes through regular cycles of activity.

“When you have turbulent flow, you have random motions on all scales,” Brüggen says. “Each jet of material ejected from the disk creates turbulence that mixes everything together.”

Scannapieco and Brüggen’s results, to be published in the journal Monthly Notices of the Royal Astronomical Society, reveal that turbulence acts to effectively mix the heated region with its surroundings so that the cool gas can’t make it down to the black hole, thus preventing star formation.

Every time some cool gas reaches the black hole, it is shot out in a jet. This generates turbulence that mixes the hot gas with the cold gas. This mixture becomes so hot that it doesn’t accrete onto the black hole. The jet stops and there is nothing to drive the turbulence so it fades away. At that point, the hot gas no longer mixes with the cold gas, so the center of the cluster cools, and more gas makes its way down to the black hole.

Before long, another jet forms and the gas is once again mixed together.

“We improved our simulations so that they could capture those tiny turbulent motions,” Scannapieco says. “Even though we can’t see them, we can estimate what they would do. The time it takes for the turbulence to decay away is exactly the same amount of time observed between the outbursts.”

Staab, with the School of Earth and Space Exploration, can be reached at (480) 727-9249 nstaa@asu.edu.

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Asu DEPARTMENT OF ENGLISH “SPRING THINGS”

Crossword puzzle for spring

Across
1. Dr. King, initially
5. Strunk’s Periodic Table of Style?
11. Two line rhymers
12. Bother
15. Small operation
16. Progress
17. One kind of Muslim
19. New, to begin with
20. Light; abbr.
21. Short advertisement
22. Where ASU’s WPA murals are located
23. Figures of speech
27. Motor neuron disease; abbr.
31. Not Cheese Whiz—the other one
35. A liquid
36. Right; abbr.
37. Either...
38. Kansas, to the USPS
39. Not Schenectady, NY
43. What higher education can’t do right now
44. American League; abbr.
45. Osteoarthritis; abbr.
46. Note
48. A kind of colon
49. How a conversation comes to be
50. It should chicken, given time
54. What Austin Powers is
55. Asu mascots before Sun Devils
56. Dynamite
60. A short dash
61. Emergency Room; abbr.
62. Our ASU national literary journal
64. Points of view; abbr.
65. Let’s not fail; abbr.
67. Either or, but you need two of these
68. No corn on this baseball Cobb
69. A kind of colon

Down
1. What nerve?! It can be a pain in the behind
2. A day off?
3. Modern Languages Association; abbr.
4. Whose swan is that?
5. How’s is spelled
6. Not the goods
7. Honey wine
8. Former
9. What is being done to the line
10. Some feet, with two stressed syllables
12. Off antonym
13. Some chickens become this (2 wds)
18. Our Mr. Durham did not write The Odyssey
19. Some stoo pigeons name these
24. Memorable homage
28. Some narrators
29. Asu undergraduate literary journal
33. Over the counter; abbr.
34. What Austin Powers is
35. An old vial
38. This 1984 Asu visitor flew over the cockoo’s nest
39. 39-line poem
40. What people used to do to that tune?
41. Irritation can raise these
42. Cavities; abbr.
47. A strange fellow?
50. Points of view; abbr.
51. Swear this
56. Let’s not fail; abbr.
57. Either or, but you need two of these
59. No corn on this baseball Cobb
63. Whose swan is that?
66. Points of view; abbr.
67. Either or, but you need two of these
68. No corn on this baseball Cobb

The answer to the puzzle can be found online via the ASU News Site at http://asunews.asu.edu/springthingscrossword.