in Akron, was described by old friends there as a student who excelled in mathematics and classical piano. “She was a math whiz, but at some point math lost the numbers and she wanted something more tangible so she switched her collegiate major to electrical engineering,” said Michael D. Oldak, another electrical engineering major at Carnegie Mellon, who became her friend.

For more information, please visit www.cm.edu/campaign/love.

Judy Resnik

Family, Friends Remember Engineer Who Reached for the Stars

Trapped alone in a Utah canyon for nearly a week, pinned by a half-ton boulder, Carnegie Mellon alumnus Aron Ralston (E’97) had to choose between his hand and his life. He chose survival — amputating his own limb, rappelling 65 feet and hiking seven miles to rescue.

Ralston will bring his amazing inspirational story home to Carnegie Mellon May 15, when he delivers the keynote address at the university’s 114th Commencement ceremony.


More than 1,500 students wrote thank you notes to donors who have helped support their college education during Love a Donor Week (Feb. 14-18). Donors contribute to the $55 million a year that Carnegie Mellon provides for undergraduate financial aid. Tuition dollars cover about two-thirds of education costs, and 54 percent of all CMU students receive aid. Visit www.cm.edu/campaign/love for more information.

For more information, please visit www.cm.edu/campaign/love.

Faces of Migration

Immigrant Elvira Arellano’s story of seeking sanctuary in a Chicago church is just one of the many profiles found in this year’s International Film Festival lineup. See page nine.
Eric Nyberg, a professor in the Language Technologies Institute, builds software applications that can understand and process human language. For the past decade, he has worked on question-answering technology, often in collaboration with colleagues at IBM. Since 2007, he and his CMU colleagues have participated in the Open Advancement of Question Answering, a collaboration with IBM that led to the development of Watson, a question-answering computing system that recently defeated human opponents in nationally televised matches of Jeopardy!

What was it like to be at the taping of the Jeopardy! episodes? Were you or your IBM colleagues anxious about how Watson would perform? We actually arrived (at IBM’s Thomas J. Watson Research Center in Yorktown Heights, NY) before the main crowds did. The Watson project leader, David Ferrucci, took Ph.D. student Nico Schlafler and I inside to see how the Jeopardy! set had been grafted onto the IBM conference room; it looked like it had been beamed down from an alien planet or Los Angeles or something.

But once everybody sat down, it was a very serious environment with palpable tension in the room. The IBM CEO and top executives were in the audience, and for four-and-a-half hours we were literally on the edges of our seats, wondering what was going to happen. It was very exciting and very tense.

Did Watson meet or exceed your expectations? Watson met my expectations, both in terms of what it did well and also where it faltered. If you watch the matches, you’ll see categories where Watson is dominant and where the humans have a lot of difficulty competing, but there are other categories where Watson doesn’t get a single correct answer. That’s a great outcome, because I would call it an accurate and fair representation of Watson’s capabilities.

Where do we go now with this question and answering capability? I think there are two big areas of future research that need our attention.

One is how to build systems like Watson but with fewer resources in terms of time, money and people. While Watson is a wonderful achievement, to have an impact in the business world, we need to build applications with Watson’s level of performance in new domains like financial forecasting and health care, and do it cost effectively.

The second area has to do with making Watson smarter.

Watson doesn’t grow up in the real world the way that we do, so it doesn’t have a base of common sense knowledge. That’s one of its weaknesses. An important question is going to be how Watson can learn to read and build a knowledge base that’s not just factual knowledge, but knowledge about how the world really works. For example, if you asked Watson whether a bathtub could hold a magnum of champagne, it might not be able to answer if there is no literal text in its knowledge base which contains the answer.

What do you say to people who feel threatened by Watson, who fear machines will replace them at work or supplant humans? Whenever anybody expresses that concern to them, ’Don’t worry, you’re smarter than Watson.’ Watson thinks that grasshoppers eat kosher.”

Eric Nyberg

“Don’t worry, you’re smarter than Watson. Watson thinks that grasshoppers eat kosher.” — Eric Nyberg

We do have a certain number of people sitting at customer service desks, answering questions about products, and librarians helping to find facts. What do you say to those people? I think that there may come a day when a question answering system like Watson could automate the help desk; it would be relatively straightforward to let Watson read all the IBM manuals and then answer questions about IBM products on the telephone. Folks at IBM’s Tokyo research lab are thinking about this kind of application already. Question answering systems today can operate without human intervention only in simple cases. I don’t think we’re afraid to let Watson answer a question about an IBM PC or laptop. It might give more than one answer and some might be inaccurate, but it’s probably not going to tell the person something harmful.

In cases where we are deciding whether or not to launch the missiles or whether or not to target somebody with a drone, there would never be blind acceptance of the output of a machine. The machine’s output would inform a human decision. But once everybody sat down, it was a very serious environment with palpable tension in the room. The IBM CEO and top executives were in the audience, and for four-and-a-half hours we were literally on the edges of our seats, wondering what was going to happen. It was very exciting and very tense.

Nevertheless, all ROTC classes at Carnegie Mellon University are required not to discriminate in violation of federal, state and local law.

The equal employment opportunity program of Carnegie Mellon University is required not to discriminate in violation of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1978, or any of the other laws and statutes provided in any applicable governmental regulation or order. The educational opportunities and programs of Carnegie Mellon University are available to all qualified persons, regardless of race, sex, color, religion, national or ethnic origin, handicap, disability, age, sexual orientation, veteran status or marital status.
Professor Receives Elite Wolf Prize in Chemistry

Jocelyn Duffy

Krzysztof Matyjaszewski, the J.C. Warner Professor of the Natural Sciences in the Mellon College of Science, has been named a recipient of the 2011 Wolf Prize in Chemistry from Israel’s Wolf Foundation.

The Wolf Prize is given every year in four out of five categories, in rotation: agriculture, chemistry, mathematics, medicine and physics. One out of every three Wolf Prize Laureates in chemistry, physics and medicine have later received a Nobel Prize.

“The Wolf Prize is a distinguished honor received by only the most elite scientists and artists in the world,” said Carnegie Mellon President Jared L. Cohon. “Kris certainly belongs in this category. His work is nothing short of visionary.”

Matyjaszewski will be recognized with two other noted chemists, Stuart Alan Rice of the University of Chicago and Ching Tang of the University of Rochester, for their “deep creative contributions to the chemical sciences in the field of synthesis, properties and an understanding of organic materials.” They will accept the award from the President of the State of Israel and the Israeli Minister of Education at a special ceremony at the Israeli Parliament on May 29.

“I feel very flattered by this special recognition from the Wolf Foundation. This award belongs not only to me, but also to the more than 50 graduate students, 100 postdocs and the countless chemists, materials scientists, and chemical, biomedical and civil engineers among CMU’s faculty that I have had the pleasure of collaborating with throughout the years,” Matyjaszewski said.

The Wolf Prize Committee commended Matyjaszewski for his “groundbreaking research in synthesis of organic materials, and in particular, in the critical area of controlled, efficient, safe and economical polymer synthesis.”

Matyjaszewski invented the process of atom transfer radical polymerization (ATRP), one of the most effective and most widely used methods of controlled radical polymerization (CRP). This method allows scientists to create polymers from many different component parts, called monomers, in a piece-by-piece fashion, precisely controlling the polymer’s composition. By assembling polymers in such a manner, scientists have been able to create a wide range of new materials with highly specific, tailored functionalities. This technology also allows for the production of “smart” materials that can respond to altered environments, such as changes in pressure, acidity, light exposure or other variables.

“ATRP has made polymerization easier, less expensive, and more effective, changing how we make materials from paints to plastics and adhesives,” said Fred Gilman, dean of CMU’s Mellon College of Science. “Kris continues to strive to improve the process and even given the worldwide recognition of his achievements, I would bet the best is yet to come.”

Polymers created using ATRP have been used for coatings, adhesives, lubricants, cosmetics and electronics and are currently under investigation for use in the medical and environmental fields. In 2006, ATRP formed the basis for a Carnegie Mellon spin-off company called ATRP Solutions that uses the technology to develop next-generation materials for evaluation by their customers in their targeted markets.

Matyjaszewski came to Carnegie Mellon in 1985 and was appointed the J.C. Warner Professor of the Natural Sciences in 1998. While at Carnegie Mellon, Matyjaszewski founded the Center for Macromolecular Engineering, served as head of the Department of Chemistry from 1994 to 1998, and was named a University Professor in 2004.

Matyjaszewski is the second Carnegie Mellon professor to receive a Wolf Prize. The late John Pople received the 1992 Prize in Chemistry for his contributions to theoretical chemistry. Pople went on to receive the Nobel Prize in Chemistry in 1998.

Barry Drives Dreams Forward

She’s Funding an Andrew Carnegie Society Legacy Scholarship for a Student in CFA

Sometimes it takes a little while to fulfill a dream.

As a high school student, Amy Barry dreamed of attending Carnegie Mellon to pursue a singing career. She applied and was wait listed.

She attended Ohio University instead to obtain a degree in music therapy. But sometimes it takes a little while to fulfill a dream.

When bringing people into the city to work, she said she sees the global and cultural climate helps draw top talent to the region.”

I was surprised and delighted to see such a vibrant arts community. A thriving cultural climate helps draw top talent to the region.”

Barry said her support of an ACS Legacy Scholarship has inspired others to give.

“As a Christmas gift, my staff unexpectedly contributed to the scholarship I’ve established. Many of them are first time donors,” she said.

Barry is a member of Carnegie Mellon’s Faculty & Staff Annual Fund Committee. To learn more about ways that faculty and staff can give back, contact Carole Panno in the Office of Annual Giving at cp@andrew.cmu.edu or visit www.cmu.edu/campaign/involved/faculty.html

Leading Innovation: Boston and Beyond

Thursday, June 9, 2011
6:30 to 9:30 p.m.
The State Room, 60 State Street, Boston

President Jared L. Cohon and a panel of faculty experts spearheading Carnegie Mellon’s new brain, mind and learning initiative will engage in an evening filled with alumni networking, news and updates about the university and the Inspire Innovation campaign.

Which is smarter: IBM’s “Watson” or a human? What can a deeper understanding of the brain teach us about how we think and learn? How will advances in artificial intelligence shape industries from finance to medicine?

For more information, visit www.cmu.edu/campaign or contact Susan Tate Hiser at 412-268-6567 or sj11@andrew.cmu.edu.
Ridge Calls for Best Practices in Marcellus Drilling

Former Pennsylvania Gov. Tom Ridge discussed the risk management involved in today’s gas industry as it relates to the Marcellus Shale. But he said it was worth it to help drive economic energy and vitality into communities in the state will result in additional income and higher paying jobs.

“We have a chance — if we do it right — to embed the natural gas industry in an environmentally sound, economic significant way,” Ridge said.

Ridge’s talk focused on his work with the Marcellus Shale Coalition and the sweeping environmental policies he influenced during his tenure as the 43rd governor of Pennsylvania from 1995 to 2001. He developed the Growing Greener Initiative that provided critical funding to preserve the state’s rivers and streams, and Clean and Green legislation that helps preserve valuable land for agricultural use.

Ridge’s talk was part of the annual Distinguished Lecture Series in Environmental Science, Technology and Policy. The lecture series is co-sponsored by the Heinz Center for Environmental Education and Research and the University Library Series. The theme for this year’s talks are around environmental problems for Marcellus Shale extraction.

To watch a video of Ridge’s talk visit: http://wms.andrew.cmu.edu:81/nmvideo/RT/Ridge_event2-3-11.mov.

Congratulations to Krista Campbell, John Matsko and Donna Marano for correctly answering the February Piper Trivia question.

Go online to the Piper+ at bit.ly/CMUeppiper for this month’s question. Previous winners are ineligible. Winners will receive a prize from the Carnegie Mellon Bookstore.

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Running Commencement a Real Marathon This Year

Get Here Early To Avoid Street Closings, Says University Events Director

Bruce Gerson

When does a marathon become an obstacle course?

When it falls on Sunday, May 15, and more than 2,000 graduates, their families, guests, faculty and staff will be navigating the crowds and street closings associated with the Pittsburgh Marathon on their way to Carnegie Mellon’s 114th commencement and diploma ceremonies.

The Dick’s Sporting Goods Pittsburgh Marathon gets under way at 7 a.m. and streets in many Pittsburgh neighborhoods along the route will be closed to vehicular traffic for several hours to allow for the majority of runners to pass through.

CMU’s main commencement ceremony begins at 11 a.m. in Gesling Stadium. The portion of the marathon that passes closest to CMU (miles 11-14) includes:

• Forbes Avenue between the Birmingham Bridge and Craig Street;
• Craig Street between Forbes and Fifth avenues;
• Fifth Avenue between Craig Street and Aiken Avenue;
• Fifth Avenue between South Highland and Penn avenues.

Streets along the route will close at rolling intervals as the lead runners approach, according to Pittsburgh Marathon representatives. The elite runners are expected to pass the halfway point (13.2 miles) at Fifth and Morewood avenues between 8 and 8:30 a.m. The slowest runners will most likely reach the midway point between 10:30 and 11 a.m. Marathon reps said they hope that streets in Oakland will reopen by 11 a.m.

“We have been working diligently with the marathon staff to ensure that commencement guests are impacted as little as possible,” said Jennifer Logan Boyer, director of University Events.

Boyer and her staff recently met with commencement coordinators from the academic departments to review details and to discuss the marathon’s impact.

“We’re telling folks who will be affected by the street closings to get to campus that day as early as they can,” Boyer said. “If you can arrive on campus by 8:30 a.m. you shouldn’t have a problem.”

Boyer said marathon organizers are creating a hotline for people to call regarding rolling street closures. She also noted that extensive directions and information will be provided on the commencement website (www.cmu.edu/commencement) to help participants and guests navigate to campus and find parking locations. She said she’s working with bobsmaps.com to obtain detailed maps depicting the affected roads and routes around campus.

University Events will send emails to graduating students with information and encouraging them to monitor the website for updates. Carnegie Mellon also will employ its Facebook and Twitter pages to help get the word out.

“We are asking students to forward this information on to their parents, family members, and guests who will be attending to keep everyone informed,” Boyer said.

In addition to the parking locations on campus and in Oakland, she noted that free parking would be available in the Squirrel Hill parking lots near the Carnegie Library and Jewish Communit Center at Forbes and Murray avenues. Shuttles to and from campus will be provided for those parking there as well.

Additional signage will be posted on commencement day to direct guests to campus and parking locations. Staff also may be stationed at intersections to help with directions. Boyer noted that pedestrians would be permitted to cross streets that are closed once a break in the crowds of runners occurs.

A map of the complete marathon route can be downloaded from the commencement website. Also on the site is a listing of diploma ceremonies and other information for students, faculty and visitors attending or participating in commencement weekend activities.

“The early bird gets the worm, or in this case, an easy commute to commencement,” Boyer said.

Ralston To Speak at Commencement

CONTINUED FROM PAGE ONE

autobiography, “Between a Rock and a Hard Place,” received six Oscar nominations, including “Best Picture.”

“Aron’s incredible story has been, and continues to be, an inspiration to millions around the world,” said Carnegie Mellon President Jared L. Cohon. “He turned grave adversity into a learning and teaching experience for all of us. I know our graduates will enjoy and greatly benefit from hearing Aron speak.”

A highly talented student while at Carnegie Mellon, Ralston credits the university with helping him in the canyon. “The analytical and rational problem-solving I honed at Carnegie Mellon played a major role in helping me get out of there,” he explained.

But what kept him alive, said Ralston, was more elemental. “It was primarily my family,” he explained. “In the end I realized what I survived on, what got me out of there, was love.”

At CMU, Ralston majored in mechanical engineering and French, and minored in piano performance. As a resident assistant, he was an important role model for students and earned the respect of his peers for his work ethic, sense of adventure and great humor. He also was active in numerous intramural sports and a member of seven honor societies, including Phi Beta Kappa. He became a member of Carnegie Mellon’s Andrew Carnegie Society as a way of giving back to the university for what he describes as “an incredible education.”

Ironically, his experience in Utah only caused him to redouble his efforts and intensity. He went on to climb all 59 of Colorado’s highest peaks — solo, in winter. He’s also drawn on his engineering skills, helping to design prosthetics for companies that have sponsored his climbs.

Today, Ralston lives with his wife, Jessica, and their son in Boulder, Colo. He is an advocate for Utah and Colorado wilderness. In late February, he earned $125,000 for the non-profit organization Wilderness Workshop on the television game show “Minute To Win It.”
Family, Friends Remember Engineer Who Reached for the Stars

CONTINUED FROM PAGE ONE

boyfriend and husband. Oldak is vice president and general counsel of Washington, D.C.-based Utilities Telecom Council, a global trade association dedicated to creating a favorable business, regulatory and technological environment for companies that own and manage critical telecommunications systems in support of core business. “She had a great sense of humor and was always willing to try anything, I remember taking her to Kennywood to ride the rollercoasters. At first, she hesitated. But once she took a ride, she was hooked and rode them all.”

Resnik received a bachelor’s degree in electrical engineering from Carnegie Mellon in 1970 and a doctorate in electrical engineering from the University of Maryland in 1977. She worked for RCA beginning in 1971 as a design engineer, which included engineering support for NASA telemetry system programs.

From 1974 to 1977, Resnik was a biomedical engineer and staff fellow in the Laboratory of Neurophysiology at the National Institutes of Health in Bethesda, Md. She worked for about a year as a senior systems engineer in product development with Xerox before being selected by NASA in 1978.

“When she heard NASA was looking to incorporate female astronauts, she asked me what I thought about it, and I encouraged her to apply,” said Angel Jordan, a university professor emeritus, provost emeritus and Resnik’s faculty adviser and mentor. “She was an amazing person.”

With a long pause and a quick blink to hold back tears, Jordan says he still feels a bit responsible for her loss. “I pushed her to excel, and I live with that memory every day,” he said.

Across campus, Jerome “Jay” Apt III recalls that he spoke with Resnik a few days before the shuttle loss.

“She was an excellent pilot and a superb operator in space,” said Apt, a veteran astronaut who flew four missions aboard the Atlantis and Endeavour shuttles in the 1990s. He also is a professor of technology at the Tepper School of Business and in the Department of Engineering and Public Policy, and executive director of the Carnegie Mellon Electricity Industry Center.

“She was the kind of astronaut that we could all emulate. I’m certain that she would have flown more times if the Challenger had not been lost,” Apt said. “The accident was significant because it ultimately prompted a whole set of changes at NASA.”

Resnik, who was a mission specialist on that flight, had logged more than 145 hours in space. Because many of the family members were involved with Resnik’s first shuttle trip aboard Discovery, when it came time for her to be on the Challenger, it wasn’t on the top of everyone’s mind, according to Norin, an audiologist. Her brother called her from California to tell her about the explosion that followed the launch.

He said, “Helene, you better sit down,” she recalled. At that instant, her husband and receptionist from her Akron office came in to bring her home because they knew she would not be able to drive herself.

“It was shocking,” she said. “They were all so confident, we never thought anything could go wrong.”

As the nation mourned the loss of Resnik and 16 other fallen astronauts Jan. 28, 2011, at Arlington National Cemetery, solemn, singular remembrances continue to unfold for Carnegie Mellon’s famous alum.

“It was a hard time,” said Chriss Swaney, who wants to be an astronaut and perhaps her pioneering spirit lives on with my 13-year-old grandson Tyler, who wants to be an astronaut and perhaps attend Carnegie Mellon,” Norin said.

Students Create Bridge Between Business and Health Care

Maria Zayas
Carnegie Mellon doesn’t have a medical school, but that doesn’t stop students from working on health care solutions. From bioengineering to quality of life technology, collaborations abound.

The latest, the Industry Academics Clinicians Together (IACT), is the brainchild of graduate students in the Tepper School of Business and the College of Engineering.

IACT brings together Carnegie Mellon and University of Pittsburgh graduate students from a variety of schools and majors to focus on ideas for new or improved health care technologies. Their approach to problem solving is unique in that it addresses the multiple dimensions of clinical technology: the science, the technology and business sense.

“There wasn’t a strong focal point for health care in Pittsburgh with all of its resources,” said Daniel Bishop, a student in the joint medical scientist training program between Carnegie Mellon and Pitt. “I got into medicine in the first place because I am passionate about using engineering and my own knowledge to help others.”

Bishop who will receive a master’s in biomedical engineering and a medical degree and two other students, James Wolfe and Jeffrey Mataya decided to create the organization for people interested in the technological and business aspects of the healthcare industry.

“We take a market-centric focus on problems rather than trying to retrofit technology into a particular problem,” Mataya said.

CONTINUED ON PAGE TWELVE
Words, Form Take Center Stage in Poetry Spotlight Series

National Poetry Month is April, but Carnegie Mellon is starting its celebration early.

American poets and critics Daisy Fried, James Longenbach and Fred Moten will read their work and discuss the state of contemporary poetry from 7 – 9 p.m., Thursday, March 29 in McConomy Auditorium.

“This is going to be a really great introduction to poetry. I think people will be surprised and satisfied to hear these three different perspectives on poetry,” said Yona Harvey, director of the Creative Writing Program. “They’ll be surprised how they can connect to these writers.”

Co-sponsored by the Poetry Society of America (PSA) and Creative Writing programs at Carnegie Mellon and the University of Pittsburgh, the event is the first of a spotlight series in Pittsburgh. The event will be moderated by Robert Casper of the PSA.

Poetry has thrived in Pittsburgh in recent years. Sherrie Flick, a special instructor in the English Department, was the artistic director for the Gist Street Reading Series, which recently wrapped up after a 10-year run.

“That was a huge loss,” Harvey said. “Lots of our students used to go there. It was a space that was different than most academic spaces. All the students could see that it’s not just students and academics going to hear poetry. We’re going to miss that.”

The last year has been busy for the English Department. Terrance Hayes won the National Book award for his poetry collection “Lighthead,” and books have been released by Sharon Dinworth, Jim Daniels and Jane McCafferty among others.

“I am proud to be associated with such an outstanding faculty,” noted Chris Newirth, head of the Department of English. “By actively publishing, our creative writing faculty are not only able to share their craft with their students, but can also mentor students as they aim for professional as well as artistic success.”

Daisy Fried Fried is the author of two books of poems published by the University of Pittsburgh press, “My Brother is Getting Arrested Again,” a finalist for the National Book Critics Circle Award, and “She Didn’t Mean to Do It,” which won the Agnes Lynch Starrett Prize.


She reviews books of poetry for The New York Times and Poetry magazine. She lives in Philadelphia.

Fred Moten Fred Moten lives in Durham, N.C., where he teaches English and African American Studies at Duke University. He works at the intersection of black studies, performance studies, poetry and critical theory.

He is author of “Arkansas” (Pressed Wafer), “In the Break: The Aesthetics of the Black Radical Tradition” (University of Minnesota Press), “I ran from it but was still in it” (Cusp Books), “Hughson’s Tavern” (Leon Works) and “B Jenkins” (Duke University Press).

James Longenbach

James Longenbach is a poet and a critic whose most recent collection of poems, “The Iron Key,” is a meditation on the conditions and consequences of beauty. His most recent critical work, “The Art of the Poetic Line,” is an account of work ranging from Shakespeare to Ashbery.

Diversity of Data Privacy Research on Display at CMU Forum

Ken Walters

Posts and tweets may seem harmless by themselves, but together they could paint a negative picture when it comes to privacy.

CMU researchers believe the key to your online safety starts with your keyboard.

“There are two converging trends people need to consider. First, there is more and more self-disclosure online, where we are giving away little pieces of data, and the other side of that is the ability of data mining to scour those pieces to build a complete profile of your life,” said Alessandro Acquisti, Heinz College associate professor of cybersecurity research and education centers in the U.S.

A recent panel discussion as part of International Privacy Day in late January, discussed some of the research in front of a large crowd.

Moderated by Acquisti, the panel included experts from a variety of fields, including Assistant Professor Travis Breaux, whose research focuses on how information systems comply with government privacy policies; Associate Professor Lorrie Cranor, who has authored more than 80 research papers on data privacy issues; University Professor Steve Feinberg, who is an expert on protecting confidentiality in census data; Professor Norman Sadeh, co-founder of Wombat Security Technologies, which commercializes solutions to combat phishing attacks; and Associate Professor Jason Hong, who studies security issues related to mobile devices and applications.

“The interdisciplinary collaboration at CMU is why we are able to do such interesting work in the field,” Cranor said. “We’re looking at ways to help you protect your privacy without regret what you’re doing.”

Acquisti notes that it will be important to increase public awareness of the nature of digital data and help people make more informed decisions about sharing personal data online.

“Students today may reveal something online that sometimes they don’t realize could still be available and used years later, say, when they run for office or apply for a job,” he said.

Concerns over unfortunate photos or embarrassing remarks living in cyberspace could lead to a cottage industry of “personal brand management,” Cranor noted.

She sees a business opportunity for cyber experts who could search the Web and delete unflattering information or photos, or at least make it more difficult for a “prospective employer or prospective date” to find, she said.
Qatar National Research Fund Awards Grants to Three Researchers

Age might only be a number, but for post-doctoral researchers Behrang Mohit, Peter Hansen and Thierry Sans, it was a factor in each of them winning a grant from the first cycle of the Young Scientists Research Experience Program from Qatar National Research Fund.

The grants, $100,000 each renewable for up to three years, aim to build human capital by supporting scientists age 35 or younger to initiate and lead their own research.

Their projects focus on expanding Arabic content on Wikipedia, creating 3-D maps using robots and developing more secure Web applications. All of these projects will have a great impact on Qatar as well as the rest of the world.

“This is a wonderful result that reflects the high-quality research that is being done by the young faculty and post-doctoral research associates at Carnegie Mellon Qatar. They are all under age 35 and are working on amazing projects with real-world impact," says Majid Sakr, assistant dean for research.

Mohit’s proposal focused on expanding Arabic Wikipedia by statistical machine translation.

“Arabic is one of the top 10 spoken languages, yet the number and the length of Arabic articles is not in the top 20 languages of Wikipedia,” Mohit said. “We plan to train systems that automatically translate Wikipedia articles from English to Arabic and locate those parts with higher translation quality to be used by Arabic Wikipedia authors.”

Hansen’s project involves SLAM, or simultaneous localization and mapping using robots. Since GPS can be fairly unreliable when there are buildings and structures in the way, Hansen is fitting a robot with multiple cameras, then creating a 3-D map of the environment using the images from the cameras.

With multiple cameras, the robot can find its position and determine what has changed from a previous trip. Such technology could be a crucial safety feature at liquid natural gas processing facilities because the robot could automatically do surveillance, check for gas leaks and find structural changes.

Sans’ work focuses on something that affects everyone on a daily basis: Internet security. He is working on a type-safe programming language for the Web called Qwesst that builds safe and secure Web applications.

Since Web applications are becoming more and more complex, it is harder to control how data is disseminated over the Internet. Attackers can steal sensitive information by exploiting Web application bugs. Qwesst will have a built-in security model that will allow programmers to control data dissemination and prevent them from writing unsafe code.

Carnegie Mellon submitted four of the 11 proposals that were independently evaluated by three internationally renowned peer reviewers. Only six grants were awarded: three to Carnegie Mellon, two to Qatar University and one to Weill Cornell Medical College.

“We submitted four proposals and were awarded three. And of the six grants that were awarded, Carnegie Mellon received 50 percent. I think that is excellent. With these grants, Carnegie Mellon will continue to be a fundamental component of the growing research culture here in Qatar,” Sakr said.

The first grant cycle was so successful that Qatar National Research Fund has decided to have two funding cycles each year.

Planning To Attend Spring Carnival Events? Think Ahead

Space won’t be quite as tight as inside a Sweepstakes buggy, but you better make your Spring Carnival reservations early.

“With all reunions happening at Spring Carnival this year, space is at a premium, so many activities are requiring advance registration,” said Dan Barnett, director of on-campus programs for Alumni Relations.

Reservations are being accepted now through April 8 for Spring Carnival activities.

“Last year, we saw more than 2,000 alumni, students, families and friends attend events. Our goal this year is to have more than 3,000,” Barnett said. “We’re really excited that there is more passion behind the weekend and more alumni wanting to be a part of Carnival. Tepper and Heinz are also doing their reunions as part of this weekend, which adds events.”

The increase in activities and expected attendees will limit parking as well.

“As with every Carnival, parking is limited on campus. We are encouraging people to carpool, make alternative arrangements and avoid having to park on campus that weekend. The hotels we work with will have shuttles to campus and we have added evening shuttle service to those hotels as well,” Barnett said.

Anniversary celebrations this year that are free but require registration include The Tartan’s 105th Anniversary Reception, the WRCT 60th Anniversary Reception and the Scotch’n’Soda fifth Annual Alumni & Student Reception, to name a few.

Additional free events include many college and school programs such as CIT Alumni Buggy Breakfast, the Buggy Alumni Reception, School of Architecture Thesis Reviews & Critiques, SoArch Alumni Reception, the Mellon College of Science Ice Cream Social, H&SS Reunion Lunch, MeCull Alumni BBQ, CMARC’s Open House and more. For the complete schedule, visit www.cmu.edu/alumni/carnival.

Athletics also is planning an all-university open house, and the School of Music will have an Alumni Sing to honor Robert Page. Dramatic performances this year include the School of Drama’s production of “The Alice Project,” and Scotch’n’Soda’s production of “Cabaret.” More information on those events will be available on the website.

Last year, the Loyal Scots Program was introduced at Spring Carnival. The program recognizes students and alumni who show their dedication, passion and continued commitment to the university. To be eligible, members must update their contact information, attend an event or volunteer, make a gift and advocate for the university. Learn more about the program at www.cmu.edu/loyalscots.

“At each welcome area, we will have information about the program and enable alumni and students to become Loyal Scots,” Barnett said. “We’re excited to celebrate the program’s one year anniversary. We will have several exclusive events for Loyal Scots.

“Everyone’s favorite things will also be back including Mobot Races, Sweepstakes and booths on the Midway,” he said. “We invite the entire university community to the Alumni Association All Campus BBQ which will take place on Friday from 11:30 a.m. to 2 p.m. We look forward to a great Spring Carnival & Reunion Weekend!”
Veteran film and TV producer Esaú Meléndez, a native of Mexico City who now lives in Chicago, sees the United States as a country built by immigrants — generation after generation with people much like himself.

When he saw the intense public reaction and protests to the 2006 federal law that criminalized undocumented citizens and anyone who assisted them, he knew he had to do something.

The May 1st protest drew a large crowd, over a million people,” Meléndez said. “I was very inspired by that. I’d never seen anything like that in my life. When I turned on the TV, the media wasn’t covering all sides, and I thought ‘Where’s the balance?’”

Meléndez wanted to personalize the story of the modern immigrant rights movement through a character who represented the immigrants’ challenges. He found Elvira Arellano, a single mother who was arrested by federal authorities and ordered to appear before immigration. Facing almost certain deportation, Arellano instead made the decision to seek sanctuary at Adalberto United Methodist Church in Chicago.

“No one did what she did — fight to stay — and her story needed to be told,” said Meléndez.

Meléndez’s resulting documentary, “Immigrant Nation! The Battle for a Dream,” combines Arellano’s actions with the larger pro-immigrant movement that primarily began in Chicago, including coverage of anti-immigration activists. The film has won several major independent film awards, including the 2011 Best Documentary at the Cine Festival of San Antonio, the 2010 Cine Latino Award at the Washington, D.C., Independent Film Festival and the 2010 Best Documentary at the Latino Film Festival in Chicago.

For Meléndez, the film’s biggest accomplishments aren’t the trophies. It’s having the film serve as a historical reference for the 2006-2009 movement.

“People forget. And, the media and a lot of people in power try to push this movement aside,” he said. “This film is a tool to tell history — told by the people who were there.”

In early April, Meléndez will be in Pittsburgh to debut “Immigrant Nation!” as part of the 2011 Carnegie Mellon International Film Festival, “Faces of Migration.”

“Esaú’s film deals with very important issues regarding American immigration and captures a piece of history from the perspective of an artist,” said Jolanta Lion, festival director. “Having him here will allow us to create a dialog with the audience to understand better and beyond what the politicians and media create.”

For more information about “Immigrant Nation! The Battle for a Dream,” visit www.cmu.edu/faces/film_immigrant.html.

2011 CMU International Film Festival Schedule

**Thursday, March 17**
- “The Attacker” (France, 2006) + Opening Night Reception
  7:30 p.m., Melwood Screening Room
  477 Melwood Ave.

**Friday, March 18**
- “Vanadov Available” (Poland 2008) and “Nisio Warsaw” (Poland 2010)
  7:30 p.m., Melwood Screening Room
  477 Melwood Ave.
- “Littlerock” (USA, Japan 2010)
  9:30 p.m., Melwood Screening Room
  477 Melwood Ave.

**Saturday, March 19**
- “Tout de suite” (France, Belgium, France, Croatia 2008)
  5:00 p.m., Melwood Screening Room
  477 Melwood Ave.
- “Norteno” (Mexico 2008)
  7:30 p.m., Melwood Screening Room
  477 Melwood Ave.

**Sunday, March 20**
- “Pato’s Academy” (Greece, Germany 2008)
  5:00 p.m., Regent Square Theater
  1035 S. Broadview Ave.

**Friday, March 25**
- “Pink Saris” (UK, India 2010)
  7:30 p.m., The Kelly Strayhorn Theater
  5941 Penn Ave.

**Saturday, March 26**
- “First of All, Felicia” (Romania, Belgium, France, Greece, Germany 2009)
  7:30 p.m., Regent Square Theater
  1035 S. Broadview Ave.

**Sunday, April 9**
- “Immigrant Nation! The Battle for a Dream” (USA 2008)
  4:00 p.m., 105 College Hall
  Duquesne University

**Thursday, April 7**
- “Four Saints” (UK, India 2010)
  7:30 p.m., The Kelly Strayhorn Theater
  5941 Penn Ave.
- “Diplomat” (Israel 2009)
  7:30 p.m., Southside Works Cinema
  425 Cinema Dr.

**Saturday, April 9**
- “Immigrant Nation! The Battle for a Dream” (USA 2008)
  5:30 p.m., McNally Auditorium
  University Center (UC)

**Sunday, April 10**
- “The Competitive Shorts Program”
  5:45 p.m., The Kelly Strayhorn Theater
  5941 Penn Ave.
- “Dooman River” (France 2010)
  7:15 p.m., Melwood Screening Room
  477 Melwood Ave.

**Saturday, March 26**
- “Publik: Uncovered” (Germany, 2010)
  7:30 p.m., McNally Auditorium
  University Center (UC)
- “Cuban Film Shorts: The Daily Experience of Living”
  7:30 p.m., Future Tenant Gallery
  819 Penn Ave.
- “Gitmek: My Marlon and Brando” (Turkey 2009)
  7:30 p.m., McNally Auditorium
  University Center (UC)
- “Croatia 2009”)”
  7:30 p.m., McNally Auditorium
  University Center (UC)
- “Croatia Unlimited” (USA 2010)
  7:30 p.m., Future Tenant Gallery
  819 Penn Ave.
- “Diplomat” (Israel 2009)
  7:30 p.m., Southside Works Cinema
  425 Cinema Dr.

**Saturday, April 9**
- “Immigrant Nation! The Battle for a Dream” (USA 2008)
  5:30 p.m., McNally Auditorium
  University Center (UC)

**Sunday, April 10**
- “The Competitive Shorts Program”
  5:45 p.m., The Kelly Strayhorn Theater
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- “Dooman River” (France 2010)
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  477 Melwood Ave.
In the royal world of professional chess, Lufei Ruan came within a few moves of being crowned queen. Not bad for someone who doesn’t even play every day.

Ruan came in second at the world’s women chess championship last December, in Hatay, Turkey, to 16-year-old Hou Yifan. In the past, the two women have been teammates competing for their native China.

“We are both familiar with each other, so we know the strategy to fight against each other,” Ruan said.

She was able to combine a few days’ leave with the winter holiday to play in the tournament, though the experience offered little relaxation. She enjoyed only one break in 20 straight days of play.

“It was much better than I expected,” said Ruan, 24, who is in the midst of her first year pursuing a Ph.D. in accounting at the Tepper School. “Everyone congratulated me when they saw me after I came back, and they even sent an e-mail to all the students to announce my victory.”

A professional chess player for eight years, Ruan started playing when she was 6 years old with the encouragement of her father, Mingru Ruan, an associate professor at the Nanjing University of Aeronautics and Astronautics. She earned the title of woman grandmaster (WGM) in 2007, and under the tutelage of her coach, Xu Jun, broke into the world’s top 20 female chess players in January 2008.

She reached the 2010 final by winning tiebreakers in every round and eliminating the previous champion, Alexandra Kosteniuk. Though she belongs to the Pittsburgh Chess League, and practices on a computer, Ruan’s primary focus is now her studies.

Before I came here, I spent half my time in study and half in chess,” explains Ruan, who attended Tsinghua University in Beijing. “If I am in school, I focus on school study. If I’m in tournaments, I focus on chess. The most important thing is to be efficient and effective. I focus on something and don’t get distracted by other things.”

Although the game has provided some social opportunities — Ruan enjoys sharing her love for chess with others, and teaches friends who ask — her priority is pursuing her doctorate with an eye toward becoming a professor in China. In fact, she credits her coach with encouraging her to continue her studies full time, something she said is a rarity in her homeland.

Now that she has resumed her studies, she has switched her focus away from chess, but she’ll never give up the game.

“Chess is part of my life,” she said. “I won’t give it up totally, but I can play it whenever I want to do so. I just want to enjoy the tournaments.”

Chess Champ Keeps Game, Studies in Check

Niki Kapsambelis

Interested in playing chess?

Lufei Ruan is a member of the CMU Tartans Chess team in the Pittsburgh Chess League, which runs from September 4 to April.

For more information about the CMU Tartans, contact team captain Jeff Quirke at jeff.quirke@gmail.com.
Carnegie Mellon and the discipline of operations management at the Tepper School

GM Foundation Supports Fund

Walt Doofstomter (from left), executive director of Integrated Vehicle Health Management for GM Research & Development, presented Es Schwarzenber, head of the Electrical and Computer Engineering Department, and Bariama Bacha, a researcher at the CMU Collaborative Laboratory, with a $70,000 scholarship grant from the General Motors Foundation for students on Feb. 10, at the Pittsburgh Auto Show. “Automotive companies are making great strides in developing and adopting new technologies and Carnegie Mellon’s exceptional programs foster a new generation of talent that can significantly accelerate the pace of automotive innovation,” Doofstomter said.

Assistant Professor Platzer Receives CAREER Award

The National Science Foundation has awarded Andre Platzer, assistant professor of computer science, a five-year, $400,000 Faculty Early Career Development (CAREER) Award to study “Logical Foundations of Cyber-Physical Systems.” Platzer develops methods for verifying the performance of cyber-physical systems, including hybrid systems and distributed systems, in which embedded computers interact with an ever-changing real world. Examples include applications such as distributed adaptive cruise controls in automobiles and robotic surgery devices.

Baybars Receives George Leland Bach Chair

Iser Baybars, deputy dean and professor of operations management at the Tepper School of Business, has been awarded the George Leland Bach Chair in honor of his contributions to Carnegie Mellon and the discipline of management science. The chair is named for the late, founding dean of the Graduate School of Industrial Administration at Carnegie Mellon, who was a pioneer in the revolution that created modern management education. Baybars received his master’s degree and Ph.D. at Carnegie Mellon and joined the university faculty in 1978. Among many awards, he received the Tupper School’s Outstanding Achievement Award for Leadership in 1997 and was the first recipient of the Emil Limbach Teaching Award for Excellence in the Classroom in 1981 at BUPA, which is now the Hertz College. Baybars also was the architect and founder of the business school’s FlexTime and FlexMode MBA programs.

Ganger Awarded ECE Professorship

Gregory R. Ganger was awarded the Stephen J. Jatras Professorship in Electrical and Computer Engineering for cutting-edge work in computer systems. The professorship is named for the late Stephen J. Jatras, E’47,” former chairman of the Tekes Corp. and a leader in a variety of academic, civic and community organizations stretching from Pittsburgh to Tel Aviv, Okla. Ganger, who recently testified in Washington, D.C., about the risks and benefits of cloud computing, is internationally recognized for his work in computer systems, such as storage systems, distributed systems and operating systems.

Since 2001, Ganger has served as director of the Parallel Data Lab, where he collaborates with HP labs on a research initiative focused on cloud computing issues through the prestigious HP Labs Innovation Program.

Wats:ON? Is All About Speed

The Jill Watson Festival Across the Arts, also known as wats:ON?, will be held March 17-19. This year’s theme will examine speed in relation to the production and presentation of creative work encompassing a range of interdisciplinary events. Events include a high-speed camera photo booth, an exhibit of Beethoven’s Ninth Symphony stretched to 24 hours by Scandinavian artist Ida Ingla, a collaborative dance-video project and a time-lapse video project that will be choreographed, shot and edited on campus with students.

The festival’s curators are Assistant Professors Pablo Garcia, the Lurita and Rich Castle Chair in Architecture, and Spike Wolff, an adjunct assistant professor of architecture. For more information, visit www.cmu.edu/cuvat-on. The series is named in memory of Watson, a Carnegie Mellon alumna, adjunct faculty member in the School of Architecture, and acclaimed Pittsburgh architect who died in the TWA Flight 880 plane crash on July 17, 1996.

Two Professors Named To National Engineering Academy

Carnegie Mellon’s Nadine N. Aubry and Chris T. Hendrickson have been elected to the National Academy of Engineering (NAE), one of the highest professional honors an engineer can achieve. Membership in the NAE honors people who have made important contributions to engineering theory and practice, and who have demonstrated unusual accomplishments in pioneering new and developing fields of technology.

Aubry, the Raymond J. Lane Distinguished Professor and head of Carnegie Mellon’s Mechanical Engineering Department, was elected to the academy for her contributions to low-dimensional models of turbulence and microfluidic devices, and for leadership in engineering education.

Hendrickson, the Dupont Light Professor of Engineering and co-director of Carnegie Mellon’s Green Design Institute, was elected to the academy for his leadership and contributions in transportation and green design engineering. Read more at www.cmu.edu/news/archive/2011/February/feb11_nae.shtml.

Cohon Joins Prestigious Global Leaders Forum

Following his participation at the World Economic Forum (WEF) meeting in Davos, Switzerland, Carnegie Mellon President Jared L. Cohon has been invited to join the Global University Leaders Forum (GULF).

At the 2011 Davos meeting, Cohon moderated an interactive group session, titled “Getting Things Done: Macro and Micro Strategies,” which addressed using technology to help increase productivity at the group and individual levels. The session included discussion leaders from the United Kingdom, India, Vietnam and Germany.

Since 2006, GULF is a global community of heads of universities under the auspices of the World Economic Forum. The group engages in issues of high impact to higher education, and works to facilitate collaboration among universities and other sectors of society in areas of significance for global governance.

GULF includes heads of more than two dozen universities from nine countries and has task forces working on five thematic tracks: capacity building in universities in developing countries; environmental sustainability; digital dissemination of university content; Middle East partnership and challenges; and intellectual property.

The university is playing a greater role in the WEF since Michele Petchlo, WEF’s director and head of university community, visited Carnegie Mellon in December.
Tirrell is best known for creatively using principles of biology and chemistry to solve one of the most critical problems in polymer synthesis — creating polymer chains that are identical in weight, composition and structure. He developed a technique whereby he is able to reprogram biological cells so that they make artificial, protein-like molecules with new and useful properties. Using this technique, Tirrell programs the cells to tailor-make molecules for use in biomedical technologies.

“David essentially re-wrote the genetic code and turned the cells into factories capable of making non-biological monomers,” Matyjaszewski said. “A number of biomedical devices based on his work will be commercialized in the near future.”

Tirrell’s early research also is notable. While he was a faculty member at CMU and the University of Massachusetts, Tirrell made important macromolecular discoveries that have made the development of “smart” materials — those that respond to external cues like light, pH or temperature — possible.

Tirrell has received numerous awards and honors, including the American Chemical Society Award in Polymer Chemistry, the G.N. Lewis Medal from the University of California, Berkeley, and the Arun Guthikonda Memorial Award from Columbia University. Tirrell is a fellow of the American Chemical Society, the American Association for the Advancement of Science and the American Academy of Arts and Sciences; and is a member of the National Academy of Sciences and the National Academy of Engineering.

The lecture, which is free and open to the public, will be followed by a reception in the Mellon Institute lobby.