



the PIPER

CMU'S NEWS SOURCE FOR FACULTY & STAFF

12/11 ISSUE

Carnegie Mellon University

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CMU Partners With Chinese University

Collaboration To Develop Graduate Engineering Programs

■ Chriss Swaney

Carnegie Mellon will extend its global reach to China, as the first private institution to offer graduate engineering degree programs with Sun Yat-sen University (SYSU).

Carnegie Mellon and SYSU will establish a joint Institute of Engineering in Guangzhou, China, initially offering master's and doctoral degrees in electrical and computing engineering beginning in 2013. SYSU is located in southern China in Guangzhou along the Pearl River Delta, an

CONTINUED ON PAGE THREE

SEI STAFFER GOES HOLLYWOOD IN PITTSBURGH



Jeff Balmert (center) is taking an unusual approach to break into the film industry. Balmert has been a paid extra in seven major motion pictures since 2008, including "My Bloody Valentine," seen here. Read more about Balmert on page 9.

Truckin' to the Food Bank



PHOTO BY BRUCE GERSON

CARNEGIE MELLON'S 18TH ANNUAL FOOD DRIVE, SPONSORED BY STAFF COUNCIL, DONATED 8,667 POUNDS OF FOOD AND \$3,982.90 TO THE GREATER PITTSBURGH AREA FOOD BANK. THE FOOD BANK STORES AND DISTRIBUTES FOOD AND HOUSEHOLD PRODUCTS TO NEARLY 350 CHARITABLE AGENCIES IN SOUTHWESTERN PENNSYLVANIA. HELPING TO LOAD THE TRUCK BEFORE TRAVELING TO THE FOOD BANK WERE (L-R) ERICA ANDERSON, MELISSA KALEY, KATIE LAMBROU (FOOD DRIVE CO-CHAIR), NICCOLE ATWELL (KNEELING), MARK BANISTER, DENIS COAN AND MATTHEW FORREST. NOT PICTURED IS CAROLE PANNO, FOOD DRIVE CO-CHAIR.

President Cohon Attends White House Meeting

■ Piper Staff

Carnegie Mellon President Jared L. Cohon was called to the White House Dec. 5 to attend a meeting with U.S. President Barack Obama and several other university presidents and chancellors to discuss making college more affordable for students.

President Cohon was invited because of CMU's expertise in developing online learning tools, including online classes that provide instructors with real-time information about each student's progress. These courses are now being used in pilot programs in statewide university systems in Maryland, New York and Texas.

In 2009, the university received \$4 million in grants to build on the

success of the Open Learning Initiative (OLI) and launch the Community College Open Learning Initiative.

The grants are dedicated to creating a partnership with faculty at an array of community colleges around the United States to create

open "gatekeeper" courses to help more community college students achieve success. The White House has recognized OLI as a possible model for gatekeeper courses that enable students to get into colleges.

CONTINUED ON PAGE TWELVE

Low Cost, High Expense?

Barkin Shares Health Concerns Over Marcellus Shale Drilling

■ Bruce Gerson

Anita Barkin is on a mission for public health.

That's not surprising for Carnegie Mellon's director of Health Services, but this effort stretches far beyond the university's Pittsburgh campus. And far below.

Barkin's mission is to educate the public about the process and impacts of drilling into the Marcellus Shale for natural gas and to advocate for safeguards. Her message to the industry and government officials is to slow down and weigh all of the factors involved.

While drilling companies and politicians boast about the positive effects of drilling, such as the low-cost clean energy it provides and the economic boost it gives to residents and communities, Barkin argues that the negative environmental and health impacts may far outweigh the positives. She notes that the economic boost it fosters may be exaggerated as well.

In a Learning & Development session this semester titled "Health Concerns Related to Marcellus Shale Drilling," Barkin, who currently serves as president of the American College Health Association, discussed some of the negatives, the need for a closer examination of the impacts and greater regulation and oversight of the industry.

"The more I learned, the more concerned I became," said Barkin, who has testified before the Marcellus Shale



THE MARCELLUS SHALE REGION COVERS MOST OF PENNSYLVANIA AND PARTS OF SEVERAL OTHER NEIGHBORING STATES.

Commission in Harrisburg as a member of the Marcellus Shale Task Force in her suburban community of Jefferson Hills. "I have had the opportunity to speak with people who have been affected by drilling ... and I was struck by their stories of what they were experiencing from a health perspective and what their children were experiencing.

"Unfortunately, since many of the health complaints are nonspecific, including nosebleeds, headaches, rashes and fatigue, the relationship between the complaints and drilling are sometimes not immediately recognized or are dismissed," she said.

Barkin says the drilling causes air pollution and the "fracking" process, which injects water, sand and toxic chemicals into wells to allow the capture of natural gas, can result in water contamination. A recent study by the EPA found the presence of a cancer-causing compound used in fracking in the Wyoming aquifer in an area where a lot of drilling has occurred.

She also sights problems with the water in Dimock, Pa., in Susquehanna County, and findings of methane in wells around drilling sites by Duke University researchers as reason for concern about water contamination.

Something's in the Water

The toxic chemicals, which are used to lubricate and protect the drilling equipment, along with salt and radioactive materials that return to the surface, eventually end up in large wastewater pits. Barkin cites incidents where water from these holding areas has caused ground surface contamination.

Residual waste, the term used for water that returns to the surface from drilling, has been sent to municipal treatment plants that are unable to filter these toxins. She says 43 percent of the chemicals found in residual waste can disrupt the endocrine system and can lead to

cancer, birth defects, fertility problems and brain function problems.

A recent study led by CMU Civil and Environmental Engineering Professor Jeanne VanBriesen, director of the Center for Water Quality in Urban Environmental Systems, showed high levels of bromide in the Monongahela River near a water treatment facility.

"The bromide combines with the chlorine and forms carcinogens," Barkin explained. "This results in a direct negative impact to our drinking water but there is a lot of money involved which is trumping the public good."

Although earlier this year the state's Department of Environmental Protection (DEP) requested that drilling companies stop sending residual waste to municipal treatment plants, the Pittsburgh Water and Sewer Authority continues to find increasing bromide levels in the Allegheny River as well.

Low-lying Ozone

Air pollution is another major concern.

"Diesel engines run 24/7 while they are fracking, there is evaporation of toxic gases from condensate tanks and the release of pollutants with flaring. Low-lying ozone is very detrimental to our lungs and that's what's created

when you mix nitrous oxide with volatile organic compounds and add sunlight. It's happening in areas where there is a lot of drilling. We only need to look at air quality issues in areas where heavy drilling has occurred like Dallas-Fort Worth and Jackson Hole, Wyoming, to appreciate the impact.

"We already have bad air in Western Pennsylvania — we have one of the worst asthma rates in the country — and this just adds insult to injury," Barkin said.

Technologies, such as a vapor recovery system, can mitigate the air pollution, Barkin says, but drilling companies are hesitant to use them and the DEP has not required them to do so. She says company representatives have told her that it's not a widely adopted practice in the industry because "vapor recovery systems are costly."

Boom and Bust

With regard to the positive influence the Marcellus Shale drilling has on people's livelihoods, Barkin argues it's temporary.

"They move into an area, they take the gas and they move out. This is not sustained growth; this is boom and bust," she said.

She also notes that property values may decline in drilling areas as a result of water and air pollution and as the quality of life is affected.

Too Good To Be True?

Barkin says she's in favor of low-cost, clean energy and a robust economy, but feels the industry needs to be regulated and health factors need to be fully investigated.

"I don't think there has been an adequate examination of the cost/benefit of the drilling in terms of the total picture. The industry is spending a lot of money on a marketing campaign that presents drilling as the answer to our dependence on foreign oil, low unemployment, terrorism and other economic woes. Concerns about negative impacts are minimized or dismissed," she said.

Barkin summed up her L&D session with a slide that read, "If it sounds too good to be true; it is."



WASTEWATER, WHICH OFTEN INCLUDES TOXIC CHEMICALS THAT LUBRICATE DRILLING EQUIPMENT, OFTEN ENDS UP IN WASTEWATER PITS. BARKIN CITES INCIDENTS WHERE WATER FROM THESE HOLDING AREAS HAS CAUSED GROUND SURFACE CONTAMINATION.

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PUBLISHER
Teresa Thomas

EDITOR
Bruce Gerson

MANAGING EDITOR
Heidi Opdyke

WRITERS

Tiffany Benson	Abby Simmons
Bruce Gerson	Byron Spice
Sylvia Leong	Chriss Swaney
Heidi Opdyke	Teresa Thomas
Susan Peterson	Cora Wang
Shilo Rea	

DESIGNER
Melissa Stoebe
Communications Design and Photography Group

PHOTOGRAPHY
Ken Andreyo
Tim Kaulen
Communications Design and Photography Group

To contact The Piper staff, call 412-268-2900 or email bg02@andrew.cmu.edu.

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Carnegie Mellon University publishes an annual campus security and fire safety report describing the university's security, alcohol and drug, sexual assault, and fire safety policies and containing statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years. You can obtain a copy by contacting the Carnegie Mellon Police Department at 412-268-2323. The annual security and fire safety report is also available online at www.cmu.edu/police/annualreports.

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Inspire Innovation: Asia 2011

■ Piper Staff

CMU President Jared L. Cohon inspired not only alumni and parents on a recent Asia-Pacific tour, but also the Guangdong Province in China.

A stop in Guangzhou, China, included signing an agreement establishing a joint engineering institute with Sun Yat-sen University (SYSU) and a visit to the International Consultative Conference on the Future Economic Development (ICCFED) of Guangdong, held every two years. He served as an economic adviser for ICCFED.

At SYSU, he told acting governor Zhu Xiaodan, senior officials and hundreds of students that universities could play a significant role in transforming the region. He pointed to the way CMU helped Pittsburgh.

“Guangdong is a manufacturing and economic center of China. As a province in the process of industry transformation, to have high-valued products is very important,” Cohon said in an interview with newsgd.com, the premier online English news source in the province. “Education can produce innovation and universities are the sources of innovation. Working with SYSU, we look forward to bringing CMU’s innovative style, technological



KAI-FU LEE (SCS '88) JOINED PRESIDENT JARED L. COHON AT AN EVENT FOR THE BEIJING ALUMNI CHAPTER.

expertise and creative problem solving to the region.”

At Tsinghua University, Cohon delivered a keynote address about the hidden costs of energy at the university’s

prestigious Tsinghua Forum. He also met with Ping Hao, China’s vice minister of Education.

Those were just a few of many stops on a November tour for Cohon and

Tepper School of Business Dean Robert M. Dammon that included the silver anniversary celebration of a chapter and record numbers of nearly 500 participants at events in Seoul, Tokyo, Hong Kong, Beijing, Mumbai, Bangalore and New Delhi.

In Tokyo, the Alumni Association’s Japan Chapter celebrated its 25th anniversary, with alumni, parents and friends. The evening included an engaging panel discussion about the Japanese and global economies, hosted by CMU Trustee Yoshiaki Fujimori (TPR '81), president and CEO of JS Group Corp.

Alumni, parents and friends joined the Beijing alumni chapter for a special evening of news and updates featuring Cohon and distinguished alumnus and former faculty member Kai-Fu Lee (SCS '88), chairman and CEO of Innovation Works and former head of Google China.

In Seoul, more than 200 members of the CMU community gathered for an evening of news, updates and networking.

In his first visit to the region as dean, Dammon discussed business school updates in Seoul, Tokyo, Mumbai, Bangalore and New Delhi, meeting with hundreds of alumni, parents and friends.

CMU Partners With Chinese University CONTINUED FROM PAGE ONE

important economic and technology hub of the Asia-Pacific region.

“We are pleased to partner with Sun Yat-sen University, which has a long history as one of China’s finest institutions,” said CMU President Jared L. Cohon.

“Working with SYSU, we hope to usher in a new era of engineering education in China. We look forward to bringing CMU’s innovative style, technological expertise and creative problem solving to the region.”

“We selected CMU because its great academic and research reputation fits nicely with south China’s vision of growing its global IT and electronics companies, and training a critical mass of IT professionals with an innovative and entrepreneurship mindset,” said SYSU President Xu Ningsheng, one of China’s top physicists.

The mission of the joint Institute of Engineering will be to deliver world-class education in engineering, perform cutting-edge research and development, and find solutions to real-world engineering problems. Another goal is to help implement successful technology transfer to China-based industries, including helping move Chinese industries from mass-production to technology/innovation-based businesses.

China’s economic performance is the envy of the Western world. It reported annual gross domestic product growth of 9.1 percent in the third quarter of 2011 and the International Monetary Fund has forecast growth of 9.5 percent

for all of 2011. SYSU is located about 100 miles northeast of important trade and economic centers like Hong Kong and Macau, giving it access to one of the Asia-Pacific region’s most vital business hubs.

“Our vision for the joint institute is that it will educate leaders, develop innovative engineering education and lead China in enhancing engineering education,” said Pradeep K. Khosla, the Dowd University Professor and dean of the College of Engineering.

Carnegie Mellon’s engineering faculty is well known for its research and education efforts. The program’s undergraduate and graduate programs both rank in the top 10 in the U.S., according to U.S. News and World Report, and a recent Times Higher Education survey placed CMU’s engineering college among the top engineering programs in the world. The college also hosts programs in Portugal and recently announced it would offer courses in Rwanda.

CMU’s relationship with China is longstanding and there are nearly 500 alumni in China. In 1919, the university granted its first Ph.D. in civil engineering to Mao Yisheng, one of the pre-eminent engineering minds of the 20th century. He designed two of China’s most famous modern bridges — the Qiantang River Bridge near Hangchow and the Yangtze River Bridge at Wuhan. He also led the structural design of the Great Hall of the People in Beijing, and served as the president of four universities in China.

\$1 BILLION

\$967.7M

12/1/2011



WE ARE MAKING A DIFFERENCE. CARNEGIE MELLON UNIVERSITY IS ON TRACK TO REACH THE \$1 BILLION GOAL OF THE INSPIRE INNOVATION CAMPAIGN. THANKS IN PART TO THE SUPPORT OF THE CMU COMMUNITY, THE UNIVERSITY IS IN THE HOMESTRETCH TO ACHIEVE THIS HISTORIC MILESTONE. VISIT CMU.EDU/CAMPAIGN FOR THE LATEST CAMPAIGN NEWS AND PROGRESS, OR TO MAKE A GIFT TODAY. PROGRESS SINCE JUNE 1, 2011: \$253,639,814.

Artists of the Year Rubin, Peña Recognized

■ Tiffany Benson

Carnegie Mellon has swept the 2011 Pittsburgh Center for the Arts (PCA) Artist of the Year awards with faculty members Jon Rubin and John Peña taking home Artist of the Year and Emerging Artist of the Year, respectively.

It's the third time in four years that a member of the CMU community has been named the PCA's top artist. And the second time since 2009 that both honorees are from CMU.

A special exhibition showcasing the extraordinary work of these artists will run through Jan. 22.

Other CMU community members who have been named PCA Artist of the Year include Susanne Slavick, the Andrew W. Mellon Professor of Art, in 2008, and Tim Kaulen, a university photographer, in 2009.

An Eye on Humanity

Jon Rubin, whose work explores social and political landscapes, has been observing and interpreting human behavior across many artistic mediums since 1995.

Of the four works on display at the PCA exhibit, his newest creation, titled "HERETHEREHERE," is one that touches home.

The project, a documentary-style video, chronicles the walk from the PCA to Rubin's home, stopping along the 1.5-mile route into 50 of his neighbors' homes for an inside look at the lives in the community.

His exhibit at the PCA takes a personal look at his surroundings and displays work that Pittsburgh has not yet seen. Some of Rubin's other art that can be viewed at the exhibit include the video pieces "Present" and "I'm Not Me."

"This [recognition] is certainly an

honor," Rubin said. "It's an opportunity to show work that I have been doing outside of the city of Pittsburgh, and work that I wouldn't normally get to share with my friends, family and community here."

In addition to his creation of local social-experiment-turned restaurants such as The Waffle Shop and Conflict Kitchen, he was recently commissioned to create a public piece for the 2012 bicentennial celebration in Columbus, Ohio.

Rubin has works published in several books and has displayed at The San Francisco Museum of Modern Art; The Center for Curatorial Studies at Bard College; The Museo Tamayo Arte Contemporaneo, Mexico; the The Rooseum, Sweden; The Mercosul Bienial, Brazil; Internationale Kurzfilmtage Oberhausen, Germany; and the Nemo Film Festival, Paris.

Nature Writer

John Peña, who recently focused his talent on video and drawing, finds his passion in conscious reflection on outwardly insignificant moments. His tendency to look at and document everyday occurrences have resulted in projects such as "Daily Geology," which includes drawings he's made everyday for the last

two years that record a memorable daily experience.

Although separately the drawings seem quite ordinary, using paper and drawn in black and white, it is the time and dedication of drawing each picture and capturing the moments every day that transforms individual drawings into the monumental value of the collective work.

Other works by Peña on display at the PCA include the video series "Natural Translations," which uses human bodies to replicate natural elements and forces, and "The Untitled Cloud Series," which utilize sun and shadow movements.

"Through my artwork, I am trying to communicate with nature and in many

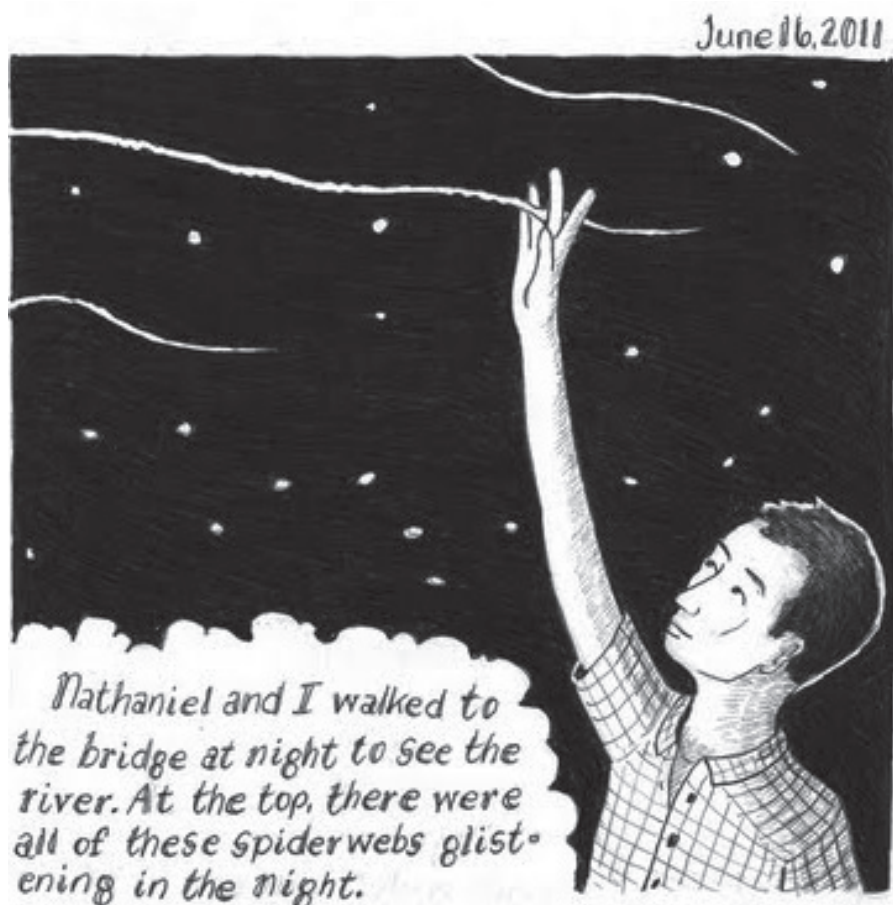
ways, emulate it as well. By engaging with the natural world in such a way, I hope to create poetic and magical moments that reveal the subtle relationships between humans and nature," Peña reflected.

A multidisciplinary scholar in his craft, Peña received his master's degree from Carnegie Mellon in 2008, then visited Colombia on a Fulbright Fellowship and attended The Skowhegan School of Painting and Sculpture, The Fine Arts Work Center and the Bemis Center for Contemporary Art. His works have been exhibited at The Mattress Factory Museum as well as the Kevin Kavanaugh Gallery in Dublin, the Kate Werble Gallery in NYC and The Bumbershoot Arts Festival in Seattle.



JON RUBIN'S ARTIST OF THE YEAR EXHIBIT INCLUDES A VIDEO PIECE TITLED "I'M NOT ME."

PHOTO COURTESY OF JON RUBIN



COURTESY OF JOHN PEÑA

JOHN PEÑA HAS SPENT THE LAST TWO YEARS MAKING DAILY DRAWINGS THAT RECORD A MEMORABLE MOMENT. THIS EXAMPLE WAS DRAWN ON JUNE 16, 2011.

The Pittsburgh Center for the Arts Gallery at 6300 Fifth Ave. is open from 10 a.m. to 5 p.m., Tuesday through Saturday, and from noon to 5 p.m., Sunday. A \$5 donation is suggested.

Since 2001, CMU has dominated the PCA Artist of the Year and Emerging Artist of the Year awards. Winners with university connections include:

ARTIST OF THE YEAR

- 2001 Paul Glabicki
- 2002 Adrienne Heinrich
- 2003 Diane Samuels
- 2004 James Duesing
- 2005 Clayton Merrell
- 2008 Susanne Slavick
- 2009 Tim Kaulen
- 2010 Brian Dean Richmond
- 2011 Jon Rubin

EMERGING ARTIST OF THE YEAR

- 2002 Jeremy Boyle
- 2003 George Magalios
- 2006 Kim Beck
- 2009 Dylan Vitone
- 2011 John Peña

Sustainability as a Way of Life

New Faculty Space Practices School of Design's Lessons

■ Cora Wang

The School of Design wants to set a sustainable example.

And it's doing so with a new faculty common room that features sustainably produced ceramic tile floor, natural clay paint, a reclaimed barn oak table and nontoxic plywood bookshelves.

"We wanted to create a space where the faculty and staff could come together in an informal/comfortable setting to discuss things," said Terry Irwin, head of the School of Design. "Our new mission puts design for society and the environment at the heart of everything we do; in other words, sustainability."

The space is designed and built by Day Shift, a Pittsburgh furniture design and production company founded by alumnus Justin Lacey (A'09) and his partner, Miriam Devlin. Its mission, to use sustainable, safe, reclaimed materials whenever possible, resonated with Irwin.

"Sustainable cultures develop within spaces that enhance social interaction and that is what we were aiming for," Irwin said. "We intentionally chose one of our alumni to design and build it as the embodiment of our teaching. We feel it was a truly holistic approach to satisfying multiple needs the school had."

Lacey and Devlin started the project a year ago in what was once a spare space at the back of a large studio. Their goal was to create a flexible space to serve as a conference room, lounge and library for faculty.

"We wanted to create something good," Lacey said.

To get a sense of what would work best for the faculty, they used miniature mock-ups and a full-scale cardboard prototype. They also spent months researching sustainable, reclaimed, environmentally friendly materials to build some of the furniture and other sustainable items from designers and manufacturers.

A couch was custom built in a warehouse in California; a cherry tree stand was crafted by a modern furniture company in North Carolina; the coffee table, made out of an old-school pallet, came from the basement of their shop which is a decommissioned firehouse; and the credenza from a cabinet maker in Minnesota.

The room's design reflects nature. Ceramic tile floor represents the earth; barn oak table, the tree trunk; and white boxes of bookshelves were scattered against the wall much like leaves through which one can see parts of the sky. Every leaf is now filled with a new collection of books about sustainability, selected by Irwin.

A future project includes a display board that discusses sustainable issues. Irwin says designers have to be more responsible in the decisions they make regarding materials. It is not yet a common practice, but she hopes it will hap-



PHOTO BY CORA WANG

JUSTIN LACEY (A'09) AND HIS PARTNER, MIRIAM DEVLIN, DESIGNED AND BUILT THIS NEW ROOM FOR THE SCHOOL OF DESIGN FACULTY.

pen more in the future, and gradually become a way of life.

"Something we designers can do is to influence people's worldview," said Dan Boyarski, a professor and director of alumni relations at the School of Design.

Boyarski said one of Irwin's goals in building the room is to gradually change the worldview of the faculty, the students, and visitors so that they under-

stand the concept of sustainability and how important it is to everyday living.

"The room is a practice of what the School of Design preaches; it is also an experience Justin and Miriam provided for us," Boyarski said. "And a memorable experience it is."

Since its opening a few months ago, the room has hosted a homecoming event for alumni and is being used for meetings, lectures, lunch and conversa-

tion with faculty. The space is a perfect site for a cup of coffee and a couple of pages of reading.

"I like sitting there, on the couch. It gives me a view of the whole room," Boyarski said. "I can also see outside the courtyard door to the landscape and sky."

Afternoon sunlight comes in through that door and shines on the leaves decorating the wall.

Hayes Appointed to National Student Poets Program

■ Shilo Rea

Award-winning poet and CMU English Professor Terrance Hayes has been chosen to serve as a panelist for President Barack Obama's new National Student Poets Program (NSPP), the country's highest honor for young poets presenting original work. Hayes is one of four literary leaders who will judge students who received a National Scholastic Art & Writing Award for poetry. Five high school students will be selected to serve for a year as national poetry ambassadors.

"This is good exposure for CMU's Creative Writing Program to kids who are interested in writing," said Hayes, who won the 2010 National Book Award for poetry. "Poetry seems to be becoming more popular in high school, but there's room to grow around what their sense of it is — from slam to hip hop and the relationship between page and stage."

NSPP was created by the President's Committee on the Arts & Humanities, which is chaired by First Lady Michelle Obama, and the Institute of Museum and Library Services through a partnership with the Alliance for Young Artists & Writers. The winning student poets will receive college scholarships and opportunities to present their work at writing and poetry events. They also will be featured at the National Book Festival in Washington, D.C.

Hayes also has been selected as a 2011 United States Artist (USA) Fellow in Literature. Each year, USA honors 50 of the nation's finest artists with fellowship awards of \$50,000. Previous USA Fellows include visual artist Kara Walker, poet Martín Espada, actress and playwright

Anna Deavere Smith, and choreographer and dancer Bill T. Jones. In the 2011 literature class, Hayes joins former and current MacArthur Fellowship winners Campbell McGrath and A. E. Stallings.

"I'm in good company," said Hayes, who is the USA Zell Fellow, supported by Helen Zell of Chicago, IL. "What's most validating is that I submitted all new work."

Included in his submission entry was the recently released "Who are the Tribes" chapbook from Pilot Books. Bound in a hand-stitched double pamphlet and only produced in a limited letterpress edition of 300, the book contains Hayes' illustrations and a single poem, broken into 15 parts.

Hayes hopes to use the USA Fellowship to spend the summer abroad and will continue to write "one poem at a time."

Hayes joined the CMU faculty in 2001 and teaches beginning and advanced poetry workshops in English. He has written four books of poetry: "Lighthouse," which won the 2010 National Book Award for poetry; "Wind in a Box," which was named one of the Best 100 Books of 2006 by Publishers Weekly; "Hip Logic," which won the National Poetry Series Open Competition and was a finalist for the Los Angeles Times Book Award; and "Muscular Music," which won the Kate Tufts Discovery Award.

His other honors include two Pushcart Prizes, four "Best American Poetry" selections, a Whiting Writers Award, a National Endowment for the Arts Fellowship and a Guggenheim Fellowship.

Problem Solver

Graduate Student Finds Elegant Solutions in Everyday Experiences



PHOTO BY TIM KAULEN

■ Byron Spice

In 2004, Chris Harrison was bushwhacking across East Africa's Serengeti plains, seemingly beyond the bounds of civilization, when he came upon a Maasai man swathed in red, his long hair in warrior braids, armed with a customary six-foot spear.

To Harrison's surprise, the man greeted him in English. The culture shock was complete when the man removed a cell phone from his robes to share photos of his family.

"YOU HAVE TO BE IN THE RIGHT ENVIRONMENT, WITH THE RIGHT PEOPLE, WITH THE RIGHT INSPIRATIONS — FOR ME, THAT PLACE IS CARNEGIE MELLON." — CHRIS HARRISON, PH.D. STUDENT

"He had a more sophisticated phone than I did," recalled Harrison, now a fifth-year Ph.D. student in the Human-Computer Interaction Institute.

Harrison, who has visited more than 50 countries to date, says that learning the often surprising ways that people in other lands use technology stokes his own creativity.

But travel is just one of the factors that he believes contributes to his prodigious creative output since arriving at the HCII in 2007.

The list of inventions and visualizations that he has worked on began in his first two weeks at CMU with Lean and Zoom, a technology for automatically adjusting the magnification of on-screen

content based on a person's distance from the screen; it has since been commercialized by the QoLT Foundry. That was followed by a variety of innovative methods for controlling mobile devices with taps or gestures, enabling 3D teleconferencing and designing touchscreens that can deform into physical controls.

Most recently, he presented four papers at the prestigious ACM Symposium on User Interface Software and Technology. Two were technologies

he developed as an intern at Microsoft Research — OmniTouch, a Kinect-based system that turns almost any surface into a touchscreen, and PocketTouch, a means of controlling touchscreens through fabric, such as a pocket.

Two others were TapSense, which uses acoustics to discern the difference between taps of the finger tip, pad, nail or knuckle on a touchscreen, and a method that capitalizes on optical distortion inherent in cheap LCD monitors to create messages that can be seen when viewers are at oblique angles.

"He has a good instinct for ideas that are simple, but solve big problems," said Hrvoje Benko, a researcher at Microsoft Research who worked with

CHRIS HARRISON HAS HAD ONE SUCCESS AFTER ANOTHER DURING HIS TIME AS A PH.D. CANDIDATE IN THE HUMAN-COMPUTER INTERACTION INSTITUTE.

Harrison on OmniTouch. "He is also not afraid to try things out, and he works fast. I remember leaving in the evening after talking to him and leaving him with several open questions, only to find him in the morning telling me: 'This worked, this didn't and here is why.' If you can answer questions with that clarity and that speed, you can accomplish great things."

Just where all the ideas come from, Harrison can't say exactly.

"It's hard for me to describe," he said. "It's not a process. I don't just sit down, grab a cup of coffee, and start thinking really hard. It's not predictable. You have to be in the right environment, with the right people, with the right inspirations — for me, that place is Carnegie Mellon."

Several things seem to be important for him:

Taking things apart.

"Almost everything in our world is designed," Harrison explained, and seeing how things work can lead to ideas about how to create new technology or recombine old technologies.

Travel.

Americans often assume they can have the latest technology. But as the Serengeti experience indicates, the developing world sometimes provides a glimpse of the future by being unencumbered by and leapfrogging entire generations of technology.

Be artistic.

Harrison has taken CMU courses in sculptural welding and glass blowing, and regularly takes advantage of the welding shop in Doherty Hall when he needs a break from research.

"I love working with my hands, such as ceramics," he said.

Location, location, location.

Harrison finds inspiration in the HCII's DevLab, a workshop in Newell-Simon Hall where students assemble do-it-yourself gadgets alongside next-gen technologies.

"It's a great funky space, decorated with things students have hacked and personalized," he said. "My house in Friendship is the same way. It's a big, old Victorian that me and three other CMU Ph.D. students have fixed up."

For Harrison, whose career ambitions lean toward academic research, human-computer interaction has proven to be an apt field for someone who's been tinkering from an early age.

"It's neat because it's not only computer science," he explained, "but also lets you dig in with your hands."

CMU Scientists Develop Method To Match Images

Approach Mimics Human Ability

■ Byron Spice

Computers can mimic the human ability to find visually similar images, such as photographs of a fountain in summer and in winter, or a photograph and a painting of the same cathedral, by using a technique that analyzes the uniqueness of images, say researchers at the School of Computer Science.

The research team, led by Alexei Efros, associate professor of computer science and robotics, and Abhinav Gupta, assistant research professor of robotics, found that their surprisingly simple technique performed well on a number of visual tasks that normally stump computers, including matching sketches of automobiles with photographs of cars.

Most computerized methods for matching images — in contrast to image searches based on keywords — focus on similarities in shapes, colors and composition. That approach has proven effective for finding exact or very close image matches and enabled successful applications such as Google Goggles.

But those methods can fail miserably when applied across photographs taken in different seasons, under different lighting conditions or in different media.

The collaborators hypothesized that it is the unique aspects of an image, in relation to other images being analyzed, that sets it apart. It is those elements that should be used to match it with similar images.

On the pixel level, a photo of a garden statue in the summer or fall will look very different than the same statue photographed in winter, said Abhinav Shrivastava, a master's degree student in robotics. But the statue's unique aspects of the statue will carry over from a summer image to a winter image, or from a photo to a sketch.

In a photo of a person in front of the Arc de Triomphe in Paris, for instance, the person likely is similar to people in other photos and thus would be given little weight. The Arc itself, however, would be given greater weight because few photos include anything like it.

Future work includes using the technique to enhance object detection for computer vision and investigating ways to speed up the computationally intensive matching process.

Tomasz Malisiewicz, a former Ph.D. student who is now a post-doctoral fellow at MIT, also was a member of the research team. This work was supported by the Computer Science Department's Center for Computational Thinking, the Office of Naval Research and Google.

Students Enjoy Rare Opportunities With World Leaders

■ Shilo Rea

Have you ever wanted to ask a presidential candidate a question? Not just a typical campaign question on plans to create jobs or the economy, but a specific question on anything that you'd like?

Kiron Skinner's students — international relations and politics majors, innovation, entrepreneurship, and economic development minors, and the research associates of the Center for International Relations and Politics (CIRP) — had exactly that opportunity four times over, with special question and answer sessions with former Speaker of the House and current presidential candidate Newt Gingrich, former Secretary of Defense Donald Rumsfeld and two former congresswomen.

"It was a huge honor to have four world leaders, whose policy decisions have had an impact on our lives and the world, take time out of their extremely busy schedules to talk with our students," said Skinner, associate professor of social and decision sciences and director of CIRP.

The special events began with Gingrich Skyping into Skinner's Decision Processes in American Political Institutions class. Hot on the campaign trail, Gingrich talked to the students for 45 minutes about everything from Medicare fraud to his foreign policy plans for North Korea and South Korea and intellectual property issues.

Kavita Varadarajan (DC '14), an international relations major, asked Gingrich about how he plans to promote bipartisanship and cooperation if elected.

"He talked about what he would do and how important it is, but I'm not sure how feasible his plans are," Varadarajan said. "Overall, he seems very knowledgeable, and it was an amazing experience — given that it's such a competitive campaign and every minute of his time is so valuable."

Former congresswomen Beverly Byron (D-MD) and Sue Kelly (R-NY)



FORMER SECRETARY OF DEFENSE DONALD RUMSFELD ANSWERED STUDENTS' QUESTIONS OVER SKYPE IN THE POSNER CENTER.

also spent two and a half days visiting with Skinner's students as part of the Congress to Campus Program. They spoke about how they came to be members of the House of Representatives — Byron because her candidate husband unexpectedly died and Kelly because she was not satisfied with her district's candidate options — and running for and serving in office.

"There is so much adverse publicity out there on the government, so this is a way of trying to encourage young people to be interested in public office," said Byron, who's signature legislation involved health care for military families.

Kelly, who served on committees focusing on banking and medical laws, continued, "We're adding our perspective on what the job is really about — the challenges and the fun."

According to both women, the biggest challenge in politics today is getting qualified people to consider running for office. They blame the media.

"The way the press describes cer-

tain things — they are so vicious. It discourages people from even thinking about running for office," Kelly said.

The whirlwind events ended with Rumsfeld using Skype to answer questions from Skinner's students, graduate students in the master's in Information Technology Strategy Program, and Winchester Thurston high school students. The often controversial Rumsfeld, who served four different presidential administrations — Nixon, Ford, Reagan and G. W. Bush — candidly answered questions ranging from rating the Obama administration and defense budget issues to China and the current GOP presidential candidates.

Reflecting on his nearly five decades of public service, something he



FORMER CONGRESSWOMEN BEVERLY BYRON (D-MD) (RIGHT) AND SUE KELLY (R-NY) VISITED AS PART OF THE CONGRESS TO CAMPUS PROGRAM.

feels privileged to have done, Rumsfeld offered advice on how to be an effective senior government official.

"Lead by persuasion," he said. "Experience is an enormous advantage, and so is getting other people's perspectives, finding the very best people for each assignment and setting priorities."

SKINNER JOINS GINGRICH'S CAMPAIGN

Kiron Skinner, associate professor of social and decision sciences and director of CMU's Center for International Relations and Politics, has been tapped by Republican presidential candidate Newt Gingrich to advise him on matters of national security and foreign policy. Skinner attended the GOP presidential debate on Nov. 22 in Washington, D.C., as part of Gingrich's campaign team.

Skinner, a renowned expert in international relations, U.S. foreign policy and political strategy, feels that every American voter needs to know what the presidential hopefuls will do on major national security issues, but notes that they have not detailed their plans to this point.

"Since the U.S. is currently in war

time, presidential candidates need to tell voters how they will manage the continuing conflicts, insurgencies and terrorist activities and how they will ensure that the U.S. safely exits conflicts," she said.

Skinner serves on the Chief of Naval Operations (CNO) Executive Panel and is a member of the Council on Foreign Relations. From 2001-2007, she was a member of the U.S. Defense Department's Defense Policy Board as an adviser on the wars in Iraq and Afghanistan.

She is the co-author, along with political scientists Serhiy Kudelia, Bruce Bueno de Mesquita and Condoleezza Rice, of "The Strategy of Campaigning: Lessons from Ronald Reagan and Boris Yeltsin," which

is now used in political science courses at leading research universities.

In a recent profile by BlackAmericaWeb.com, Bueno de Mesquita, a professor of politics at New York University and a senior fellow at the Hoover Institution, praised Skinner.

"Whether working for a Democrat or a Republican, she's someone who ought to be in some president's senior advisory team, either as secretary of state, or as a national security adviser, or director of intelligence," he said. "I have no trouble seeing her in a second Obama administration or a Gingrich administration or a Mitt Romney administration. She would be good for the country."

Class Aids First Responders in Silicon Valley

■ Sylvia Leong

First responders have so much to do in so little time.

To gather information during an emergency, they often have to rely on pencil and paper and making phone calls to pass that information along. The system can be very slow and prone to errors.

"In an emergency situation, time is critical," said Patricia Collins, an assistant professor of the practice at CMU's Silicon Valley campus.

Collins wants to help with mobile software technology. Her class, Requirements Engineering, worked to understand emergency medical service needs.

"Each year we pick a topic and they investigate," Collins said. "I teamed with our Disaster Management Initiative (DMI) to create a project for our students that met the very real needs of first responders in disaster situations. The result was quite a success for the stakeholders, as well as for the students."

This year, Collins worked with Sean Lanthier, a 31-year veteran firefighter and paramedic, who is starting a company to create technologies tailored for first responders. He presented his idea to Martin Griss, director of CMU Silicon Valley and associate dean of the College of Engineering, and other attendants at the weekly DMI meeting. Each Monday experts meet to bounce ideas back and forth for about two hours.

"I think Martin Griss really has something going on here," Lanthier said. "It's a big issue for how to combine the worlds of technology, communication, education, firefighters and first responders."

Lanthier said firefighters often still rely on push-to-talk radios during emergencies, which have limited capabilities. He is working to create a coat for firefighters with a smartphone adapted for rugged conditions attached to the wrist.

"Lanthier happens to have a lot of ideas in this area. He was particularly eager to have a venue to talk about these

ideas and encourage the students," Collins said.

Students visited fire stations in California and other states. They went on numerous emergency responder calls, ate dinner at firehouses and asked questions.

"They got out of their normal classroom experience in conducting the interviews," she said. "We used a highly interdisciplinary approach to gather and validate the requirements."

"I think they liked the idea that there was a potential for real life-saving. I kept saying to them this could actually save lives," Lanthier said. "They took that to heart and it was a good motivator."

"Patricia has been incredible in how involved she is with her students, and she filled the gap for me in a lot of the problems I was addressing" Lanthier said. "Her solid input, honesty and integrity have been incredible."

The data that was collected is now being used by the DMI to inform decisions about technologies that the DMI

is creating. Collins said DMI affiliates also can use the information to create open source solutions to other emergency medical service problems.

Some of the applied research was displayed and discussed at Pacific Endeavor 2011 in Singapore, where emergency responders and international humanitarian groups from more than 20 Asia-Pacific countries met. CMU Silicon Valley is the only non-military academic institution involved in Pacific Endeavor and was represented by Griss and DMI member Patrick Lanthier, Sean's brother.

The course is offered in the spring, and Collins said the upcoming version will work on a similar focus.

"The students just got so excited," Collins said.

Collins recently delivered a paper on the way the class approached the problem at the second annual ICST Conference on Wireless Mobile Communication and Health Care in Kos, Greece, where she also co-chaired a session.

Education City Hosts Inaugural Campus Conversation

■ Qatar and Pittsburgh Piper Staff

Professor Robert Cavalier has a simple idea when it comes to learning: "We think better when we think together."

Cavalier, co-director of CMU's Program for Deliberative Democracy, recently helped organize Education City's first Campus Conversation in Qatar. The event focused on how global climate change might affect future generations and Qatar's food security.

Students explored the link between climate change and food sustainability, asking how issues like loss of agricultural lands and depletion of fish might be addressed.

According to Cavalier, Campus Conversations builds upon a deliberative practice that is already part of Qatar's culture: the "majlis." Traditionally a

gathering of elders for the purpose of discussing issues of importance to the local community, these "deliberative forums" could also serve as a form of political consultation.

"Our model of a campus conversation adds other features like expert panels and pre- and post-surveys," Cavalier said. "But what most excited me was the fact that we did not have to come from the outside to 'teach' any of this. The students immediately took to the task, and the results of their discussions will also have a degree of consulting power."

Cavalier teamed up with the university's Division of Student Affairs and other professors to offer the program, which attracted more than 100 students from five of the six Education City universities in Doha, said Jill Duffy, student development coordinator at Carnegie

Mellon Qatar. Qatar Foundation Sustainability Education was a co-sponsor of the event, and David Gray, postdoctoral teaching fellow of philosophy, and April Conkley, adjunct assistant teaching professor of biology, co-organized the event.

"One of the most meaningful aspects of the Campus Conversation program is how it promotes engagement within one's own community," Duffy said. "Ultimately we want to foster a sense of agency in our students, so that they can go out into their respective communities and make a positive difference."

Following a discussion period, students split into groups of 10, and each posed questions and ideas to an expert panel.

The panel, moderated by Steff Gaultier, senior meteorologist at Al Jazeera English, included Fedaa Ali, chief researcher at the Qatar Environment and Energy Research Institute; Patrick Linke, professor of chemical engineering at Texas A&M University at Qatar; Mari Luomi, a postdoctoral fellow at Georgetown University's Center for International and Regional Studies; Marouf Tirad Mahmoud of Vodafone Qatar; and Robert Wirsing, a visiting professor at Georgetown University's School of Foreign Service in Qatar.

Making sustainability trendy, buying up foreign land and conserving water — especially in a country that subsidizes utility bills — were among the issues raised by students.

"We thought about establishing an Education City farm to grow produce

that we could give to the community," said Loyal Al-Alami, a CMU student majoring in business administration.

Conkley, added, "My conservation biology students liked the fact that they were interacting with students from other Education City universities and discussing elements of change that could be implemented on our campus. It was not just role play but they were actually acting as stakeholders to help make decisions."

The Division of Student Affairs hopes to utilize the Campus Conversations model in the future to address questions and issues that are important to students, both within Carnegie Mellon Qatar and the broader Education City community.

"We are really interested to see how students want to make an impact, as this can guide future programs," said Christopher Silva, sustainability education coordinator for Qatar Foundation.

Pittsburgh Campus Coordinator of Student Affairs Joanna Dickert, who worked to pilot another Campus Conversation in Doha for CMU students in spring 2009, was impressed.

"I was struck by the degree the students seemed to be engaged in the format," she said. "The quality of the discussions and questions that came out of the small groups reflected an intellectual curiosity and desire to come to a deeper understanding of issues related to food security in Qatar."

"The students were excited about the program and have suggestions for future conversations, so I think we'll be seeing more Campus Conversations in the future," Duffy said.



EDUCATION CITY STUDENTS PARTICIPATE IN A DISCUSSION FOCUSED ON HOW GLOBAL CLIMATE CHANGE MIGHT AFFECT FUTURE GENERATIONS AND QATAR'S FOOD SECURITY.

LECTURE SPOTLIGHT: MARTIN LUTHER KING JR. DAY KEYNOTE CHALLENGES AUDIENCES TO FIND “THE COURAGE TO LEAD”

■ Abby Simmons

Bernard Franklin, a friend of Martin Luther King Jr.’s family, will reflect on the qualities that set the civil rights leader apart in his keynote address, titled “The Courage To Lead,” during CMU’s 2012 MLK Day celebration.

Franklin’s address, accompanied by CMU student speakers, concludes an afternoon of programs honoring King’s legacy. The event will begin at 5 p.m., Monday, Jan. 16 — the first day of the spring semester — in Rangos Hall, University Center.

As president of Delta Upsilon International Fraternity, Franklin has a connection to the 21 members of CMU’s Delta Upsilon colony and more than 800 living alumni of the fraternity’s Carnegie Chapter, founded in 1917.

“Some of the women of the Panhellenic Council and men of the Interfraternity Council (IFC) saw Dr. Franklin speak at the Association of Fraternal Leadership and Values Conference,” said Monica McGee, coordinator for fraternity and sorority life. “When we got back to campus, the IFC decided to approach the organizers of MLK Day to see if they could sponsor Dr. Franklin’s address.”

Jonathan Chen, president of CMU’s Delta Upsilon colony, is excited to meet his fraternity’s leader, who is also a con-



BERNARD FRANKLIN WAS A FRIEND OF MARTIN LUTHER KING JR.’S FAMILY.

sultant, educator and community leader.

“We’re looking to host a private reception with Dr. Franklin after his talk, which will be open to the men of DU as well as those interested in joining the colony in the spring,” Chen said.

Franklin plans to share stories about King’s life he gathered from his personal relationship with the civil rights leader’s family. This friendship began when Franklin’s brother was Martin Luther King III’s roommate at Moorehouse College in Atlanta.

In addition, he will reflect on his personal commitment to being a role model.

WHAT: MARTIN LUTHER KING JR. DAY KEYNOTE ADDRESS

WHO: BERNARD FRANKLIN

WHEN: 5 P.M., MONDAY, JAN. 16

WHERE: RANGOS HALL, UNIVERSITY CENTER

As an undergraduate, Franklin became the first black student ever elected president of Kansas State University’s Student Government Association. He made history by becoming the youngest person ever appointed to the Kansas State Board of Regents at age 24 and the youngest chair of the board at age 28.

In the years that followed, Franklin has held senior positions in higher education, nonprofit organizations and the telecommunications and banking industries.

Franklin served in a variety of student affairs positions at the University of South Alabama; Rollins College in Winter Park, Fla.; and his alma mater. He also was president of Metropolitan Community College-Penn Valley in Kansas City, Mo.

Franklin was vice president and urban director of the National Center for Fathering, as well as executive director of the Kauffman Scholars, a \$70 million,

20-year initiative funded by the Ewing Marion Kauffman Foundation to guide and support urban Kansas City seventh graders through high school and college.

Franklin was a fellow for the Study of the United States Presidency and served on an advisory commission to President Jimmy Carter’s administration with Martin Luther King III and other prominent African-Americans.

He also served as a chaplain and professional counseling team member for the National Football League’s Kansas City Chiefs.

In addition to his speaking engagements and fraternity leadership, Franklin is a consultant to his church, Redeemer Fellowship; assistant to the vice president at Kansas State University; chairman of the board for the Satchel Paige Foundation; and a member of Kansas City’s Google Fiber Innovation Team.

Extra, Extra! Read All About Him

SEI Staffer and ETC Graduate Goes Hollywood in Pittsburgh

■ Bruce Gerson

Jeff Balmert is taking an unusual approach to break into the film industry.

The document production specialist at the Software Engineering Institute is working in front of the camera to get behind the scenes.

A client of the Nancy Mosser Casting agency, Balmert has been a paid extra in seven major motion pictures since 2008. His most recent roles were as a fan of the Gotham Rogues in “The Dark Knight Rises” and as a witness to

master’s degree from the Entertainment Technology Center (ETC) in May 2011. “I thought if I can at least get on the set of movies it might be a good way to meet people behind the scenes.”

And he has.

Playing a police officer — one of only six extras — in “The Next Three Days” starring Russell Crowe, he had the opportunity to work with director Paul Haggis, who won Academy Awards for his screenwriting of “Million Dollar



BALMERT (FOURTH FROM LEFT) WAS ONE OF A HANDFUL OF EXTRAS IN “THE NEXT THREE DAYS,” WHICH STARRED RUSSELL CROWE (CENTER).

couldn’t have been a nicer guy. He was very nice to all of us,” Balmert added.

In “The Dark Knight Rises” he worked with Director Christopher Nolan and Cinematographer Wally Pfister.

“It was awesome sitting in the front row at Heinz Field, interacting with

them and seeming them operate the IMAX camera to catch fan reaction,” he said.

In addition to “The Next Three Days,” “The Dark Knight Rises” and

VIEW SOME OF BALMERT’S MULTIMEDIA WORK ONLINE AT WWW.BALMERTMEDIA.COM/.

a crime scene near PNC Park in “One Shot” starring Tom Cruise.

While he sees acting as a “really fun thing to do,” the talented multimedia producer’s goal is to help make the movie magic happen.

“My dream is to work on the production side of feature films — in production or post-production, editing, directing, producing, something in that realm,” said Balmert, who earned a

Baby” and “Crash.” Balmert worked with Haggis during a scene in which he rushes into Crowe’s home to make an arrest.

“He actually took me aside and showed me on the monitor what looks good and what doesn’t. I was just an extra, but to have an Oscar-winning director actually direct you in a scene was really neat.

“Russell Crowe was great. He

CONTINUED ON PAGE ELEVEN

ETC Donates Kiosk to Madeira Hospital

The need to help kids on the road to a quick recovery translates in every language.

The Entertainment Technology Center (ETC) recently donated two K.I.C.K.'s — Kids Interactive Creation Kiosks — to the Madeira Interactive Technologies Institute of the Universidade da Madeira. One is installed at the Hospital Dr. Nélio Mendonça in Funchal, and the other is at the Universidade da Madeira for the Master in Entertainment Technology (MET) Program.

The K.I.C.K. was developed by a team of ETC students working with the Children's Hospital of Pittsburgh in 2006. The project created an experience to engage children and parents in an

innovative way while waiting to be seen by a doctor. The goal was to alleviate the stress and anxiety produced when visiting an emergency room.

The team designed an original touchscreen and software suite, and the outcome proved so successful that upon graduation, the team created Electric Owl Studios, a start-up company in Pittsburgh and an ETC spin-off. Similar kiosks can now be found in hospitals across three continents and 27 states.

During a ceremony at the hospital in Funchal, Michelle Macau, a visiting faculty member for the ETC, gave a demonstration of the various content on the K.I.C.K.



The K.I.C.K. at the university will be used as a development platform to create unique animation, games, puzzles and other interactive content.

Text contributed by Michelle Macau

“Post: A Fable” Wins Best Book Award

■ Shilo Rea

English Professor Hilary Masters' latest novel, “Post: A Fable,” has won a USABookNews.com Best Books 2011 Award.

USABookNews.com, the premier online magazine and review website for mainstream and independent publishing houses, announced winners in more than 140 categories covering print, e-books and audio books. Masters' “Post: A Fable” won the literary fiction category.

In his 10th novel and 17th book, Masters used the passenger pigeon plight as the central metaphor. Before their extinction in 1914, when the passenger pigeons migrated, the sky would darken for an entire day. Even as late as 1866, an estimated 3.5 billion birds flocked south, only to be hunted and trapped out of existence a few decades later. It is part-mystery, part-environmental elegy and futuristic tale about ruining things that we love.

In a starred-review for “Booklist,” associate editor Donna Seaman wrote, “In a whirl of historic fact, erotic mayhem, and comic suspense, Masters ingeniously connects the bloodlust that drove the once sky-filling passenger pigeon into extinction with endangered forms of culture and love in an uproarious and wise inquiry into why we destroy what awes and sustains us.”

Masters also writes essays and works of fiction, including a story in the recently published crime book “Pittsburgh Noir” and the memoir “Last Stands: Notes from Memory.” His work has received the Balch Prize for Fiction and the Monroe Spears Prize for the Essay, and has been published in Best American Essays, Best American Short Stories and the Pushcart Prize Anthologies. In 2003, the American Academy of Arts and Sciences presented Masters with its Award for Literature.



NEWS BRIEFS

Resources Available To Help Shed Winter Weight

Thinking of losing some pounds or making a lifestyle change as a New Year's resolution? Check out the Healthy Campus website, www.cmu.edu/healthy-campus/, for resources.

The Healthy Campus website includes information about free exercise classes for faculty and staff from 5:15 – 6 p.m. Monday through Thursdays, and yoga classes at noon on Mondays, all at Whitfield Hall, 143 N. Craig St.

Additional resources include information about Weight Watchers, quitting smoking, preventative health programs and safety and security.

Open Field Entrepreneurs Fund Open for Business

The Open Field Entrepreneurs Fund (OFEF), which provides early-stage business financing to Carnegie Mellon alumni who have graduated in the last five years, is now accepting applications.

Flip video camera creator and CMU alumnus Jonathan Kaplan, his wife Marci Glazer, and classmate and bitly CEO Peter Stern provided the generous gift to start the fund, with the goal of making Carnegie Mellon a destination of choice for young entrepreneurs.

Applications will be accepted until Jan. 31. To learn more and apply online, visit www.cmu.edu/open-field.

Swim Challenge Date Set for Feb. 26

Carnegie Mellon's swimming teams are hosting the 16th annual 1,650-yard swim challenge fundraiser on Sunday, Feb. 26. The entry fee is \$25 and all proceeds benefit CMU's men's and women's swimming and diving teams. Entries are due Feb. 10. For an entry form, contact Jimmy Goldman at 412-683-0856 or jggsports@aol.com.

Mentor Program Applications Due Dec. 22

Since 1994, CMU's Women Supporting Women mentor program has matched more than 300 women mentors with those who wish to be mentored. Mentor relationships center on professional interests and aspirations, including but not limited to, career advancement, educational opportunities and job-related issues.

To apply for this volunteer program either as a mentor or a mentee, fill out the information sheet at www.cmu.edu/hr/learning/forms/restrict/wswmentor.pdf and send it to Patsy Stragar at pls@andrew.cmu.edu or UC 146A by Dec. 22.

For more information on the program, visit www.cmu.edu/hr/learning/ProgramsEvents/wmp.html.

Industrial Design and Architecture Programs Rated Among Best

Carnegie Mellon's undergraduate industrial design program is ranked third in the nation — tied with Rochester Institute of Technology and Syracuse University — and its industrial design graduate program ranks ninth in Design Intelligence's 2012 ratings of America's Best Architecture and Design Schools. In specialty categories the programs ranked first in research and theory — tied with Arizona State University (ASU) and Illinois Institute of Design — third in cross-disciplinary teamwork and fifth in communication — tied with Auburn University, College for Creative Studies and Pratt Institute.

In a dean's survey, the undergraduate program ranked fourth — tied with ASU, Savannah College of Art and Design, and University of Louisiana at Lafayette. Deans said they admired the program for its focus on interdisciplinary design, industry partnerships and integration of design and thinking.

Design Intelligence ranked the undergraduate architecture program 11th, tied with USC.

Tepper School Part-Time MBA Program Ranked No. 3

The Tepper School of Business' part-time MBA program was ranked No. 3 nationally and No. 1 in the Mid-Atlantic region by Bloomberg BusinessWeek.

The Tepper School's national ranking is up four spots from the previous ranking in 2009, and up 21 spots from its No. 24 ranking in 2007.

In individual component scores, the school ranked No. 2 in student satisfaction — up one spot from 2009 — and No. 12 in academic quality — up from No. 42 previously. For the second time in a row, the Tepper School also earned straight “As” for teaching quality (A), caliber of classmates (A+) and curriculum (A+).

Heinz Dean Earns INFORMS Fellow Award

Heinz College Dean Ramayya Krishnan, the William W. and Ruth F. Cooper Professor of Management Science and Information Systems, has received the Institute for Operations Research and the Management Sciences (INFORMS) Information Systems Society Distinguished Fellow Award in recognition of his intellectual contributions to the information systems discipline.

His current research projects investigate risk management in business process design and in information security, social network analysis in settings ranging from call data records to knowledge sharing communities, consumer behavior in e-business settings, and the design of policies that take into account the competing needs of promoting data access and protecting privacy.

Fonseca Elected President of Mathematics Society

■ Jocelyn Duffy

Irene Fonseca, the Mellon College of Science Professor, has been elected president of the Society for Industrial and Applied Mathematics (SIAM), an international professional society for applied mathematicians with more than 13,000 individual members and almost 500 institutional members.

SIAM advances the application of mathematics and computational science to engineering, industry, science and society. Of SIAM's 35 presidents, Fonseca is only the second woman to hold this leadership role.

"Mathematics is the common denominator behind everything we experience in our daily lives," Fonseca said. "As president of SIAM I hope that I can lead the society as we address and respond to the issues and current events that impact the world."

She will serve a one-year term as president-elect in 2012, followed by a two-year term as president.

"Irene's election as the president of SIAM reaffirms what we have long known — that she is a leader in her field, whose abilities, vision and judgment will lead to continued success," said William J. Hrusa, acting department head and professor of mathematical sciences.

"Irene has a superb combination of organizational and scientific abilities," added David Kinderlehrer, the Alumni Professor of Mathematical Sciences and professor of materials science and engineering. "This election raises her visibility in the field of applied mathematics, in which she is already very prominent."

Fonseca came to CMU in 1987 as a visiting assistant professor and became professor in 1989.

Fonseca is an internationally respected educator and researcher in applied mathematics. Her research involves the mathematical study of a variety of novel man-made materials, including ferroelectric, magnetic and magnetostrictive materials, shape memory alloys, composites and liquid crystals.



IRENE FONSECA

Her ability to introduce and apply new mathematical techniques to the materials sciences complements her work as director of the Center for Nonlinear Analysis (CNA) at CMU. The CNA focuses on research and training in applied mathematics at the interface between mathematics, the physical sciences and engineering; it is one of the few centers in the United States that receives significant federal funding for research in applied mathematics.

Fonseca also directs the Partnerships for International Research and Education (PIRE) project, a five-year National Science Foundation-funded multi-institution grant addressing issues in applied mathematics and mechanics that arise from the materials sciences.

Fonseca has a strong international presence in the mathematics community. She sits on committees and the boards of several major international universities and research centers. In 1997, she was bestowed knighthood in the Military Order of St. James (Grande Oficial da Ordem Militar de Sant'Iago da Espada) by the president of Portugal. This order is generally reserved for accomplishments in cultural fields, but in Fonseca's case the award also recognized her contributions to scientific progress in the European Union.

In 2004, she received a Women of Distinction Award in Math and Technology from the Western Pennsylvania Girl Scouts Trillium Council, and she was chosen to deliver the prestigious Sonia Kovalevsky Lecture at SIAM's Annual Meeting in 2006.

SEI Staffer Goes Hollywood in Pittsburgh CONTINUED FROM PAGE NINE

"One Shot," Balmert has played a state trooper and bartender in "She's Out of My League," a coal miner in "My Bloody Valentine," and a hospital security guard in "Abduction." Yet to be released is "The Perks of Being a Wallflower," in which he plays two roles, a hospital administrator and hospital visitor.

Balmert honed his multimedia skills at Duquesne University, where he earned

his undergraduate degree, and at the ETC. He has experience in video, sound design, graphic design, Web design, photography, animation, and he's even created his own short films.

At the ETC, he was part of project teams that produced videos for several clients, including Cosmic Contact and Lockheed Martin. For his final project, he produced an interactive marketing video for the ETC (<http://etc.cmu.edu/>

site/program/) under the guidance of adviser Ralph Vituccio, who he credits for teaching him about camera angles, how to frame a scene and how to tell a story.

"Jeff is very talented in a number of ways," said Vituccio, a faculty member and director of special projects at the ETC. "His organization and sense of directing and producing is very good."

Balmert, a member of the Pennsylvania Film Industry Association,

said he's heard that Jack Black, Steve Carell, Nicolas Cage and Kevin Kline are interested in making a movie in Pittsburgh early next year. He's also heard that facilities for feature film post-production work may soon be built in the city.

"They're just rumors, but a lot of these rumors have proven to be true," he said. "It's really an exciting time in Pittsburgh for someone who wants to get into the movies. You may not have to go to Hollywood anymore."

Suparak To Participate In Philadelphia Exhibit

Miller Gallery Director Astria Suparak was selected to participate in the Philadelphia Exhibitions Initiative at The Pew Center for Arts & Heritage. The interview series, titled "Pigeons on the Grass, Alas: Contemporary Curators Talk About the Field," focuses on curators and their individual practices. The Pew Center selected Suparak because her work "reflects the values" that guide the Pew Center, "excellence, imagination and courage."

Slavick Curates War Exhibit

"OUT OF RUBBLE," curated by the Andrew W. Mellon Professor of Art Susanne Slavick, is on display at the SPACE Gallery, 812 Liberty Ave., in Pittsburgh.

The exhibit presents the work of international artists who consider the consequences of war, from decimation and disintegration to the possibilities of regeneration and recovery. The exhibit runs through Jan. 29.

For more information go to www.space-pittsburgh.org/flash.html.

Lunar Robot Named to "Best of What's New" List

Popular Science has named the Astrobot Technology lunar robot to its Best of What's New list, noting the team headed by the Robotics Institute's Red Whittaker "took the lead this year over 26 competitors" in the race to win the \$20 million Google Lunar X Prize.

PSC Wins High-Performance Computing Award

HPCwire, a leading electronic-news outlet for high-performance computing and communication (HPC), has awarded a 2011 Reader's Choice Award to the Pittsburgh Supercomputing Center (PSC) for Best Use of HPC in an Edge HPC application.

The award recognizes PSC for its work with Blacklight, PSC's SGI® Altix® UV1000 system, the world's largest shared-memory system, a resource of XSEDE, the National Science Foundation cyberinfrastructure program.

Because of Blacklight's large amount of shared memory, scientists have been able to access up to 16 terabytes at a time, a feature that has enabled ground-breaking work in several fields, including fields of computer science — natural language processing and machine learning — that haven't traditionally made substantial use of HPC.

Purchase Discounted Tickets to Cultural Events

The Pittsburgh Cultural Trust is offering students, faculty and staff discounted tickets to several performances in January and February. They include Memphis (Dec. 27-Jan. 1 at Heinz Hall); The Agony and the Ecstasy of Steve Jobs (Jan. 21 at the Byham Theater); Suite Bill (Jan. 21 at the August Wilson Center); Sean Jones Duets Generations (Jan. 26 at the August Wilson Center); PMT's Spring Awakening (Jan. 26 – Feb. 6 at the Byham); and Billy Elliot

(Jan. 31-Feb. 12 at the Benedum Center). To order tickets, go to www.culturaldistrict.org and login using the promo code CMU1112 to receive the discount.

Bookstore Streamlines Textbook Adoption Process

The Carnegie Mellon Bookstore has a new streamlined textbook adoption process for this year at <http://cmu.verbacollect.com/session/selfassign>. For a brief tutorial visit vimeo.com/verba/review/29697633/09a101d693. For assistance, contact Matt Senvisky at 412-268-2967 or msenvisk@andrew.cmu.edu or Chris Coleman at 412-268-1033 or ccoleman@andrew.cmu.edu.

Review Online Directory

Human Resources reminds faculty and staff to review their department and individual information in the Faculty/Staff online directory (www.cmu.edu/hr/directory/index.html). Changes/edits can be made throughout the year. Quick search tip: When searching individuals (<https://directory.andrew.cmu.edu/services/people/search>) you may use an * as a wild card to search for a partial name. Contact Darlene Scalese with directory questions at dscalese@andrew.cmu.edu.

Are You a Notary Public?

Human Resources is updating notary public information listed in the online Faculty/Staff Directory. If you are a notary public and willing to provide notary public services free of charge to employees and students for official university business, and would like to be included in the directory, please send email to Darlene Scalese at dscalese@andrew.cmu.edu and include your name, department, location and phone number.

Students Recognized at Qatar Research Forum

Two computer science students at Carnegie Mellon in Qatar were recognized for their excellence in pioneering innovative scientific research in computing at the 2011 Qatar Foundation Annual Research Forum.

Amna Al Zeyara and Nawal Behih, both sophomores, received the Best Student Research Award in Computing and a 20,000 Qatari Riyal grant for their work on enhancing facial expressions in bilingual humanoid robots.

The test bed for the research project was Hala, a 3-D animated female robot that interacts with visitors, switching between English and Arabic languages and crafting responses that are culturally sensitive to the user. To do this, Hala takes linguistic cues from the user to determine the cultural background — ensuring effective communication and minimizing misunderstandings.

Event Seeks Citizen Scientists To Capture Images of Nature

■ Byron Spice

From a bike path in Montana to a back-water underneath a highway overpass in Austria, citizen scientists fanned out last June to capture high-resolution images for the first Nearby Nature GigaBlitz. Organizers are hoping for even broader participation in the second GigaBlitz, scheduled for the solstice week of Dec. 19-26.

The GigaBlitz is organized by a trio of biologists and their partners at Carnegie Mellon's CREATE Lab. It is similar in concept to a BioBlitz, an intensive survey that attempts to identify all living species within an area at a given time. But instead of sending volunteers into a park or nature preserve to do a count, GigaBlitz asks people to create high-resolution panoramic images of their backyards, nearby woodlots or adjacent vacant lots. Participants around the world can then access these images, crowdsourcing the process of species identification.

"The idea is that biodiversity isn't something you find just in a distant national park or some far-flung field site, but it's around all of us, all of the time," said Ken Tamminga, professor of landscape architecture at Penn State University and one of the event organizers. "Gigapixel imagery is a means for us to record and share data for sites that may be widely separated, but nevertheless are part of our everyday lives."

Magazine Features Images From First GigaBlitz

About 80 people participated in the inaugural GigaBlitz during the June solstice and uploaded images from 15 countries to the GigaPan website, said Mary Jo Daines, who coordinates the GigaBlitz for the CREATE Lab in the Robotics Institute. The best of these images will be featured in an upcoming issue of GigaPan Magazine, the lab's online publication.

Among them is an image of a residual part of the Danube River beneath a highway overpass in Vienna, Austria;



A FROG WAS INCLUDED IN A GIGAPAN IMAGE OF A FOREST POND NEAR HAUSEN AM ALBIS, SWITZERLAND. THE IMAGE WAS TAKEN DURING THE FIRST GIGABLITZ LAST JUNE.

croplands in Brazil; and a vegetable garden in Spain. Others are a bike path near West Glacier, Mont.; a forest pond near Hausen am Albis, Switzerland; a botanical garden in Mexico City; and seashell and coral debris on a Singapore beach.

Tamminga and his fellow organizers, Dennis vanEngelsdorp, senior extension scientist in Penn State's Department of Entomology, and M. Alex Smith, assistant professor of integrative biology at the University of Guelph, Ontario, are co-editing the issue.

"Coordinating the first Nearby Nature GigaBlitz was very rewarding and we all learned from each stage of the process," they write in the introduction to the magazine. "In the end, we were delighted in the geographic breadth represented in the submitters."

Second GigaBlitz Seeks More Sites

Now, the organizers are hoping to expand the number of participants and the number of sites, while also encouraging previous participants to revisit their sites so that changes in the habitats can be tracked over time. Tamminga said rigorous study of the images ultimately will depend on development of content analysis software for gigapixel images.

For the upcoming Nearby Nature GigaBlitz, participants again are asked to create gigapixel panoramas, or GigaPans, of nearby habitat during the solstice week. Each will then upload their GigaPans of nature in their neighborhoods to the GigaPan website, where they and other participants can share in the process of identifying the visible plant and animal species.

In January and February, secondary school teachers in South Africa, Brazil

and Huntington, W.Va., will explore the GigaBlitz images with their students as part of a biodiversity project. The schools participate in GigaPan School Dialogues, an international program that enables students to use GigaPan technology to exchange information with each other. It works in conjunction with the United Nations Education, Scientific and Cultural Organization.

GigaPan technology, developed by Carnegie Mellon and NASA, can combine hundreds of digital photos into a large panorama that can be interactively explored via computer. More than 5,000 GigaPan camera systems, which can be used with virtually any digital camera, are in use worldwide and available commercially through GigaPan Systems Inc.

Smith, Tamminga and vanEngelsdorp are fellows of the Fine Outreach for Science, a project funded by the Fine Foundation of Pittsburgh to foster scientific use of gigapixel imagery.

President Cohon Attends White House Meeting CONTINUED FROM PAGE ONE

A statement released by the White House read:

"The president hosted White House senior officials, Secretary of Education Arne Duncan and a dozen college presidents and higher education thought leaders from across the country to discuss rising college costs and strategies to reduce these costs while improving quality.

"During the meeting, the president conveyed the urgent need to pursue bold and innovative solutions to help more Americans attain a higher education at an affordable price. In response,

attendees shared how they have worked to promote innovation, reduce costs and increase productivity during a time of reduced funding for higher education at the state level."

"The key message was a challenge to us to question all our strongly held assumptions, including getting our faculty to think differently about teaching," Cohon told *The New York Times*. "I personally get very uncomfortable when people start talking about replacing faculty with technology. But I do think technology can help us educate more students faster and better."

In addition to President Cohon and Duncan other attendees included:

- Nancy Zimpher, chancellor of the State University System of New York;
- Francisco Cigarroa, chancellor of the University of Texas System;
- William "Brit" Kirwan, chancellor of the University System of Maryland;
- Holden Thorp, chancellor of the University of North Carolina at Chapel Hill;
- Freeman Hrabowski, president of the University of Maryland at Baltimore County;

- King Alexander, president of California State University at Long Beach;
- Thomas Snyder, president of Ivy Tech Community College in Indiana;
- Larry Shinn, president of Berea College in Kentucky;
- Robert Mendenhall, president of Western Governors University in Utah;
- Jane Wellman, executive director of the Delta Project on Postsecondary Education Costs, Productivity and Accountability; and
- Jamie Merisotis, president and CEO of the Lumina Foundation for Education.