



Carnegie Mellon

- 3 LEGEND IN THE MAKING
- 4 PARALYMPIC HOCKEY GOALIE SHUTS OUT COMPETITION
- 6 SINGER EARNS UNIVERSITY'S FIRST MARSHALL SCHOLARSHIP
- 8 APPLES AND ORANGES
- 11 CHALLENGE CREATES A CYCLE OF PHILANTHROPY

Delving Into Details

Strategic Plan Is Approved

■ Catherine Davidson

University trustees approved the 2008 revision of Carnegie Mellon's strategic plan at their October meeting.

"The 2008 strategic plan represents an important update and improvement of the plan set down in 1998," said President Jared L. Cohon. "It both reaffirms the wisdom of our choices a decade ago and positions the university for future progress.

"Provost Mark Kamlet and all those who worked on this plan are to be congratulated for creating a document that is simple in outline while being fully responsive to the immense changes in the last decade — changes in the university itself, advances in science and scholarship, as well as the urgent social, economic and environmental challenges we face in the world.

"We believe this plan sets the university's course in the right directions for today and tomorrow," Cohon said.

CONTINUED ON PAGE FIVE



PHOTO BY RENEE ROSENSTEEL

MARIAN VOLLMER, PRIMARY SCHOOL TEACHER AND ASSISTANT PRINCIPAL AT THE UNIVERSITY OF PITTSBURGH FALK LABORATORY SCHOOL, LOOKS AT DETAILS IN ONE OF THE GIGAPAN PANORAMAS AT THE ARTISTS IMAGE RESOURCE STUDIO DURING A RECENT EXHIBIT. READ MORE ABOUT THE PROJECT ON PAGE 3.

President Cohon Announces Efforts To Help Contain Costs

In an email to the university community on Monday, Dec. 8, President Jared Cohon announced three measures to help contain costs in light of the current economic situation.

First, all capital projects, those in development and those already under

through June 30, 2010), however, special considerations will be made for promotions. The freeze will include the president and senior management of the university. The salary freeze will be reviewed during the next fiscal year, and President Cohon said pay raises will

department head, the vice president of that specific area and the president must approve all new hires.

"I know this is a difficult time for everyone, here and at home, but with

these plans in place I am confident we will continue the exceptional and groundbreaking work for which this university has become known," President Cohon wrote in his email.

TO HEAR PRESIDENT COHON'S ADDRESS TO STAFF ON NOV. 24, VISIT WWW.CMU.EDU/NEWS/PIPER.SHTML.

way, will be reviewed. The president said no decision to delay any specific project has been made as yet. Second, a salary freeze will be in effect for the next fiscal year (July 1, 2009,

resume as soon as prudently possible. Third, a process is being implemented to review all new hires. In academic units, the dean and provost must approve all new hires. In administrative areas, the

Q&A: Deb Moon on the Challenges of Managing University Finances

■ Heidi Opdyke

Deb Moon, chief financial officer at Carnegie Mellon, recently won the CFO of the Year Award by the Pittsburgh Business Times. Moon joined Carnegie Mellon in 2001 and was appointed CFO in 2005. A senior member of the university's management team, Moon oversees financial systems, university budgets, treasury, investments, financial operations, financial reporting, internal audit, sponsored projects accounting and cost analysis, and international finance for the school.

As CFO, how do you measure success?

I measure success by how effective I am in providing business intelligence and financial advice to the university's leadership to enable informed decision making.

I also want there to be evidence of adequate internal controls to demonstrate fiduciary and ethical responsibilities and to do so to the extent possible without negatively impacting our ability to conduct our core business of teaching and research. Also, I look for continued growth and evolution of the university's financial management team, both within central finance and in the academic units. This requires us to work together to find and implement effective solutions.

How does the role of CFO at an academic institution differ from a similar role in the private sector?

Our primary lines of business, research and education, are not structured to be self-sustaining. We are dependent upon fundraising and investment results to make up the gap. We cannot price our product to cover the costs and regulations keep us from recovering the full costs of doing business, specifically for research.

What are some of the biggest challenges you face as CFO?

Recently, it's managing and assessing the challenges created by the current market and economy. We've had to really read the fine print in our various debt contracts, reassess counterparty risk, analyze and manage liquidity, as well as analyze and project the potential impacts we are likely to face as a result of negative investment performance and other financial impacts realized from the current economy.

Also, the audit and regulatory environment has changed over the last five years, and we've had to implement rather significant change in a short period of time. This has put tremendous pressure on our human resources and business practices. We are a very ambitious organization with unlimited potential and very limited resources.

When you have equally deserving but competing requests from academic and business units, how do you maintain a balance?

These financial decisions are ultimately made by the Provost and President, after wide discussion and consultation with academic and administrative leadership. It's my job to provide them with adequate information to make those decisions. To the extent possible, the first priority is always to the academic and research initiatives. However, we are finding it increasingly necessary to make investments in infrastructure where we have underinvested over the past decade, most notably in our administrative systems.

What are some other difficulties in balancing the university's budget?

Projecting our revenues can be challenging. As I mentioned, we are dependent upon gifts and investment returns, which in times like these are less certain. We are also dependent upon federal research funding and appropriation decisions. We are fortunate in that we are relatively diversified, which helps reduce our risk.

Two of our biggest challenges in putting together our budget are related to our decentralization and systems. I am dependent upon accurate and complete information from the academic and administrative units to put together our multi-year forecasts, which we've only been doing for the last four or five years. With the multiple, and often conflict-



DEB MOON, CHIEF FINANCIAL OFFICER AT CARNEGIE MELLON, RECENTLY WAS NAMED CFO OF THE YEAR BY THE PITTSBURGH BUSINESS TIMES.

PHOTO BY KEN ANDREYO

ing priorities, that the business managers have, they don't always have adequate time to invest in these activities and we don't have integrated budget systems for them to utilize.

Were you surprised by your nomination as CFO of the Year by the Pittsburgh Business Times?

Absolutely, surprised and honored.

What was your reaction when winning?

Shock – I hadn't prepared anything to say, as I truly didn't expect to win and apparently was too naïve to have identified the signs, such as the videotaped interview, which I thought they did with all the finalists.

How has your role changed over time in particular with the global expansion of the university?

My role has evolved with the university. My financial team and I have had to acquire knowledge on how to support our faculty as they expand internationally. This includes becoming functionally

to do anything other than to continue to monitor and analyze and come up with contingency plans.

What can faculty and staff do to help Carnegie Mellon during these tough economic times?

The good news is that the faculty and staff of Carnegie Mellon are accustomed to managing operations on meager resources. The culture already very much supports responsible spending and careful analysis of business needs. They should continue these behaviors and avoid non-essential spending.

In talking with peers at other universities, do you see a shift in attitudes toward future spending?

They're doing the same types of things we are doing. We've been fortunate in that we were not among the large number of schools, almost 1,000 universities, which were impacted by the Common Fund, who ran into immediate liquidity problems. We were not invested into

"WE ARE A VERY AMBITIOUS ORGANIZATION WITH UNLIMITED POTENTIAL AND VERY LIMITED RESOURCES."

literate in areas like international taxation, expatriate allowances and benefits, foreign payrolls and international accounting standards. We also had to "globalize" our administrative systems to, among other things, utilize foreign currencies.

How does the current economic climate change your approach?

It doesn't really change our approach to anything. It might delay our approach or our initiatives depending on what continues to happen in the market. There are liquidity considerations. It's too early yet to fully assess the impact it might have on Carnegie Mellon. We haven't been able to assess fundraising impact. We haven't been able to assess yet whether research funding will continue at the same level as well as whether some of the bailout considerations will impact research funding. So it is a little early

that fund and therefore we didn't have the challenges with access to our working capital or cash that some of those schools did. Consequently we weren't faced with the need to make immediate reductions to our operations. Looking forward, we're all looking at the same thing. There's nothing really unique about what we'll do compared to other schools.

Outside of work, how do you maintain balance?

It can be challenging depending on the business cycle and current priorities at work. I can be here a lot more than I am at home. I have two teenagers at home which creates its own unique challenges. We try to spend whatever time we all can together (and to the extent that it fits in their "teen" schedules). We work out together at the YMCA in Cranberry most nights. The great thing about a teenage daughter is I always have a shopping buddy!



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PUBLISHER
Teresa Thomas

EDITOR
Bruce Gerson

MANAGING EDITOR
Heidi Opdyke

WRITERS

Catherine Davidson	Eric Sloss
Jocelyn Duffy	Byron Spice
Abby Houck	Chriss Swaney
Amy Pavlak	Ken Walters
Jill Perkins	Anne Watzman
Abby Ross	Andrea L. Zrimsek

DESIGNER
Melissa Stoebe
Communications Design Group

PHOTOGRAPHY
Ken Andreyo
Communications Design Group

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

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Inquiries concerning application of these statements should be directed to the Provost, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-6684 or the Vice President for Student Affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2057.

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Obtain general information about Carnegie Mellon University by calling 412-268-2000.

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“GigaPan Conversations” Exhibit Is Worth Millions of Words

■ Byron Spice

By the time the “GigaPan Conversations” exhibit at the Artists Image Resource (AIR) studio came to an end last month, 15 giant panoramas created by students weren’t the only things that hung from the walls.

Alongside the 20-foot-wide prints were notes jotted down by exhibit attendees. “I don’t see a lot of cars in any of the photos,” one person wrote next to a panorama from Soweto, South Africa. “Do all families have a car? Do you walk a lot? Or ride bikes?”

The panorama “San Fernando Hill” from Trinidad brought this comment: “I wonder if you need a lot of money to live near the ocean, just like you do here.” And another huge image from Trinidad titled “Environment,” inspired this: “I wish our country’s people would make throwing their trash into a receptacle important, too.”

As suggested by the title of the exhibit, these scrawled comments are part of an extended conversation, one that began among the students from Pittsburgh, South Africa, and Trinidad and Tobago, who created these huge images using Carnegie Mellon’s GigaPan robotic camera technology.

Since last spring, the students have been part of a 21st Century “pen pal” program called the GigaPan School Exchange, in which they create explorable, digital images of their communities and

share them with their peers thousands of miles away.

“The technology is leading to some really interesting conversations and, we think, contributing to a deeper understanding of people who live an ocean away from each other,” said Illah Nourbakhsh, associate professor of robotics and co-principal investigator of the Global Connection Project.

The exchange program was established in partnership with the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) Associated Schools Project Network and initially included students at Falk Middle School and the Manchester Craftsmen’s Guild in Pittsburgh, and at Lavela High School in Soweto, Africa.

It later was expanded to Naparima Girl’s School on Trinidad and Bishop’s High School on Tobago.

The program generated an enormous amount of material, Nourbakhsh

**ONLINE: TO VIEW A GIGAPAN OF THE ART EXHIBITION, VISIT
[HTTP://GIGAPAN.ORG/VIEWGIGAPAN.PHP?ID=12532&WINDOW_
HEIGHT=608&WINDOW_WIDTH=1409](http://gigapan.org/viewgigapan.php?id=12532&window_height=608&window_width=1409)**

said, and some of the best were incorporated into the “Conversations” exhibit, which was displayed at MuseuMAfrica in Johannesburg, South Africa, in October, at AIR on the North Side last month and at the University of Trinidad and Tobago’s O’Meara campus atrium this month.

Some of the images also were featured at the International Conference on Education in Geneva, Switzerland, Nov. 25-28, where Nourbakhsh spoke about the program and where officials discussed how the program will be expanded to new schools and countries next year.

Initially funded by Google Inc., the exchange program has won support from the Claude Worthington Benedum

Foundation and the Pittsburgh Foundation. That will enable the program to expand to five new schools in Western Pennsylvania, including South Fayette middle and high schools and the Propel School in Homestead, as well as five more international schools.

Representatives from some of the new schools, as well as students and teachers from Falk and Manchester Craftsmen’s Guild were among the 70 people who attended a special event at the AIR exhibit on Nov. 14.

GigaPan, based on software originally developed by NASA for assembling panoramas of Mars, enables almost any digital camera to create panoramas. The camera is attached to a robotic camera base, which then automatically snaps tens or hundreds of photos of a scene; special software then digitally stitches the photos together into a panorama that can be explored with a computer.

“GigaPan represents the highest of high tech and we’ve taken it to some communities where even computers are rare,” Nourbakhsh said. “The students are essentially becoming the pen pals of the technological age.”

Legend in the Making

SCHOOL OF MUSIC HOSTS LANG LANG MASTERCLASS

■ Kristi Ries

He sells out concerts around the globe and has been called “the hottest star on the classical music planet” by The New York Times. At the age of 26, Chinese pianist Lang Lang is one of the most famous, in-demand classical musicians in the world.

Nearly 400 people gathered for the masterclass led by Lang Lang, held in November in Carnegie Mellon’s McConomy Auditorium. The masterclass, which featured three student pianists, was co-sponsored by the Pittsburgh Symphony Orchestra and Carnegie Mellon’s School of Music.

Called a prodigy by many in the industry, Lang Lang won his first piano competition at the age of 5 and was accepted to the Curtis Institute of Music at the age of 14. At 17, Lang Lang stepped in to play Tchaikovsky’s Concerto for the “Gala of the Century” with the Chicago Symphony. He has appeared on “The Tonight Show with Jay Leno,” “Good Morning America” and “60 Minutes.” He has been featured worldwide in Vogue, GQ, Die Welt, Reader’s Digest and People magazine, and he has performed for a number of global leaders, such as President George H.W. Bush, Her Majesty Queen Elizabeth II, President Hu Jin-Tao of China and President Vladimir Putin of Russia.

For those unfamiliar with masterclasses, it was typical to have Lang Lang coach each of the student pianists after hearing an initial performance of their selected piece.

What might be considered unusual was his dramatic personal style, a defining characteristic that has brought him much acclaim (and some criticism) as a professional musician.

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[WWW.MUSIC.CMU.EDU](http://www.music.cmu.edu) OR CALL THE CONCERT LINE AT 412-268-2383.**

To say that Lang Lang’s coaching style was interesting to witness is an understatement; he was very hands-on, at times swaying beside the student, humming along with the melody, or gesturing wildly to encourage the expression of varying emotions and tempos. Adding the public element of a live audience made this an intense experience for the musicians and onlookers alike. More than a few times, the audience chuckled at Lang Lang’s remarks. He had the swagger of a rock star and the incredibly passionate, masterful approach of a classically trained artist.

Rishi Mirchandani, age 12, of Carnegie Mellon’s Music Preparatory School, performed first in the master class. Mirchandani, a student of Luz Manriquez, played



LANG LANG WORKS WITH XIAOYUAN (SHANNON) LIU IN MCCONOMY AUDITORIUM DURING A MASTERCLASS.

PHOTO BY NICOLE LONGEVIN-BURROUGHS

Frédéric Chopin’s Waltz in C-sharp minor. Lang Lang commented that Mirchandani, wearing a suit, appeared more like a teacher than a student.

School of Music student Junyi (Jimmy) Liu, a student of Sergey Schepkin, paid homage to Lang Lang’s native country of China with the Yellow River Concerto, a piece that Lang Lang has performed extensively in recent years. Staff accompanist Sung-Im Kim played the part of the ‘orchestra’ for the piece.

Xiaoyuan (Shannon) Huang, a student of David Allen Wehr in Duquesne University’s Mary Pappert School of Music, played La Leggieressa by Franz Liszt. As the title suggests, this challenging piece is a study of nimbleness and lightness.

“It is a unique privilege for us to host Lang Lang,” Noel Zahler, head of the School of Music, said. “His work with our students will transform their lives and careers. We are grateful to Lang Lang and our partnership with the Pittsburgh Symphony Orchestra for making this opportunity possible.”

Lang Lang also performed in recital later in the day in Heinz Hall.

With 22 faculty members who are also members of the PSO, the School of Music and the Pittsburgh Symphony Orchestra maintain a strong partnership. This year, they have partnered to present Vienna Days, a celebration of Austrian music director Manfred Honeck’s inaugural year in Pittsburgh.

Paralympic Hockey Goalie Shuts Out Competition

■ Chriss Swaney

It was a clean sweep. And engineering freshman Dan Hefley made it spotless.

Hefley, a goalie on the U.S. National Under 20 Paralympic Sled Hockey Team, turned away all 63 shots he faced to help his squad win all four games at the USA U20 National Sled Team Paralympic Tournament in Sacramento, Calif., last month. He and his teammates have the opportunity to be selected for the U.S. Paralympic Hockey Team that will compete in the 2010 Olympics in Vancouver, Canada.

“I am very excited to play with some of the best young players in the sport this year. It is a terrific opportunity to participate in an activity which is nationwide,” Hefley said.

The 18-year-old Hefley, who has spina bifida, made the trek to California with fellow teammate Danny McCoy, 14, of Cheswick, Pa. For practice, Hefley and McCoy play in Harmarville, Pa., with the Pittsburgh Mighty Penguins coached by



GOALIE DAN HEFLEY SHUT OUT FOUR DIFFERENT TEAMS DURING A RECENT PARALYMPIC SLED HOCKEY TOURNAMENT IN CALIFORNIA.

O'Connor, who has coached national and Olympic hockey teams for more than two decades, says the hockey playing

ONLINE: SLED HOCKEY VIDEO: [HTTP://KDKA.COM/VIDEO/?CID=13](http://kdk.com/video/?cid=13)

Ray Harding. Both players were recently featured by Dave Crawley on the KD Country segment on KDKA News. (See a link to the video on Piper+ at www.cmu.edu/piper/index.shtml)

“Hefley is a wonderful role model for our younger players, because he never fails to be there for them when they need a little extra encouragement,” Harding said.

Sled hockey follows typical ice hockey rules with the exception of the equipment. Players sit in specially designed sleds that rest on top of two hockey skate blades. There are two sticks for each player instead of one, and the sticks have metal picks on the butt end for players to use to propel themselves.

“Hefley is a great goalie because he has courage and quick reflexes,” said Bob O'Connor, coach of the U.S. National Under 20 Paralympic Hockey Team. “The entire team works very hard in the offseason to be both competitive and highly skilled.”

motto is simple: “If it is to be; it is up to me.” The team’s next competition will be Jan. 9 in Salt Lake City.

“Each player knows how important it is to be able to move with speed and agility, and the goalie also knows that the puck can travel in excess of 70 miles per hour,” said O'Connor of Hopkins, Minn.

O'Connor said each player has a strict training regimen to complete before hitting the competitive playing trail. “We give them a laundry list of skill-building exercises, including exercises that force them to be able to move the puck with either hand — an exercise that professional hockey players would find challenging,” O'Connor said.

Sled hockey, or sledge hockey as it is referred to outside the United States, was invented at a Stockholm, Sweden, rehabilitation center in the early 1960s by a group of Swedes, who despite their physical disability wanted to continue to play hockey.

MAKING CARNEGIE MELLON A PLACE “WHERE ALL BELONG”

■ Abby Houck

Last spring, Henry DeYoung and his father traveled to the home of Lenore Blum, Distinguished Career Professor of Computer Science, armed with a three-foot plywood ramp. Henry, who had just finished his undergraduate studies in computer science, hoped to use the ramp to attend an open house for newly admitted doctoral candidates.

Henry and his brother Andrew, a senior chemistry major, have a rare form of muscular dystrophy called spinal muscular atrophy, which makes visits to campus and professors’ homes rare treats.

But when Henry could not safely use the homemade ramp, Blum contacted Larry Powell, manager of disability resources. Powell then approached Jim Mercolini, assistant general counsel; Marty Altschul, university engineer; and Kyle Tomer, service response manager, for assistance. Just a few hours later, the Facilities Management Services team created a ramp beyond expectations.

“I was amazed at what they had constructed. This ramp was no simple slope,” Henry said. “They incorporated two switchback turns to keep the angle shallow as the ramp climbed six or seven steps.”

According to Powell, this is just one example of how faculty and staff “came together, transcending organizational boundaries, cooperating, collaborating and communicating to do what Carnegie Mellon does best, build a world where all belong.”

The DeYoungs are among approximately 320 students and 100 faculty and staff that Disability Resources assists each year. Individuals self-declare physical or learning disabilities, and Powell develops accommodation plans that individuals may share with professors or supervisors.

“Initially, I had no idea how I would even be able to attend college since I need to live with my parents. And, at first, neither did Carnegie Mellon,” Henry explained. “But instead of thinking ‘I don’t think that we can do that,’ School of Computer Science Assistant Dean Mark Stehlik’s approach was, ‘I’m not sure how we can do this, but let’s try.’”

For more than four years, professors have transmitted lectures to Henry and Andrew’s home through the CourseCast online system. In addition, the brothers visit professors and research advisors on campus about once each week.

FOR INFORMATION ON DISABILITY SERVICES, VISIT WWW.CMU.EDU/HR/EOS/DISABILITY/INDEX.HTML.

Although the DeYoungs challenges are physical, many students work with Disability Services and Academic Development to overcome learning challenges. The university has also played a key role in establishing AHEADD — short for Achieving in Higher Education with Autism and Developmental Disabilities. This nonprofit network of professional resources helps students live independently and achieve personal learning goals. AHEADD provides programming in four U.S. cities and has been featured in The New York Times, USA Today and The Chronicle of Higher Education.

Upcoming Events

**Justice Illuminated:
The Art of Arthur Szyk**
Jan. 7–March 28
Free and open to the public from 1 to 4 p.m., Monday–Friday
Posner Center

Carnegie Mellon
Philharmonic
5 p.m., Sunday, Jan. 18
Scott Parkman, guest conductor
Katie Petrarulo, soloist
Carnegie Music Hall, Oakland

Martin Luther King, Jr. Day Celebration
Monday, Jan. 19
(See page 12)

Project Olympus Show and Tell 7
3:30 p.m., Wednesday, Jan. 21
Collaborative Innovation Center
For a schedule of presentations:
www.olympus.cs.cmu.edu/events/

University Lecture Series
“Signs of Change: Visualizing Social Movement Cultures”
A multimedia presentation by curators Dara Greenwald and Josh MacPhee is followed by the exhibition reception at the Miller Gallery.
4:30 p.m., Friday, Jan. 23
McConomy Auditorium

University Lecture Series
Matt Calman, Senior Vice President, Bank of America, will speak about “Leading Innovation at Bank of America”
4:30 p.m., Thursday, Jan. 29
Adamson Wing, 136A Baker Hall

School of Music Opera:
“Street Scene”
Jan. 23–25
Performance times:
Friday and Saturday, 8 p.m.
Saturday, 2 p.m.
Philip Chosky Theater

School of Music Alumnus
Keith Lockhart conducts the Carnegie Mellon Philharmonic
Friday, Jan. 30
Carnegie Hall, New York City

Playground: A Festival of New Student Works
Jan. 29–31
All performances are free
For updates and a full schedule, call the Drama box office at 412-268-2407

Journeys Lecture
Joel Tarr, Carnegie Mellon’s Richard S. Caliguiri University Professor of History and Policy and the recipient of the 2008 Leonardo da Vinci Award from the Society for the History of Technology, discusses “Why Technology?”
4:30 p.m., Monday, Feb. 2
Adamson Wing, 136A Baker Hall

School of Drama Production:
“London Cuckolds”
Feb. 19–29
Performance times:
Tuesday–Friday, 8 p.m.
Saturday, 2 p.m. and 8 p.m.
Philip Chosky Theater

The Way He Works

WRITER EXPLAINS HIS CREATIVE PROCESS FOR STUDENTS

■ Heidi Opdyke

Author and illustrator David Macaulay follows his curiosity. That has driven him to look at buildings, explain machines and write about the present through a future tense. His most recent book, “The Way We Work,” explores the human body.

While in town recently to give a Drue Heinz lecture, Macaulay participated in a Q&A session with Carnegie Mellon students as part of a season-long collaboration with the Department of English. Karen Schnakenberg, teaching professor of Rhetoric and Writing, handled the arrangements.

Jayne Adair, executive director of Pittsburgh Arts & Lectures, says he last visited Pittsburgh when his “The Way Things Work” was re-released in 1999. “His presentation was original and very well received. One of our audience members said, ‘This is the work of a creative genius!’ I think everyone agreed,” Adair said. To hear a portion of Macaulay’s Q&A session, please visit www.cmu.edu/news/piper.shtml.



PHOTO BY: STEPHEN BADEN

LISTEN TO DAVID MACAULAY’S ANSWERS TO STUDENTS’ QUESTIONS ONLINE AT WWW.CMU.EDU/NEWS/PIPER.SHTML.

University’s 2008 Strategic Plan is Approved

CONTINUED FROM PAGE ONE

Development of the Plan

President Cohon began the process of renewing the university’s strategic planning efforts in November 2007, when he appointed Kamlet to head a plan steering committee of deans. Kamlet appointed working groups to review progress in each of the six areas or “pillars” of the 1998 strategic plan.

The working groups also assessed new external conditions, internal needs or other factors affecting each area of the plan. Each group then generated appropriate goals and strategies for the decade ahead.

The initial drafts of the findings of each working group were presented to university leadership in the spring

and later to the community at large in a series of campus open forums in April and May. A combined document was presented to the trustees at a daylong meeting in July 2008, when lengthy discussions about each pillar generated new ideas and questions. Additional campus meetings were held in September. Revisions were made at

each stage, with the final document prepared for consideration by the trustees at the October meeting.

Highlights of the plan are listed in the accompanying box below.

For the complete strategic planning document, see www.cmu.edu/strategic-plan.

THE STRATEGIC PLAN AT A GLANCE

Pillar	Goal	Some Strategies
Research	Through foundational research, artistic creation and creative inquiry, Carnegie Mellon will make significant contributions to society and enhance human welfare by identifying and solving real-world problems.	<p>We will have impact in five broad areas of focus:</p> <ul style="list-style-type: none"> • Transitioning to an environmentally sustainable society. • Improving health and quality of life. • Understanding and engaging global societies, economies and cultures. • Understanding human and social behavior. • Transforming science and society by advancing information, computation and communication.
Education	Carnegie Mellon students will contribute to and thrive in the ever-changing global community as socially responsible leaders and architects of change.	<ul style="list-style-type: none"> • Build on our longstanding focus on professional excellence; social, environmental and ethical responsibility; and health and personal well-being. • Foster critical inquiry and abiding respect for diverse others. • Keep creative inquiry and problem solving at the center of our educational ideals. • Within the context of student teamwork and leadership experiences, strengthen communication, writing, and information and media literacy skills. • Help students understand and engage in global societies, notably on issues critical to a sustainable civilization.
Regional Impact	Carnegie Mellon will contribute significantly to economic growth and improved quality of life in Western Pennsylvania in areas that leverage and complement our core research and educational activities.	<ul style="list-style-type: none"> • Encourage technology-driven regional economic growth. • Support improvements of K-12 education through both research and service. • Enhance quality of life, by working in visual and performing arts, environmental and public policy initiatives. • See the region as both a laboratory for research and a site for collaborative inquiry and educational innovation.
Globalization & International Initiatives	We will strengthen our leadership position and build new models for global knowledge creation, education and citizenship.	<ul style="list-style-type: none"> • Educate students to understand and be effective in the global context of their lives. • Build upon diverse global activities to create new forms of collaboration and partnership. • Integrate research more fully with education in our global activities. • Learn from global experiences and transfer that knowledge throughout and beyond the university.
Carnegie Mellon Community Success	We will create a viable, supportive, rewarding and collaborative environment that enables our faculty, students, alumni and staff to advance the university’s vision and mission.	<ul style="list-style-type: none"> • Based on an understanding of shared goals, support collaborative problem solving across the university. • Foster responsibility and respect in collegial and managerial interactions and processes. • Promote well-being and work-life balance. • Recognize those who make a positive impact on the university and further its goals. • Increase diversity by recruiting and retaining under-represented minorities and women. • Enhance lifelong connections to the university, looking especially for deeper engagement with and by alumni.
Finance and Infrastructure	Continuing a tradition of extraordinary impact with a relatively modest resource base, the university will build endowment assets, follow best practices in deployment of resources, creatively and effectively develop facilities for optimal and environmentally sustainable use and sustain a high-functioning IT infrastructure.	<ul style="list-style-type: none"> • Continue to focus on growth of the endowment. • Continue to implement measures for efficient management of financial and human resources. • Pursue optimal development and use of existing facilities and strategic expansion off-campus. • Continue to emphasize environmentally sustainable practices in campus operations. • Invest in IT systems, including those that support learning and facilitate integration of research and practice.

Top Scholar

SENIOR EARNS UNIVERSITY'S FIRST MARSHALL SCHOLARSHIP



PHOTO BY HEIDI OPDYKE

VOICE AND PSYCHOLOGY MAJOR SHEELA RAMESH HAS RECEIVED CARNEGIE MELLON'S FIRST MARSHALL SCHOLARSHIP TO STUDY IN ENGLAND.

■ Kristi Ries

Sheela Ramesh, a senior majoring in voice and psychology, has been named a 2009 Marshall Scholar. She is the first student from Carnegie Mellon to receive this prestigious and highly selective international award, which funds up to two years of graduate study at a university in the United Kingdom.

The award of \$34,347 a year, covers university fees, tuition, cost of living expenses, books, a thesis grant, research, and daily travel, including airfares.

Ramesh, a mezzo-soprano who studies with Mildred Miller Posvar in Carnegie Mellon's School of Music, says her diverse undergraduate education has prepared her well to study abroad. She intends to attend the Guildhall School of Music & Drama, one of Europe's leading conservatories, or the Royal Academy of Music to work on a master's in opera and vocal performance.

"The wonderful depth of experiences and opportunities I've had in such different fields has led me to a some-

what unusual perspective on my field. My hope is to contribute to the creation of stimulating new operas that will be engaging and moving for audiences who wouldn't ordinarily attend opera," said Ramesh, a member of the Phi Beta Kappa honorary society. "In order to achieve that, I think it will be important to have a wide variety of musical or artistic and analytical skills, and I feel as though my diverse education at Carnegie Mellon has helped immensely in preparing me for this next step."

She has had a busy senior year. She is working on her senior thesis research project in psychology, which involves investigating children's ability to perform analogical reasoning tasks that rely on semantically similar labels, such as rock and stone. She recently wrapped up a performance in "The Coronation of Poppea" and also sings in "Street Scene," which will run on campus Jan. 22-25.

"Sheela has an incredible 'can-do' attitude, which helps her to succeed in every endeavor she undertakes," said Anna Fisher, an assistant professor of psychology and Ramesh's adviser. "Sheela is remarkably energetic and gets more things done than any other student I know. She is truly passionate about what

she is doing, be it music or research."

Ramesh hopes to eventually open an opera company that focuses on new works.

"I think it's important to create operas that are meaningful to audiences perceptually and also emotionally," she said.

Each year, the Marshall Foundation conducts a competition across eight regions in the United States to select 40 scholars who have demonstrated high academic and leadership abilities and the capacity to serve as an ambassador for relations between the United States and the United Kingdom.

Carnegie Mellon's Fellowships and Scholarships Office worked closely with Ramesh at every point in the process, from the initial application to preparing for the final interview.

"Ms. Ramesh exemplifies the Carnegie Mellon ideal of interdisciplinary excellence; she has already distinguished herself as an extremely bright and talented individual," said Noel Zahler, head of the School of Music. "On behalf of the administration, I offer her our sincerest congratulations on her recent selection as a Marshall Scholar."

Doors Open

FIRST TELSTRA SCHOLAR, MEGAN BOUNDEY, FINISHES HEINZ COLLEGE AUSTRALIA MSIT PROGRAM

■ Abby Houck

Carnegie Mellon's Heinz College Australia is celebrating the graduation of its first Telstra Media Communications and Technology Scholarship recipient, Megan Boundey.

"Megan was an outstanding student from the beginning," said Tim Zak, executive director of Heinz College

talking about!"

Boundey chose the Heinz College's Master of Science in Information Technology (MSIT) Program because it combined her interests in strategy and information technology. Prior to pursuing graduate studies, she was a computer systems analyst with an Australian

company. She originally planned to pursue graduate studies part time while working full time to pay for her education. However, the Telstra Scholarship made it possible for Boundey to become a full-time student and complete her studies in one year.

Boundey appreciated Heinz College Australia's small class sizes and close interactions with professors and her peers.

"The quality of the students is exceptional, and there is a real mateship about the program," she said.

For her final semester, Boundey studied at the Pittsburgh campus. She enjoyed reconnecting with professors who taught in Australia, and she had the opportunity to meet face-to-face with those who taught distance-learning courses from the Pittsburgh campus.

Boundey also benefited from immersing herself in American culture, "especially during such an important election year," she said. And when most students grumbled about the first snowfall in Pittsburgh, she could be spotted trekking across campus with a bright yellow coat and a smile on her face. This was just the second time in her life she had seen such a thing.

piper TRIVIA

CONGRATULATIONS!

Congratulations to the November Trivia winners: Joan Stein and Dana Houston.

School of Drama students recently gave a public reading of "Bubble Boy" by Cinco Paul and Ken Daurio as part of a News Works Program. For this month's Piper Trivia question, name the father/son duo who assisted as part of a collaboration between the Pittsburgh CLO and Carnegie Mellon School of Drama, in partnership with The ASCAP Foundation.

The Piper staff will give away a \$25 gift card to the bookstore to the first four people who can correctly identify the father/son duo. Send your answers to bg02@andrew.cmu.edu with "December Trivia" in the subject line. The winners' names will be published in the following issue. Previous winners are ineligible.

The Piper trivia question is sponsored by Carnegie Mellon Internal Communications.

"I NEVER EVEN DREAMED OF THE OPPORTUNITIES I WOULD HAVE. THE RECRUITERS AT THE HEINZ COLLEGE AUSTRALIA SAID DOORS WOULD OPEN, BUT I DIDN'T REALIZE JUST HOW MANY THEY WERE TALKING ABOUT!" MEGAN BOUNDEY SAID.

Australia. "The fact that she is being recruited for senior IT roles at global corporations is a testament to her talent, drive and ambition. She has set a high bar for her fellow MSIT students in the Heinz College."

Boundey is excited about the many different options she has to advance her career in information technology.

"I never even dreamed of the opportunities I would have," Boundey said. "The recruiters at the Heinz College Australia said doors would open, but I didn't realize just how many they were

corporation. She originally planned to pursue graduate studies part time while working full time to pay for her education. However, the Telstra Scholarship made it possible for Boundey to become a full-time student and complete her studies in one year.

Telstra, Australia's largest integrated telecommunications company, recognizes the impact graduate-level education can have on future leaders in information technology fields. The company is sponsoring 15 scholarships worth \$90,000 each for Australian citi-

Movie Executive Offers Entertainment Industry Insights

■ Eric Sloss



PAULA WAGNER (LEFT) SPEAKS TO STUDENTS DURING A SCHOOL OF DRAMA OPEN SESSION. AT RIGHT IS DICK BLOCK, INTERIM HEAD OF THE SCHOOL.

Carnegie Mellon trustee and acclaimed entertainment industry executive Paula Wagner (A'69) recently spent a full day as a guest lecturer discussing the business of the entertainment industry and the value of theater education.

In late October, Wagner met graduate dramatic writing students in the "Production Management" class with David Holcomb, production manager in the

School of Drama. She advised students about the new career paths that are emerging through the evolution of new technology.

In the afternoon she attended the "Business of the Business" class led by Don Wadsworth, professor of voice and speech. There, she provided advice to senior actors on how to navigate through the labyrinth of agents, casting directors and managers in Hollywood.

"When I see Carnegie Mellon on a resumé, I expect that you understand your technique and you work hard," Wagner said in one session. She expressed the need for the students to understand the way new technology is changing the way the entertainment industry works. "You are an extraordinary generation and you have the amazing opportunity to be a part of the vast cultural, social and economic change that is taking place. You are at the threshold of that change as artists," she said.

After the afternoon sessions, Wagner met with Dan Martin, director of the Institute for the Management of Creative Enterprises, to talk about the entertainment industry with students in the Masters of Entertainment Industry Management Program.

Wagner completed the exhausting day by hosting a two-hour open session with the entire School of Drama. She discussed her studies at Carnegie Mellon, how the political climate in the 1960s shaped her understanding of the world and about her career as an actor. "When I was here theater was synonymous with social change. Theater had to mean something," she said.

Wagner spoke about her time as one of the first women to become agents in Hollywood, her time as chief executive at United Artist and recently, her return to her roots to pursue her passion of producing independent films. Wagner offered some inspiring parting advice: "You need to know the business of the art you are in. You are responsible for you. Make sure your career path is right for you and you will create your own path."

Klugman Presented With Honorary Doctorate

■ Eric Sloss

Award-winning actor Jack Klugman has received an honorary doctorate of fine arts from Carnegie Mellon. In the late 1940s, Klugman left the university before completing his degree to break into the business, beginning one of the most successful careers in Hollywood. He might be best known for his role as the loveable Oscar Madison in "The Odd Couple," but his storied career spans many generations. He starred

in such classic films as "Twelve Angry Men," "Days of Wine and Roses" and "Goodbye Columbus." Klugman shined on Broadway in such acclaimed shows as "Gypsy," "I'm not Rappaport" and "The Sunshine Boys."

Hilary Robinson, the Stanley and Marcia Gumberg Dean of the College of Fine Arts, presented the degree at the 23rd Annual "New York Alumni, Night of Nostalgia" in October at the Beverly Hills High

School in Beverly Hills, Calif. The event honors New York City natives living on the West Coast. Klugman, a native of Philadelphia, was "adopted" as a native New Yorker for this event. Headliners like Jerry Stiller, Ed Ames, Sammy Shore, Connie Frances and Monty Hall were also honored.

JACK KLUGMAN SITS WITH HILARY ROBINSON, THE STANLEY AND MARCIA GUMBERG DEAN OF THE COLLEGE OF FINE ARTS.



PHOTO BY STEPHEN KLAUSNER

Lifesavers

45 AEDs ON CAMPUS CAN HELP HEART ATTACK VICTIMS

■ Bruce Gerson

Do you know what an Automated External Defibrillator (AED) is? Do you know where the nearest one is, and do you know how to use it? Your answers could be the difference between life and death. It's already saved two lives on campus.

AEDs are portable electronic devices designed to help victims of a heart attack or cardiac arrhythmia. They come equipped with two pads that carry electronic current to the chest, a razor for shaving chest hair if needed, a mouthpiece to assist in CPR and an audio system that relays instructions to the user.

A total of 45 AEDs have been installed on campus in various buildings, including the University Center, Skibo Gym, Student Health Services, the Purnell Center for the Arts, the College of Fine Arts, Hunt Library, Baker Hall, Porter Hall, Warner Hall, Hamburg Hall, Doherty Hall, Wean Hall, Hamerschlag Hall, the Facilities Management Services Building, Campus Design and Facility Development, the Software Engineering Institute, Mellon Institute, Whitfield Hall and the University Technology and Development Center.

Units are also in student housing facilities, including Stever House, Morewood Gardens, Resnik and Donner, and at the National Robotics Engineering Center. Five University Police patrol cars have units as well. A complete list of the AED locations is under the Emergency Response link on the left-hand side of the Environmental Health & Safety (EHS) Web site at www.cmu.edu/ehs.

Jim Gindlesperger, loss prevention manager for EHS, said EHS began purchasing the units about two years ago when 15 were installed on campus. He said the AEDs are purchased at a discount rate through the St. Margaret Foundation's Pittsburgh United for Life Saving Emergencies Program.

"They retail for about \$1,600 each, but we get them for around \$800 from the foundation," said Gindlesperger, who

noted that several university departments have purchased their own since the initial purchases in 2006.

While the units do contain audio instructions, Gindlesperger recommends that all members of the university community become certified in using the AED

at one of many training programs held on campus throughout the year. He said about 150 individuals have become certified thus far.

Licensed trainers from the St. Margaret Foundation and from Carnegie Mellon's student Emergency Medical Service conduct the training sessions, which include instruction in CPR as well.

"It's a hands-on training session," Gindlesperger said, "so you have to demonstrate some proficiency to gain certification, which is good for two years."

Scheduled training sessions are listed on the EHS Web site. Departments interested in purchasing an AED should contact Gindlesperger at jg57@andrew.cmu.edu.

VIEW A DEMONSTRATION BY STUDENT MEMBERS OF THE UNIVERSITY'S EMERGENCY MEDICAL SERVICE ON HOW TO USE AEDs AT WWW.CMU.EDU/NEWS/PIPER

AED CAMPUS LOCATIONS CAN BE FOUND AT WWW.CMU.EDU/EHS

Apples and Oranges

ROBOTICS INSTITUTE AWARDED \$10M TO IMPROVE FRUIT FARMING

■ Byron Spice

Comparing apples and oranges may be a no-no, but that doesn't mean that two new programs studying how robots can tend to apple trees and orange trees don't have a lot in common.

In both programs, robotic vehicles will work the fields throughout the growing season, using sensors to gather information about tree health and crop yield, as well as performing such tasks as mowing between tree rows and spraying agricultural chemicals.

The two Robotics Institute programs are part of a new U.S. Department of Agriculture (USDA) research initiative to solve critical issues facing the producers of specialty crops, such as fruits and vegetables. Of \$28 million divvied among 18 research projects this fall, the USDA awarded \$10 million to the two Carnegie Mellon robotic programs.

The Comprehensive Automation for Specialty Crops (CASC) Program, headed by Sanjiv Singh, research professor of robotics, received a four-year, \$6 million grant to develop automated systems for apple growers. The Integrated Automation for Sustainable Specialty Crop Farming Project, led by Tony Stentz and Herman Herman of the Robotics Institute's National Robotics Engineering Center, received a three-year, \$4 million grant to develop a similar system for the citrus industry. The grants are being matched dollar for dollar by industry, state governments and other funding sources.

"We are taking automation to a level never before demonstrated in an agricultural setting," Herman said. His NREC project will deploy a fleet of networked, unmanned tractors in the orange groves of Southern Gardens Citrus (SGC), one of Florida's largest growers. "This will provide an early look at how the automated farm may someday operate and promises to deliver insights and lessons far beyond what should be expected from small demonstrations of autonomous scouts."

Both programs will explore mechanical methods that might enhance harvests, the most labor-intensive operation for fruit producers. But mechanical harvesting of fruits is very challenging because of handling and cost requirements. So more effort will be placed on automating tasks such as watering, spraying and mowing and, in particular, on gathering a multitude of data about tree health and crop status.

"Mobile sensors and computer tracking will enable growers to monitor their orchards in unprecedented detail," Singh said.

The CASC is working with apple growers in Pennsylvania, Oregon and Washington, where researchers will use a fleet of automated, four-wheel vehicles that can perform multiple tasks.

"Growers can use the data generated by this new approach to make decisions throughout the year regarding pest management, pruning, fertilization,



PHOTO COURTESY OF NREC

THE NREC IS WORKING TO DEPLOY A FLEET OF NETWORKED, UNMANNED TRACTORS IN THE ORANGE GROVES OF SOUTHERN GARDEN CITRUS IN FLORIDA.

irrigation and yield estimates," said Jim McFerson, manager of the Washington Tree Fruit Research Commission. The technologies developed will be applicable not only to producers of apples and oranges, but to growers of all kinds of tree fruits, he added.

Carnegie Mellon is not a university traditionally associated with agricultural research. But the Robotics Institute's Field Robotics Center has been involved in agricultural automation since the early '90s, and the NREC has worked with agricultural equipment manufacturers since it opened in 1996. Moreover, both organizations know how to manage research programs involving academic, industrial and governmental

researchers working closely with end users.

The CASC is collaborating with Penn State, Washington State, Oregon State and Purdue universities and with the USDA Agricultural Research Service. Industrial partners include Toro, Trimble, Vision Robotics, IONco and Sensible Machines. In addition to SGC, the NREC project is working with researchers at the University of Florida, Cornell University and Deere & Co.

"This level of collaboration between academia, government and industry is not at all common in agriculture research," McFerson said.

Thanks to a Yes Man, I am Now One

■ Eric Sloss



PHOTO BY STEPHEN BADEN

MIKE BONNANO OF THE YES MEN PRESENTS AT THE "HOW TO BE A YES MAN" WORKSHOP.

A recent Miller Gallery workshop led by activist Mike Bonnanno offered the everyman tricks and tips on becoming a new kind of "yes man" — one who resists and subverts the evils of corporate giants rather than mindlessly complying with them. By the time the member of the culture-jamming activist group The Yes Men was done speaking, he may just have converted many in the crowd to "yes men" — me included.

The Yes Men create various scenarios or products revealing corporate

maltreatment using irony, public relations skills and a ton of courage. Drawn by the group's activist-idol status, more than 300 attendees packed into the seats and crouched on the floor to receive first-hand instruction in early November.

I was a bit startled by the event's opening. I had expected it to be like other workshops I had attended, complete with breakout sessions, sticky notes, markers and large paper. But Bonnanno, never one for conventionality, explained he wanted to start preemptively, much as the government has done over the last eight years. So he began with questions. "How much is the earth worth?"

Bonnanno explained that corporations put a price tag on everything. Still, he never did get an answer.

Prompted by an audience member's question, Bonnanno discussed The Yes Men's recent venture, publishing 1.2 million copies of a replica New York Times newspaper with the headline "Iraq War Ends."

The project took more than 300 people and one year to write, print and finally deliver. He noted the date on the paper was July 4, 2009, and that it replaced the Times' classic slogan "All

the News That's Fit to Print" with "All the News We Hope to Print."

The workshop continued with videos of various Yes Men projects. Included was footage of The Yes Men's prank at the 2006 Catastrophic Loss conference. Masquerading as Halliburton representatives, Bonnanno and his collaborator, Andy Bichlbaum, delivered prototypes of an "advanced technology that will keep corporate managers safe even when climate change makes life as we know it impossible."

The spoof technology they presented was "SurvivaBalls," large egg-like canopies designed to keep top corporate players safe and sheltered in the event of catastrophic climate change. The crowd roared in laughter when the video showed people at the conference trying on the fake protective gear.

Between videos, the legality of their actions was forefront in the minds of audience members.

"We sometimes get a little pressure from corporate entities," Bonnanno explained. "There is much less danger in doing this than you would think. The process these corporations would have to go through would be a lot and the le-

gal system is quite baroque ... it would have to be worth their [the corporations] while and since we are asking for it they may not think it's worth it."

Some attendees were encouraged by the workshop. Jen Pascoe from Pacific Northwest College of Art explained, "I wanted to know how are The Yes Men not getting their pants sued off? It was really interesting to hear they've had no problems at all."

Sean McGarril, a School of Architecture alumnus, was even more impressed by the workshop and how the group uses business practices to highlight issues.

"It's not very often people who have those skills or knowledge do something with them other than make a profit," McGarril said. "I am very impressed for how they can move in those circles and fool everyone by turning the tables."

After the workshop the message was clear. Since I already have the expertise in the corporate world, I can now use these skills to expose corporate exploitation — but no matter what Bonnanno said, I would still hire a lawyer.

Ph.D. Student's Bright Idea Among Top Collegiate Inventions

■ Bruce Gerson

A bright idea to benefit people who live in electricity-poor countries landed Carnegie Mellon doctoral student Matthew Beckler and his colleagues in the spotlight as one of 12 finalists in the Collegiate Inventors Competition presented by the National Inventors Hall of Fame Foundation.

Beckler and fellow students Patrick Delaney and Caleb Braff presented their idea and attended an awards ceremony Nov. 19 in Kansas City, Mo. The competition drew more than 2,000 entries.

While undergraduates at the University of Minnesota, Beckler, Delaney and Braff designed a solar-powered LED lantern that could be used in places where there is no reliable electricity, where fuel is expensive and where light is desperately needed after dark. Delaney got the idea while studying abroad in Nicaragua.

"Being so close to the equator, the sun sets very rapidly [in Nicaragua], with only 10 to 15 minutes of dusk between daylight and darkness," Beckler said. "Another side effect of its equatorial proximity



DOCTORAL STUDENT MATTHEW BECKLER AND COLLEAGUES WERE NAMED FINALISTS IN AN INVENTION COMPETITION.

PHOTO COURTESY OF THE NATIONAL INVENTORS HALL OF FAME FOUNDATION

is the nearly constant 12 hour days and 12 hour nights. If people want to work after sunset, especially children trying to study and get an education, they need some form of light.

"Patrick was telling us when we started this project that most people there have cheap kerosene lanterns that

require them to purchase fuel, usually every three months. This is a recurring cost, and it would be great if we could provide a different way to provide light," added Beckler, who noted that the solar lantern has no recurring costs, emits no pollution and can be locally produced.

Beckler, who earned his bachelor's degree in computer engineering at Minnesota, said the lantern uses rechargeable AA batteries, a one watt LED bulb, a solar panel and "a bit of creative circuitry." The six-inch long device, which fits inside a two-inch wide PVC pipe, is intended to sit in the sun during the day while the solar panel recharges the batteries. The light can then be used at night.

"This kind of pipe is readily, and cheaply, available around the world, and with suitable end-caps, can be made into a very durable, water-tight, floating enclosure. We are still finalizing details on the different configurations, such as having a spotlight, flashlight or lantern configuration," Beckler said.

The team is considering several improvements, including being able to adjust the brightness; enhancing the charging cycle through "intelligent circuitry" to extend the life and safety of the battery; and to create flexibility so the product is compatible with many different types of solar panels. They are working to simplify the design and components so it can be assembled on-site to avoid importing taxes, lower shipping costs and to create local jobs.

For Beckler and his teammates, the competition was secondary. "The best part is the real-world engineering experience," Beckler said.

The Collegiate Inventors Competition is sponsored by the Abbott Fund, the philanthropic foundation of the global health care company Abbott, and the United States Patent and Trademark Office.

Science Van Celebrates 10 Years of Interactive Education

■ Jill Perkins

The ice cream truck isn't the only set of wheels putting smiles on kids' faces anymore. As the Carnegie Mellon Science Van Outreach Program rolls into its 10th year, it's safe to say that hands-on science is pretty cool, too.

Science concepts can often be abstract and confusing to understand, so what better way to learn that atoms exist, for example, than to "see" them with the aid of some balloons, Scotch tape, Saran Wrap and a fire extinguisher? Using every day ingredients, the Van Guys, a team of retired science teachers and university students, have brought science to life for more than 20,000 children through hands-on, inquiry-based workshops, classroom interactions and science shows.

Chemistry Professor Garry Warnock, who founded the Science Van program in 1998, hops in the Science Van with his colleagues and travels to middle schools in the Pittsburgh region to perform science shows and engage students in hands-on classroom sessions. Students measure time with pendulums and springs, identify minerals using specific gravity, or do a little chemistry in a bag.

"Studies have shown that students will recall a mere 20 percent of what they hear, and only about 30 to 40

percent of what they hear and see," Warnock said. "If students actually get to do things with their own hands, they recall more than 90 percent of what they've learned."

As a young teacher in his native England, Warnock ascribed to this maxim: "I hear and I forget; I see and I remember; I do and I understand." He still believes in this approach.

"Middle school students haven't yet become disillusioned by science, so we want to get to them before it's too late. We want to build interest in and excitement for science," he said.

Because the Science Van can only be in one place at a time, Warnock and his team offer teacher workshops so that teachers can learn and do the experiments the Van Guys do. As a part of the workshops, in which topics range from electricity and magnetism to biology and nanotechnology, teachers receive a "teacher kit" full of materials that can be used in the classroom.

In 2007, the Science Van made its longest journey yet — from Pittsburgh to Qatar, where it brought science to life for young students in the Middle East. Working with Cornell University's Chemistry Department, Warnock obtained the use of a van to do shows in several middle and high schools in

the Doha area.

"The young Qatari audiences were very enthusiastic," Warnock said. Terrence Murphy, professor of chemistry at the Qatar campus, is driving the outreach program in Doha.

Within the first 10 years of the Science Van Program, the Van Guys have performed more than 100 science shows, more than 300 hands-on classroom sessions, and have held workshops for more than 500 teachers. Warnock hopes the Van will keep rolling for another 10 years and plans on implementing new workshops, and even some Saturday sessions to continue to educate students and teachers.

"With the outreach program, there is a definite opportunity to make connections with Carnegie Mellon faculty and with chemistry teachers throughout the local area. It feels great to be a part of an educational process in chemistry," said Jason Fishel, a sophomore chemistry major involved with the outreach program. "I really appreciate Dr. Warnock's teaching style and dedication to promoting understanding in chemistry, and it's very satisfying to be a part of an end result that hits home in a way that makes students think chemistry is cool."

Cool — like ice cream.



FIREBALLS ARE ONE WAY THE VAN GUYS GET AN AUDIENCE'S ATTENTION. THE SCIENCE VAN HAS BEEN VISITING MIDDLE SCHOOLS SINCE 1998.

PHOTO BY KEN ANDREYO

Franklin Named Head of Physics

■ Jocelyn Duffy

Professor Gregg B. Franklin has been named head of the Department of Physics. Franklin succeeds Fred Gilman, who served as department head from 1999 until this April, when he was appointed dean of the Mellon College of Science (MCS). Gilman remained as acting department head until Franklin took over the post Nov. 1.

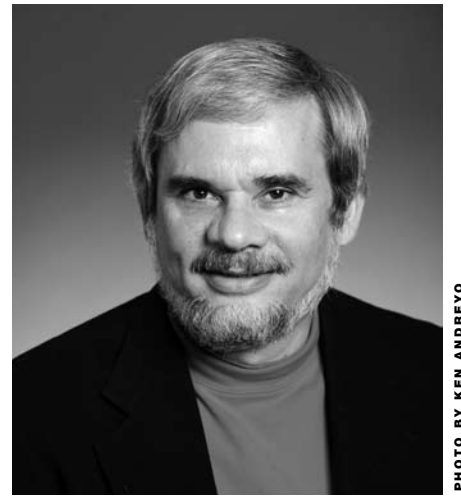
Franklin joined the Carnegie Mellon faculty in 1984, and served as associate dean for faculty and graduate affairs at MCS since 2002. During that time, Franklin was a leader among the

medium-energy physics group and an innovator in teaching. A member of the multi-center G0 experiment, Franklin and his colleagues are attempting to determine what impact strange quarks and their antiparticle partners have on a proton's electromagnetic properties. In the classroom, he was the first professor at Carnegie Mellon to use "clickers," an interactive classroom response system that provides student feedback during a lecture.

"I am honored to become head of the Physics Department," Franklin said. "The department is experiencing a great

time of growth, with the establishment of the Bruce and Astrid McWilliams Center for Cosmology, and burgeoning research in emerging fields such as cellular membrane physics. It will be an exciting time to lead my colleagues and our students into the future."

Franklin received his bachelor's degree from the University of Washington, Seattle, and his doctoral degree in nuclear physics from the Massachusetts Institute of Technology. He has authored or coauthored more than 60 publications and has served as spokesperson for several international physics collaborations.



GREGG FRANKLIN

PHOTO BY KEN ANDREYO



PHOTO COURTESY OF MARCEL JUST

Autism Symposium Draws 400

The 35th Carnegie Symposium on Cognition drew more than 400 people to campus to hear about development and brain systems in autism. The late October event featured 16 of the world's most prominent autism researchers who presented their latest findings on the disorder.

"As scientific inquiry sheds more light on the fundamental nature of autism, the work being done in particular fields, such as genetics and brain imaging, begins to inform investigation and discoveries in other relevant areas," said Marcel Just, the D.O. Hebb Professor of Psychology, who with Kevin Pelphrey, associate professor of psychology, organized the symposium. "The presentations at this symposium highlight the value that these interdisciplinary approaches hold for future autism research."

For more information, visit www.psy.cmu.edu/autismsymposium.

Tartans Run Away With NCAA Regional Title

■ Mark Fisher

Carnegie Mellon's men's cross-country team won the NCAA Division III Midwest Regional Championship in November and competed in the NCAA Division III championships in Hanover, Ind. The regional championship was the second for the Tartans, who last won the event in 1988. For the second consecutive year, senior Brian Harvey was the meet's overall winner, covering the 8K course at Waynesburg University in 25:10. Junior Dario Donatelli, son of Head Coach Dario Donatelli, was fourth overall, followed by senior Breck Fresen (6th), sophomore J.P. Allera (13th) and senior Ryan Anderson (17th). At nationals, the team placed 13th. Harvey placed ninth, earning All-America honors in cross country for the second time.

FOR MORE ON THE CROSS-COUNTRY

TEAM, VISIT: WWW.CMU.EDU/ATHLETICS/INTERCOLLEGIATE-SPORTS/MENS-TEAMS/CROSS-COUNTRY/INDEX.HTML



SENIOR BRIAN HARVEY WON HIS SECOND CONSECUTIVE MIDEAST REGIONAL CHAMPIONSHIP TITLE. HE PLACED NINTH AT NATIONALS.

PHOTO BY MARK FISHER

NEWS BRIEFS

Carnegie Mellon Teams Place First and Second in ACM Regional

For the first time, Carnegie Mellon teams took the top two places in the ACM-ICPC East Central North America Regional Programming Contest in Cincinnati on Nov. 1.

The Tartans — computer science (CS) sophomores Tom Conerly and Alan Pierce and electrical and computer engineering (ECE) senior Celestine Lau — completed seven of the eight problems in 1,287 minutes to take first place and move on to the World Finals April 22, 2009, in Stockholm, Sweden.

The Dragons — CS junior Daniel Schafer, CS sophomore Yun "Stanley" Yeo and ECE freshman Si Young Oh — took second place by completing six of the problems in 730 minutes, 64 minutes faster than third-place University of Waterloo.

"It's not unusual for Carnegie Mellon to have two teams in the top three," said Greg Kesden, associate teaching professor, who coaches the team along with Eugene Fink, systems scientist, and Danny Sleator, professor of computer science. "But to have two teams finish first and second — you can't get better than that."

Cohon Meets With University Leaders in Iran

President Jared L. Cohon was among a group of university presidents who traveled to Iran, Nov. 14-21. The group, representing member schools of the Association of American Universities (AAU), met with university leaders in Iran to discuss and share ideas about higher education in America. Cohon was joined by AAU President Robert Berdahl; Rice University President David Leebron; University of Florida President J. Bernard Machen; University of Maryland President C. Daniel Mote, Jr.; Cornell University President David J. Skorton; and University of California, Davis, Chancellor Larry Vanderhoef.

Engineering Chairs Named



Mechanical Engineering Professor Jonathan Cagan has received the George Tallman and Florence Barrett Ladd Professorship in Engineering. Cagan, a member of the faculty since 1990, is an expert in product development and design methods for early stage product development. He co-founded and co-directs the Masters in Product Development Program and the Center for Product Strategy and Innovation. The late George Tallman was a trustee of the university, who with his wife formed a foundation that has funded faculty research in the College of Engineering for the past 50 years.



Mechanical Engineering Professor Kenji Shimada has received the Theodore Ahrens Professorship in Engineering. Shimada's research interests are in the areas of computational engineering and robotics — specifically geometric modeling — computational mechanics, reverse engineering, factory robotics and computer assisted surgery. The late Theodore Ahrens was president of Standard Sanitary Manufacturing Company, which endowed this professorship in his memory.

Ilic Receives Honorary Chair in The Netherlands

Carnegie Mellon's Marija Ilic has received an honorary academic chair from TU Delft University in The Netherlands for her efforts in modernizing the world's electricity infrastructures.

Ilic, a professor of electrical and computer engineering and public policy, was named chair of Control of Future Electricity Network Operations in the Department of Technology, Policy and Management at TU Delft. The award includes a courtesy appointment in the Electrical

Scholarship Challenge Helps Create a Cycle of Philanthropy

■ Heidi Opdyke

Emeritus life trustee Jerry Holleran (E 1957, TPR 1969) and his wife, Carolyn, had two great ideas when they made one of the first gifts to Inspire Innovation — The Campaign for Carnegie Mellon University. First, they created a scholarship challenge to benefit undergraduates. Then, they added a philanthropy education fund to get students actively involved in giving. And it's working.

"Being a Holleran Scholar has really made me pay attention to how valuable a gift like this can be," said Candace Brekka, a junior majoring in scenic design and production management. "The doors that you open by supporting another person or cause are very motivating. You are able to eliminate the financial stress of a situation and allow for imagination and innovation to really push the limits."

In the four years it's been available, more than 50 students at Carnegie Mellon have benefited from the Holleran Challenge Scholarship Program. The scholarships use philanthropy in two ways.

First, to endow the Holleran Scholarships, dozens of donors responded to the challenge by giving \$30,000, which were matched by \$20,000 gifts from the Hollerans.

"We are ecstatic over the way in which the Holleran Challenge Scholarship has attracted new donors to Carnegie Mellon," Holleran said. He added that the program has increased the number of people making significant commitments. "In effect, the Holleran Challenge Scholarship has really unlocked a whole new class of giving potential for the university."

Then, the students study philanthropy. Each gets a copy of Andrew Carnegie's "Gospel of Wealth," and David Nasaw's "Andrew Carnegie" biography. They practice it by deciding how to allocate \$5,000 annually to help meet university needs.

This year, 38 scholarships were awarded. Noelle Badertscher, a donor

relations specialist, leads a monthly dinner for scholarship recipients.

"When you tell them they have \$5,000 to give away their eyes kind of light up," Badertscher said.

Brekka says the group dynamics make the program different as they work together to share the gift of philanthropy.

"I take great pride in being selected for this program," Brekka said. "It is a top priority for me to stay involved in everything the group does."

Brekka said that another benefit of the program was getting to meet her personal sponsor, who is also a scenic design alum.

"I was able to meet with him for lunch while he was visiting, and it was very valuable to talk to someone in the industry," she said. "He is now a great contact and resource."

Last year's group gave \$4,000 to campus facilities to put a protective coating on the statue honoring Mao Yisheng, the first Ph.D. candidate to

graduate from the university in 1919. They also provided \$1,000 to Engineers for a Sustainable World to build a solar-powered booth for the 2008 Spring Carnival.

"This year, the students are very interested in collecting requests for proposals from student groups and faculty researchers," Badertscher said. "They want a broader understanding of the opportunities where they can make an impact with their philanthropy."

Jerry Holleran keeps in contact with the students by visiting them each spring for an hour. During the time, he works to engage recipients of scholarship aid in a dialogue on the importance of the gift in helping them meet their education and career objectives. He said he hopes the students realize the importance of endowed philanthropy in making the educational system work.

"I hope recipients feel and accept a moral obligation to propagate similar gifting to the university sometime during their lifetime," he said.

For more information about submitting a proposal, please contact Badertscher at nbg@andrew.cmu.edu.



College of Fine Arts Completes Strategic Plan

■ Eric Sloss

Led by Hilary Robinson, the Stanley and Marica Gumberg Dean of the College of Fine Arts, and the college's associate deans Barbara Anderson, Luis Rico-Gutierrez and Ramesh Krishnamurti, the staff and faculty of the College of Fine Arts (CFA) have completed a strategic plan for the college.

The process began at the start of the last academic year, and included two full retreats for faculty and staff; benchmarking interviews; stakeholder

interviews; executive sessions; and on-line input (a survey monkey and a wiki) for faculty and staff. It was guided by the consulting services of John Camillus, professor of Strategic Management at the Joseph M. Katz Graduate School of Business at the University of Pittsburgh.

More than 150 faculty and staff attended the strategic planning retreats, and about 80 contributed feedback online regarding the plan's initiatives, mission and vision.

The final CFA strategic plan is

structured to be college-wide, but allows the individual schools to develop their own missions and strategies. It affirms the college's identity, values, aspirations and competencies. It also outlines seven initiatives aimed at realizing the college's vision and achieving its primary strategic goal: Transformational Leadership for Education, Practice, Scholarship and Research in the Arts.

The initiatives are: extending the Margaret Morrison Carnegie Hall to create space for strategic collaboration;

further enhancing the STUDIO for Creative Inquiry and growing an Arts and Technology Center; building the CFA brand in keeping with its mission and vision; strengthening inter-disciplinarity: student and faculty research; strengthening inter-disciplinarity: undergraduate and graduate educational programs; enriching programs for faculty and staff development; and intensifying international engagement.



and Computer Engineering Department.

Her appointment, which began Nov. 1 and runs through 2013, is the first chair of its kind dedicated directly to future electricity infrastructures. She is

developing intricate software-based tools to make the electric power grid more economical to operate and safer to use.

Associate Professor to Lead National Design Society

Eric Anderson, associate professor in Carnegie Mellon's School of Design, will become president of the Board of Directors and Education Council of the Industrial Designers Society of America (IDSA) in January 2009.

Anderson is the first African-American to be elected president of IDSA and the only

African-American ever elected to the Board of Directors. He will be the third educator and the third School of Design faculty member to hold the post.

Active in the local community, Anderson is the founder of Design Camp, a weeklong summer experience for African-American boys. He is also founder of the design consulting firm To Envision, Inc. Anderson holds a master's degree in fine arts and a master's degree



in design education from The Ohio State University. He earned a bachelor's degree in industrial design from the Philadelphia College of Art. His professional experience includes consulting for companies such as ACME Animation and Six Flags.

Rhetoric Professor Publishes Book

Rhetoric Professor Linda Flower recently published "Community Literacy and the Rhetoric of Public Engagement" with Southern Illinois University Press. For a decade, urban teenagers at Pittsburgh's Community Literacy Center wrote and held public dialogues about issues from risk and respect to police and school policy. This history of a local counterpublic explores the contested meanings of empowerment and rhetorical agency in the context of intercultural inquiry.



INFORMS Award Goes to Tepper Professor

The Institute for Operations Research and the Management Sciences (INFORMS) selected

Linda Argote, the David M. Kirr and Barbara A. Kirr Professor of Organizational Behavior and Theory at the Tepper School of Business, to receive the 2008 INFORMS Fellows Award in recognition of her professional contributions to the advancement of operations research and the management sciences.

Argote, one of 12 recipients this year, received the award at a special luncheon during the INFORMS annual meeting in Washington, D.C. She joins four faculty members and five Ph.D. alumni as INFORMS Fellows.

Argote is also a fellow of the Association for Psychological Science. Her instruction and research focus is on organizational learning, innovation productivity, knowledge transfer, organizational memory, group decision-making and performance.



LECTURE SPOTLIGHT: MARTIN LUTHER KING JR. DAY KEYNOTE ADDRESS

Michael Eric Dyson To Speak on Eve of Historic Presidential Inauguration

■ Abby Houck

Carnegie Mellon's annual Martin Luther King Jr. Day Celebration will conclude with a provocative keynote address titled "King, Obama and The American Dream" by renowned scholar Michael Eric Dyson. This timely lecture falls one day prior to the historic inauguration of president-elect Barack Obama, one of the subjects of Dyson's most recent book.

"April 4, 1968: Martin Luther King Jr.'s Death and How It Changed America" probes the virtues and flaws of charismatic black leadership in the 40 years since King's assassination. The book also celebrates King's prophetic leadership and challenges America to renew its commitment to his vision.

Recognized in many circles as the "Hip-Hop Intellectual," Dyson has been named to *Ebony's* list of the "100 Most Influential Black Americans." His work combines cultural criticism and biography, while focusing on themes of race, religion and popular culture. His 16 books also include "Come Hell or High Water: Hurricane Katrina and the Color of Disaster," "The True Martin Luther King Jr.," and "Is Bill Cosby Right?"

In addition to his work as an activist,



COURTESY OF MICHAEL ERIC DYSON

AUTHOR AND PROFESSOR MICHAEL ERIC DYSON WILL DELIVER THE KEYNOTE ADDRESS FOR THIS YEAR'S MARTIN LUTHER KING JR. DAY CELEBRATION.

author and ordained Baptist minister, Dyson has served as a faculty member at numerous universities across the United States. He currently holds the title of University Professor at Georgetown University, where he teaches theology, English and African-American studies. He previously taught at the Chicago Theological Seminary; the University of Pennsylvania; the University of North Carolina at Chapel Hill; and Brown, Columbia and DePaul universities.

WHO: MICHAEL ERIC DYSON

WHAT: KEYNOTE SPEAKER, MARTIN LUTHER KING JR. DAY CELEBRATION

WHEN: 5 P.M., MONDAY, JAN. 19

WHERE: RANGOS BALLROOM

ONLINE: WWW.MICHAELERICDYSON.COM

MARTIN LUTHER KING JR. DAY MONDAY, JAN. 19

Classes scheduled after 12:30 p.m. are canceled for the day. All events take place in the University Center.

Noon	Community Collage and Choral Tribute to Dr. King
12:30 p.m.	State of Diversity Address – Jared L. Cohon
1:30 p.m.	Presentation of The Martin Luther King Jr. Writing Awards
2 p.m.	Children's Programs with Holden Puppets
2:30 p.m.	Community Conversation/Panel Discussion
4:30 p.m.	Candlelight Vigil
5 p.m.	Keynote Speaker – Dr. Michael Eric Dyson

Doctor Offers Veterans Program To Help Manage Stress

■ Heidi Opdyke

Dr. Bruce Rabin, medical director of the UPMC Healthy Lifestyle Program, will be providing a 12-week free program to help veterans of all wars and their families increase their ability to cope with stress and anxiety.

"Veterans who have served in military conflict have, in many cases, been exposed to high levels of psychological trauma," Rabin said. "Such intense and extended exposure to trauma without skills to cope with the effects increases the likelihood of long-term mental and physical health problems for the veterans."

This stress coping program, developed by Rabin, will help participants understand the mental and physical effects of stress and teach the skills to minimize them. This program teaches skills to increase the ability to be calm,

think clearly, reduce the likelihood of depression and rage reactions, and improve overall health.

Rabin said a maximum of 12 families would be in each group, and meetings will be scheduled to accommodate the participants. There is no fee for the program, nor is this part of a research study.

He emphasizes that he would like families to be included when possible. Many returning veterans want to be alone, he said. They desire privacy, experience "flashbacks," have sleep problems and easily "blow up."

"This program will help the veteran and their family manage stress," Rabin said.

For more information e-mail Rabin directly at rabinbs@upmc.edu.

The 'Sky' Is Not Falling



After swaying more than usual before Thanksgiving, the Walking to the Sky sculpture in front of Warner Hall has been stabilized with heavy-duty cables and the area surrounding the 100-foot-tall pole has been roped off with yellow caution tape. Engineers from California, who assisted in installing the sculpture in May 2006, traveled to Carnegie Mellon to investigate what caused the abnormal movement. After an initial inspection, which included some exploratory digging at the foundation, engineers concluded the sculpture and all associated components were structurally sound and in good condition. Further investigation was under way at press time as engineers will study the sculpture's mechanical resonance. Walking to the Sky, created by artist Jonathan Borofsky (A'64), was donated to the university by Trustee Jill Gansman Kraus, a 1974 alumna, and her husband, Peter. When the Pittsburgh Post-Gazette inquired about the status of the structure, Borofsky said, "The pole is not going to fall."

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ETC FACULTY MEMBER ANNE HUMPHREYS WILL BE REMEMBERED AS GUIDE, MENTOR

Anne R. Humphreys, a faculty member at the Entertainment Technology Center, died Tuesday, Dec. 2, 2008, at Magee-Womens Hospital. She was 45. For nearly a decade, she battled breast cancer but never let it get in the way of her tireless devotion to family, college teaching, hobbies and helping others.

"She was a born teacher who aspired to be a guide, mentor and

sounding board for students," Donald Marinelli, co-founder of the ETC, wrote in a letter to colleagues.

Humphreys graduated from Mt. Lebanon High School in 1982 and from Washington and Jefferson College in 1986. In 1994, she received a master's degree in professional writing from Carnegie Mellon. Two years later, she received a master's degree from Carnegie Mellon in Communication

Planning and Design.

In 1996, she joined the technical staff of Carnegie Mellon's Learning Systems Architecture Lab, becoming co-director in 2000 until April 2006, when she joined the ETC.

A memorial service will be held Dec. 21 at 1 p.m. at Old St. Luke's Church, 330 Old Washington Pike, Carnegie.

The family suggests donations

in Ms. Humphreys' name to the local chapter of Susan G. Komen for the Cure, 1133 S. Braddock Ave., Pittsburgh, PA 15218, or to Anne Humphreys' Memorial Fund at Carnegie Mellon, in care of Sharon King, 5000 Forbes Ave., PPG 6, 11th Floor, Pittsburgh 15213.

To view the Post-Gazette's complete obituary visit: www.post-gazette.com/pg/08339/932585-122.stm