



Carnegie Mellon

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Thorpe's Thoughts SIX YEARS, SIX LESSONS IN QATAR

■ Andrea L. Zrimsek

After serving six years as the inaugural dean of Carnegie Mellon University in Qatar, Chuck Thorpe announced this spring that he was leaving the post to return to the Pittsburgh campus. Before leaving Doha, Thorpe gave a public lecture "Six Quotes from Six Years in Qatar" on some of the lessons he learned as dean of Carnegie Mellon's first undergraduate branch campus.

"The kids here still respect the college dean."

While walking through City Center Mall one day in 2004, Thorpe heard Merle

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Presidential Moment



PHOTO BY KEN ANDREYO

PRESIDENT BARACK OBAMA ADDRESSED AN INVITATION-ONLY CROWD IN WIEGAND GYMNASIUM ON JUNE 2 AS PART OF HIS ONGOING INITIATIVE OF TRAVELING AND SPEAKING OUTSIDE OF WASHINGTON, D.C. THIS WAS THE FIRST TIME THE UNIVERSITY HAS HOSTED A U.S. PRESIDENT. CMU PRESIDENT JARED L. COHON CALLED THE PRESIDENT'S SPEECH AN IMPORTANT PROGRESS REPORT ON THE ECONOMIC PLAN OBAMA LAID OUT EARLY LAST YEAR. HE SAID HE WAS PARTICULARLY PLEASED TO HEAR THE EMPHASIS ON CLEAN ENERGY AND INVESTMENTS IN EDUCATION AND RESEARCH. READ MORE ABOUT OBAMA'S VISIT ON PAGE NINE.

Summer Work To Refresh Campus Spaces

■ Bruce Gerson

Ah, summer . . . when the living is easy. True for some, but not for the folks at Campus Design and Facility Development (CDFD), who are managing three major renovation projects, several smaller capital renewal efforts and the completion of an initiative in Wean Hall, which is transforming space formerly held by the School of Computer Science into new offices and classrooms for mathematics, physics, engineering, the humanities and software research.

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SAMS Celebrates 10 Years of Building Scholars

■ Abby Houck

Carnegie Mellon's Summer Academy for Mathematics and Sciences (SAMS) has created a diverse, nationwide community of scholars over the past 10 years.

This community will gather Aug. 6–8 in Pittsburgh for a reunion, which will enable alumni opportunities to interact with current students and reconnect with fellow classmates, instructors and staff.

"SAMS is about filling educational gaps and improving the caliber of each student," said Ty Walton, director of the Carnegie Mellon Advising Resource Center (CMARC), which coordinates SAMS. "We recruit good students who can become excellent students."

Bill Elliott, vice president emeritus, founded SAMS in 2001, at a time when researchers and institutions of higher education were beginning to discuss a national pipeline problem: A limited number of outstanding college-bound students from diverse backgrounds were pursuing education in engineering and science.

"The staff of CMARC, SAMS faculty and student counselors are due

a BIG thank you for making the SAMS program such a great success," Elliott said. "Under the leadership of Gloria Hill and now Ty Walton, SAMS has become a model program for opening the pipeline for underrepresented populations to highly selective colleges."

A majority of SAMS participants are black, Hispanic or Native American students. Admission to the program

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Q&A: Book Grounds Teaching Tips in Research

■ Heidi Opdyke

Current and former Eberly Center staff members Susan A. Ambrose, Michael W. Bridges, Michele DiPietro, Marsha C. Lovett and Marie K. Norman recently published "How Learning Works: 7 Research-Based Principles for Smart Teaching." The Piper sat down with Ambrose, Norman and DiPietro to discuss the book.

Why did you write this book?

Ambrose: We wanted to distill the literature on learning into simple principles that can help faculty design better courses and teach more effectively. As it is, the research on learning is dense and technical, so busy faculty are unlikely to read it. At the same time, there are books with teaching tips and techniques, but they are not grounded in research and do not help instructors understand why or when particular strategies work. We wanted to bridge the gap between these two literatures. Our goal with this book, as in the rest of our work at the Eberly Center, is to help faculty better understand how students learn, so they can make sound teaching decisions across a range of contexts.

Who is the target audience?

Norman: It's for educators of all sorts: primarily university faculty, but also graduate students, faculty developers and K-12 teachers. It's relevant to a fairly broad audience.

Lovett: The book is also helpful for faculty at different stages of their careers. It can help new faculty be more efficient and effective from the start, and also help experienced faculty better understand when and why various teaching strategies work.

What do you want readers to take away from the book?

Lovett: Each chapter of the book deals with one of the seven principles. Chapters start with common teaching scenarios, which are composites of situations faculty we work with have faced. Then we analyze what might be going on in these scenarios, we introduce the relevant learning principle, and we discuss the research that principle was based on. Finally, we talk about specific strategies for improving your teaching in light of that principle.

Is this the first book published by the Eberly Center?

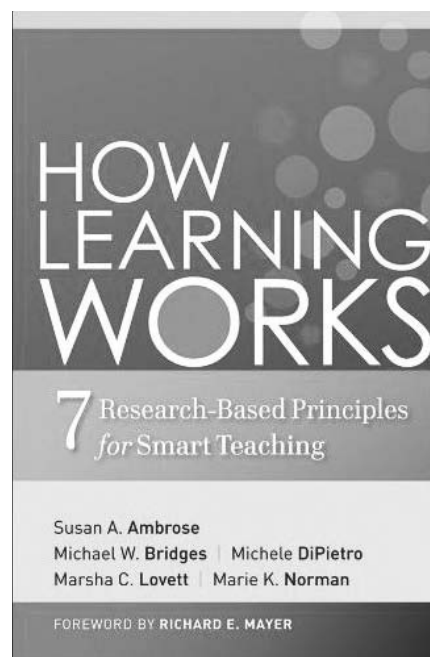
Ambrose: This is our first book published as a group. We all have individual works as well. We had five different authors who brought diverse backgrounds with perspectives that included cultural anthropology, history, cognitive psychology, social psychology and statistics. I don't know of any other place than CMU where a book like this could have been written. We're really happy with it.

Lovett: The research we used is from many disciplines: cognitive psychology, developmental psychology, social psychology, organizational behavior, anthropology and more. That's the nature of our work: to draw on a breadth of literature about how learning works and the multidimensional facets of students as they learn.

What is the role of the Eberly Center?

Ambrose: One of the reasons the Eberly Center was founded was that faculty are too busy working in their own fields to find and read the research on learning. Our job has been to stay abreast of research on education and translate it into ideas faculty can use. "How Learning Works" represents what the Eberly Center is all about, which is making it easier for faculty to put learning research into practice in their classrooms.

The center works with faculty across the university from very new to very senior. We also run a program for graduate students who teach or want to teach. When we first set up the center, we didn't want it to be a place for instructors to come only when they are encountering problems with their teaching, but rather a place where scholars who are interested in teaching as an intellectual activity could gather. We're



interested in fostering a community of educators at CMU.

Faculty members who come to the Eberly Center come for different reasons. Some are driven by a problem, frustration or concern they have; some come because they want to try something different: they're creating a new course or they want to use a new kind of pedagogy or classroom technology. We see people from all across the spectrum and all seven colleges.

The majority of the work we do is one-on-one consulting with faculty. It's

geared toward the faculty member's goals and course objectives, teaching style and students. We might spend 30 hours with a faculty member over the course of the semester, but if you then multiply that by what they learn, how many courses they'll teach, and how many students they'll influence during their career, that's a lot of students. Add the multitude of graduate students on top of that, and we believe we have had a huge impact.

One of the reasons we know so many people and are as interwoven into the fabric of the university as we are is because of Ted Fenton, who created the center in 1982. When he set it up, he took care to integrate it deeply into the culture of the university. I also think that, over time, we have earned the trust of the faculty here. They know when we look at their materials, do focus groups with their students and come into their classrooms to observe that what we see, read and hear remains confidential. They know we're on their side. Also, faculty are really busy, so all of the programs we do are geared toward helping them be more efficient while being effective, because we are a research university and we know there are heavy demands on their time.

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the PIPER

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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 Campus Affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2057.

Carnegie Mellon University publishes an annual campus security report describing the university's security, alcohol and drug, and sexual assault policies and containing statistics about the number and type of crimes committed on the campus during the preceding three years. You can obtain a copy by contacting the Carnegie Mellon Police Department at 412-268-2323. The security report is available through the World Wide Web at www.cmu.edu/police/. Obtain general information about Carnegie Mellon University by calling 412-268-2000.

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Guiding Light NAIR WRAPS UP FINAL SEMESTER



PHOTO BY TIM KAULEN

INDIRA NAIR, RETIRING VICE PROVOST FOR EDUCATION, GREETES BOB KAIL, FORMER ASSOCIATE DEAN AT THE COLLEGE OF ENGINEERING AND CARNEGIE MELLON IN QATAR, DURING A CELEBRATION OF HER TIME AT THE UNIVERSITY. PRESIDENT COHON ALSO RECOGNIZED HER AT COMMENCEMENT. "I DOUBT THERE'S ANY FACULTY MEMBER OR ADMINISTRATOR WHO'S TOUCHED THE LIVES OF SO MANY STUDENTS AS SHE HAS IN HER 32 YEARS AT CARNEGIE MELLON," HE SAID. "HER UNSELFISH AND BOUNDLESS LOVE FOR TEACHING AND LEARNING AND MOST OF ALL FOR ... HER STUDENTS, OUR STUDENTS [IS WHAT INDIRA IS ALL ABOUT.] TRULY INDIRA NAIR IS THE HEART AND SOUL OF THIS UNIVERSITY AND WE WILL MISS HER TERRIBLY." A SCHOLARSHIP IS BEING CREATED IN HER HONOR.

Collins, Krishnan and Taylor Honored with Heinz Professorships

■ Jocelyn Duffy

Three faculty members were honored with endowed professorships from The Heinz Endowments and The Heinz Family Philanthropies in May. Terry Collins of the Mellon College of Science was named the Teresa Heinz Professor in Green Chemistry; Ramayya Krishnan of the H. John Heinz III College was named the H. John Heinz III Dean; and Lowell Taylor of the Heinz College was named the H. John Heinz III Professor of Economics.

The professorships mark the continued support of the two philanthropies to Carnegie Mellon. Over the years they have provided funds for a wide range of projects at the university in fields including public policy, green science, architecture, computer science, robotics and the arts.

“The Heinz Endowments and Carnegie Mellon have a very special partnership, one that reflects our shared commitment to education, innovation and environmental sustainability, and most of all a strong future for southwest Pennsylvania,” said Chris Heinz, son of Teresa Heinz and the late H. John Heinz III and a member of The Heinz Endowments.

Collins, who also serves as the director of the Institute for Green Science, joined the Mellon College of Science faculty in 1987. He is internationally renowned as one of the founders of green chemistry, a field of study aimed at developing chemical products and processes to reduce or eliminate the



PICTURED FROM LEFT, PRESIDENT JARED L. COHON, ANDRÉ HEINZ, LOWELL TAYLOR, TERESA HEINZ, TERRY COLLINS, RAMAYYA KRISHNAN AND CHRIS HEINZ.

use and generation of substances that are hazardous to human health and the environment. Collins speaks to audiences worldwide on the subject, and has been a pioneer in green chemistry education, teaching the first course in the subject at Carnegie Mellon in 1992 and currently developing online resources for teachers. In addition to his work in education and advocacy, Collins is an avid researcher, having invented tetra-amido macrocyclic ligand catalysts (TAMs), a class of catalyst that has the potential to destroy pollutants in the water supply and soil and to provide more environmentally friendly alternatives to industrial processes.

Krishnan, the W.W. Cooper and Ruth F. Cooper Professor of Information Systems, joined the faculty of the H.

John Heinz III School of Public Policy and Management in 1988 and became the first dean when the school was renamed the H. John Heinz III College in July 2009. As a founder and chair of the Masters of Information Systems Management Program, Krishnan has been a driving force behind the college’s graduate information technology programs. He also is considered a strong advocate of innovative initiatives within the college, including the Washington, D.C. Heinz College Center, the revitalized Center for Economic Development and the new iLab Research Center. Krishnan is a well-known researcher, focusing on commerce, risk management and the design policies that take into account competing needs of data access and privacy.

Taylor, who is the academic director of the Center for Economic Development at the Heinz College, joined the faculty in 1990. He is an internationally recognized researcher who studies basic economic theory and statistical methodology, policy issues including labor market inequality by gender, race and sexual orientation, and incentive in health care and health insurance markets. In 2000, Taylor served on President Bill Clinton’s Council of Economic Advisers as a senior economist, working on issues related to labor, health and education policy. Taylor also has been recognized for his excellence in teaching having won the Heinz College’s top teaching award three times.

PHOTO BY KEN ANDREYO

Wing To Return To Lead Computer Science Department

■ Byron Spice

Jeannette Wing, assistant director for the National Science Foundation’s Computer and Information Science and Engineering (CISE) Division, will return to Carnegie Mellon on July 1 to once again head the Computer Science Department (CSD). She succeeds Peter Lee, who stepped down as department head last August to become director of the Transformational Convergence Technology Office in the Defense Advanced Research Projects Agency.

Wing, the President’s Professor of Computer Science and a faculty member in the School of Computer Science (SCS) since 1985, had been head of the CSD for three years prior to joining the NSF in 2007.

“For almost three years now, Jeannette has had a powerful influence on computer science nationwide as she has guided CISE, by far the largest source of federal funding for computer science research,” said Mark S. Kamlet, executive vice president and provost. “It is good to know that her strong, steady hand will again be leading our Computer Science Department, which has long set the standard for computer science education and research.”

CISE provides more than 80 percent of all federally funded research in computer science. During Wing’s NSF tenure, the budget for CISE increased to \$619 million for the current fiscal year, up 17 percent from 2007, not including \$235 million in stimulus funding last year.

Wing has championed the idea that computational thinking, which draws on fundamental concepts of computer science to solve problems, design systems and understand human behavior, should be incorporated broadly into educational programs. She launched a CMU Center for Computational Thinking in 2007 and, at the NSF, established programs to advance computational thinking.

“It has been an eye-opening experience for me to be in D.C.,” Wing said. “I learned a lot about how the federal government works and why it is crucial for scientists to be engaged in policy. I am also grateful for the opportunity to serve the nation’s computer and information science engineering research and education community in my leadership position at the National Science Foundation. However, my heart is in academia and I’m eager to return to the spirit of creativity, curiosity, and pursuit of

knowledge that defines the university environment.”

At the CSD, Wing will oversee 70 faculty members, 587 undergraduates and 135 graduate students. CSD is part of SCS, which tied for first-place among computer science Ph.D. programs in U.S. News and World Report’s 2011 edition of America’s Best Graduate Schools.

“We are all excited to have someone with Jeannette’s technical and leadership talent guiding the activities of the stellar group of faculty, students, and staff in CSD,” said Randal E. Bryant, SCS dean. “Having a strong computer science department is critical for the success of SCS and the entire university.”

Prior to becoming CSD head in 2004, Wing served five years as SCS associate dean for academic affairs, overseeing and standardizing the school’s nine doctoral and 12 master’s degree programs. She also served nine years as associate department head for the doctoral program in computer science.

As a researcher, Wing has been an international leader in the area of formal methods — the use of mathematical models and logics to specify and reason about computing systems — and in



JEANNETTE WING

trustworthy computing, with a focus on software security.

Wing is an alumna of the Massachusetts Institute of Technology, where she earned bachelor’s and master’s degrees in electrical engineering and computer science in 1979, and a doctorate in computer science in 1983. She began her career as an assistant professor at the University of Southern California and joined the Carnegie Mellon faculty in 1985.

PHOTO BY TIM KAULEN

Spanish Lessons

TARDIO, ANTKOWSKI MAKE A DIFFERENCE IN NICARAGUA THROUGH ART

■ Shilo Raube

When Mauren Antkowski (A'04), an art major, took Therese Tardio's intermediate Spanish class in 2002, she didn't realize that five years later the two would be co-founders of a successful arts education program in Nicaragua.

"I was interested in teaching art in a native Spanish-speaking school," said Antkowski, a staff member in the Philosophy Department. "Therese approached and invited me to teach in two schools that she was involved with in Granada, Nicaragua. When we returned, we decided to make the trip an annual event and to try to build a sustainable project to support the arts. That's how the Granada Arts Education Project was born."

The Granada Arts Education Project (GAEP) serves a community of schools in Granada with activities and art appreciation. Fundraising allows the project to donate supplies, sponsor art education activities and support translation needs.

"The schools in Nicaragua do not have resources for any type of arts program," said Tardio, associate teaching professor of Hispanic Studies who had spent time in Nicaragua for research and to volunteer with Building New Hope, a Pittsburgh-based non-profit that supports community development in Nicaragua and El Salvador. "The arts are important to stimulate children's brains and foster overall intellectual development. Through the project, we're hoping to improve the education of Granada's students while also giving them a creative outlet."

Students and teachers in Granada have welcomed the art curriculum. Artwork is done during free class time and only after the students' regular work is completed. Antkowski and Tardio work with the teachers to include projects that complement what the students are learning in class.

"When one class was learning about the environment, Mauren designed lesson plans for projects using rocks, plants and sun paper, after first talking about the importance of land and water use," Tardio said. "It was a project that rein-

forced what the children were learning in other classes, but creative at the same time."

"The students are really proud of their work," Antkowski added. "Last summer, we kept all of the work they did and set up an art exhibition. We invited their families, and the kids were so excited to show off their work."

Currently the GAEP supports two schools in Granada with arts education but there are plans to expand. In addition to sending supplies, the GAEP provides resources for the Granada teachers to use on future projects and art-related field trips.

And the GAEP's work is also benefiting Pittsburgh-area students and promoting cultural exchanges through swap projects. In one swap project, Antkowski had students in Granada make self-portraits that she brought back and shared with Winchester Thurston students — who then learned about Nicaragua and made self-portraits, which were sent to Granada.

"We're just trying to bring art activities to places that don't have them," Antkowski said. "Besides fundraising, we're always looking for artists to collaborate, lesson plans to use or new ideas."

**SUPPORT THE GRANADA ARTS EDUCATION PROJECT (GAEP)
AT 6 P.M. ON SATURDAY, JUNE 19, AT GAEP'S
THIRD ANNUAL FUNDRAISER AT AVA BAR AND LOUNGE,
126 S. HIGHLAND AVENUE. BROWSE
AND PURCHASE ARTWORK DONATED BY PITTSBURGH ARTISTS.**



MAUREN ANTKOWSKI WORKS WITH CHILDREN AS PART OF THE GRANADA ARTS EDUCATION PROJECT, WHICH PROMOTES ART IN THE SCHOOLS.

PHOTO COURTESY OF MAUREN ANTKOWSKI

Calendar of Events

"Literacy in Context(s)" Communication Symposium

June 21-23
The English Department presents Cheryl Geisler (H'86) of Simon Fraser University and Ann M. Johns of San Diego State University. Email the symposium coordinator Danielle Wetzal at dfz@andrew.cmu.edu with questions. RSVP to Emily McCall at emccall@cmu.edu. <http://english.cmu.edu/research/symposium/index.html>

L&D session: Presentation Skills

Ron Placone will provide practical tips on topics such as the importance of audience analysis, techniques for developing persuasive organizational patterns and ways to improve your delivery.
9 a.m. - noon, Thursday, June 24
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

Hunt Institute Open House 2010

In conjunction with the exhibition "Botanicals: Environmental Expressions in Art, the Alisa and Isaac M. Sutton Collection," the Hunt Institute will hold its annual Open House, which will include a guided gallery tour of the exhibition, two curators' talks and displays, a talk about and tour of the reading room and a Q&A with curators and the graphics manager.
12:30-4:30 p.m., June 27-28
5th Floor Hunt Library
huntbot.andrew.cmu.edu/HIBD/Services/OpenHouse.shtml
For more, see page 12.

L&D session: Fostering Team Creativity

Ron Placone will lead a session to explore ways managers and team leaders can stimulate innovative work teams.
Noon-1:30 p.m., Tuesday, June 29
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: Facebook: Personal Privacy Settings

David Holzemer will lead a session to walk through some of the personal privacy options that are available to use in Facebook.
10-11:30 a.m., Wednesday, June 30
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: Presenting with PowerPoint and Visual Aids

Karen Beaudway will lead a session on basic presentation theory and proven techniques to get better results with each PowerPoint.
10-noon Tuesday, July 6
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: Career Tune-up

Lola Mason will lead an expert panel to answer career development questions. Prior to the workshop, participants will take an online career assessment.
9-11 a.m., Thursday, July 8
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: Goal Setting, Coaching and Developing Employees

Lola Mason and Ron Placone will lead a session to provide managers with an overview of the tools and resources that can help their employees explore development opportunities, including career enrichment, advancement and transition.
9-11 a.m., Thursday, July 15
Connan Room, UC
www.cmu.edu/hr/learning/

L&D session: Beyond Basics, Hands-On Tips and Tricks for PowerPoint 2007

David Holzemer will lead a session to create more impactful slides, create slide masters, format images and more. An intermediate-level understanding of PowerPoint is assumed.
9 a.m.-noon, Wednesday, July 21
Hearth Room, Whitfield Hall
www.cmu.edu/hr/learning/

L&D session: UniverSOUL Leadership

Michael Nee and Freida Williams will challenge assumptions, analyze traditional leadership models and explore non-traditional leadership styles in this workshop.
9 a.m. - noon, Thursday, July 22
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: As You Live Your Day, You Live Your Life

Lola Mason will focus on the way we spend our time based on the concept of importance — all those things we know we should be doing but

put off. To be effective and balanced, we need to schedule our priorities rather than prioritize our schedules.

9-11 a.m., Tuesday, July 27
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

L&D session: Is Social Media Right for You/Your Department/Your School?

Amanda Berneburg and Jay Brown will discuss the most popular social media tools and concentrate on when to use these tools for your marketing needs, and when they're not as useful.
Noon-1:30 p.m., Wednesday, July 28
McKenna/Peter/Wright Room, UC
www.cmu.edu/hr/learning/

Kennywood Picnic

Staff Council presents the annual Employee Kennywood Picnic on Saturday, July 10. Carnegie Mellon employees must present their ID to purchase one FunDay ticket for \$10, valid only on July 10. Employees can purchase up to nine additional tickets that can be used through the end of the 2010 Kennywood season. The first four additional tickets are \$15 each, and up to five more tickets are available for \$20 each. Tickets can be purchased — cash only — at the following times and locations:

- 11:30 a.m.-1 p.m., Monday, June 28, University Center (UC)
- 11:30 a.m.-1 p.m., Tuesday, June 29, UC
- 11:30 a.m.-1 p.m., Wednesday, June 30, UC
- 11:30 a.m.-1 p.m., Tuesday, July 6, Mellon Institute
- 4:30-5:30 p.m., Tuesday, July 6, UC
- 11:30 a.m.-1 p.m., Wednesday, July 7, UC
- 11:30 a.m.-1 p.m., Thursday, July 8, UC

Staff Council serves as the voice for staff at Carnegie Mellon through policy advocacy and community involvement. For more on Staff Council events and services, visit www.cmu.edu/staff-council.



ART PROJECTS REINFORCE WHAT CHILDREN LEARN IN OTHER CLASSES.

Humanitarian Ian Rawson Shares Message of Perseverance, Hope

In his keynote address at Carnegie Mellon's 113th commencement last month, Ian Rawson, managing director of Hôpital Albert Schweitzer in Haiti, encouraged the Class of 2010 to learn from the people around them. The following are excerpts from his remarks.

Thank you for this opportunity to salute these outstanding graduates. It's a little bit intimidating to look out here, and to see all of you who are graduating, and knowing that when you came here several years ago, probably every one of you was the top student in your class, or knew who was. But every now and then — Leslie [McAhren, this year's student speaker] will recognize this as a Copernican inversion — sometimes it's possible for us, as teachers, to learn from our students, and it's possible for us, as health care providers, to learn from our patients. And that's an experience I would like to share with you today.

As President Cohon said, I have the honor to serve at Hôpital Albert Schweitzer, which is three hours from Port au Prince, far out of the epicenter of the earthquake zone, and not directly affected. We were somewhat dissoci-



IAN RAWSON SHARED EXPERIENCES FROM THE ALBERT SCHWEITZER HÔPITAL IN HAITI.

of pickup trucks, tap-taps that serve as public conveyances. Patients who had been found by family members or neighbors were placed on the door of the ruined building, and put in the back of the pickup truck, and driven out to the hospital, which, at that time, was one of the few hospitals open in Haiti,

pressed the strength, the determination. He had no idea where he was; he had no idea what he had actually lost. He knew that he was in pain, and he hoped that this would be better. On balance, he said, it's not too bad.

President Jared L. Cohon lauded the class of 2010. "It's classes like yours that remind us why we, as teachers and staff, love what we do and why we love Carnegie Mellon." Watch his charge to the graduates at <http://www.youtube.com/watch?v=9dJHvUZn-uc>.

Student speaker Leslie McAhren (A'10) asked her class to pursue a lifelong ascent. Watch her remarks at http://www.youtube.com/watch?v=dRTVwnz_KY0.

A GigaPan was taken of the commencement ceremony. Visit <http://bit.ly/GradGigapan> to see the multibillion-pixel panoramic image.

PHOTO BY KEN ANDREYO



TO VIEW A VIDEO OF IAN RAWSON'S SPEECH, SEE:
[HTTP://WWW.YOUTUBE.COM/WATCH?V=XyG3KB7aw48.](http://www.youtube.com/watch?v=XyG3KB7aw48)

ated from reality, because all the internal telecommunications in the country collapsed. We had no cell phones, no way of communicating. We didn't know the extent of the problem in Port au Prince. It was late in the evening when the first patients started to come, in the back

at least to the area closest to the Capital City. And they came, one and two and three and four, and then many, and still we had no idea of what the extent of the damage was.

You knew more about what was happening in Haiti, than we did. You had the advantage of the helicopters flying over the capital; you had the advantage of Anderson Cooper explaining reality to us, yet one more time, and we didn't know. All we knew was the reality of more and more patients were coming. We have a trauma system, where we can take care of mass casualties, maybe 30 patients at a time, if one of these tap-taps that's fully loaded tips over. We went through that protocol in about an hour. And more and more patients came, with incredible strength, determination and even creativity.

One of the young men who came — we went out to the truck to transfer him to a stretcher to bring him into the hospital — had wrapped around his right leg pieces of cardboard that would hold his leg stable. Pretty good first aid, don't forget that trick. And as we were putting him on the stretcher, it was evident that that wasn't the only place where he had been hurt, but he didn't want to share any of the pain. In Haiti, when you see somebody, you must greet them. <Speaking in Creole> "Kouman ou ye?" "How are you?" I asked. "Pa pi mal," I'm not too bad. And here he ex-



GORDON BELL RECEIVES AN HONORARY DEGREE FROM PRESIDENT JARED L. COHON. BELL, THE FATHER OF THE MINICOMPUTER AND A WORLD-RENOWNED PIONEER IN HIGH-PERFORMANCE AND PARALLEL COMPUTING, IS A PRINCIPAL RESEARCHER AT MICROSOFT'S SILICON VALLEY LABORATORY. HE IS REVERED AS PART OF THE STARTUP FACULTY OF CMU'S COMPUTER SCIENCE DEPARTMENT.

As we started to move people out of the small triage area into a larger holding area, and started to find out where to put all these people — our 80 beds were used immediately — we went to every house on the campus, and just took beds out of people's rooms, and put them up in the hospital, then sent to town to buy some more. The logistics were astounding. And in the emergency area, the expanded emergency area, we were running almost in Boolean motion to get IV lines, to take people to the laboratory or to the x-ray, and all of a sudden it occurred to me that it was so quiet.

Think about a television program and about a scene in an emergency room. And people are running around and shouting, "Doctor, I need a <inaudible word> stat," and "My husband, my husband." Turn off the sound, and

the reserve and the strength.

We started to sort people around and take them down the halls to be ready to go into the operating room, two operating rooms, operating virtually 24 hours a day. All of our permanent doctors are Haitian, all of our permanent nurses are Haitian and that's who was there when the earthquake hit, and that's who was there for several weeks thereafter. And as I was going down one of the halls, and by somebody I had passed frequently, an older woman, she waved me over.

<Speaking in Creole> "Vin, pale ou." "Come, I want to talk to you," she said. I said, "Okay, me?" <Speaking in Creole> "Sa fe m(wen) doule." "This hurts me," and she points to her leg. And on her leg was an x-ray, because she was one of the ones next in line



STUDENT SPEAKER LESLIE MCAHREN WALKS MASCOT MAGGIE INTO THE COMMENCEMENT CEREMONY ON SUNDAY, MAY 16.

PHOTO BY KEN ANDREYO

PHOTO BY KEN ANDREYO

Rawson Shares Message of Hope

CONTINUED FROM PAGE FIVE

for the operating room. So I looked at the x-ray, and then I had to turn it so it was between me and her face, because I didn't want her to see what my reaction to the X-ray was. And I put it down, and I said, <Speaking in Creole> "Li fé m mal." "Yes, I know that hurts you," and "Eskize, Madam, we don't have anything."

We ran out of all of our antibiotics, we ran out of all of our analgesics within five days. We keep a 30-day supply. That's how big the demand was. And she looked up to me with a smile, and almost as though she was comforting me, because she'd seen me going by hundreds of times in the several days. And she said, <Speaking in Creole> "Wi m konne." "I know. Pèseverans." Perseverance. That's what it's going to take to get through this. That's what it's going to take her to get through this terrible injury she has, to wait until it's her turn to go to the operating room. That's what it's going to take all of us to get through this.

People in Haiti have had a tough life. They've had to persevere. It's only with pèseverans, that they're able to continue and to thrive. In the mornings, when we would go around the hospital and see how people were overnight, people had recognized that they were going to be there at the hospital for several days, and family members had brought them radios. So in the morning, there's a popular program where they play hymns at seven o'clock in the morning. And somebody in this large waiting room area that we had, had put on the radio, and had the hymns on. And very quietly, so as not to disturb anybody, the woman who had the radio was singing with it, and other people were singing, and then other people were singing. And all around the room, they were singing quietly, again, not to disturb people who had yet woken up.

Not everybody in Haiti is Christian, but everybody was singing, because everyone recognized the power of song to raise your voice to an unknown spirit. Perhaps in supplication, perhaps in thanks, but communing together from many faiths at the same time, seeking and finding strength in the possibility of communing together with some higher force that might help them through this, to join their pèseverans, with hope.

After several weeks, we began to see the tide recede. We were able to transfer patients out of the hospital to an uncertain future. In an American hospital, we write on a chart, "transfer home." We just wrote, "transfer," because we didn't know whether these people had homes, and many of them did not have homes to go back to. But we began to see the patterns emerging, and we began to notice in the few moments we had to talk together, the large number of patients who had come out to us with traumatic amputation and the several

that we had had to perform amputations on, either due to the trauma or because of the possibility of infections. And a wonderful thing happened. We had the opportunity to start a prosthetic service, to be able to give people who had lost an arm or a leg, some new mechanism to be mobile, to be active.

After several weeks, we had collected a large number of patients, and we had arranged some houses in a village where they could live as they were waiting. The technicians would go over, and they would explain the mechanism of the complex knee, and the complex foot. The feet are wonderfully designed. They have a metal plate, a narrow metal plate under them, and it's an energy transferring plate, so think, as you put your foot down and roll forward, as you're walking forward, your toes kick up to carry you forward. Don't try that now, your time is coming. That's what magically propels you forward.

We were explaining this to people, and two of the people we enjoy talking to so much, a young girl with a beatific smile, and her good friend, they had met at the hospital, and they had bonded almost as sisters. And we were explaining this, and she had taken a few dance lessons, and they were always moving gracefully whenever the radio was playing in the small village, and she said, "Yes, that looks good to me. That's a great idea."

The next day she and her friend came, and they were the first ones to receive their new legs. And she was first. And they fitted the leg, and she walked on the parallel bars, and because she was graceful, we said, "Now, later you can walk outside the bars." She said, "That's okay, I can do it," and she turned around and walked around. And all the doctors, the nurses, the physical therapists were there, taking her picture and cheering her on, and she got to the end, and gave us all her patent and beautiful smile.

Then her friend was getting her leg, so everybody else went down to be with her, and to cheer her on, and to take her picture. So she went back to the parallel bars, and she walked out, she held on with her left hand, and stood there for a moment. Then rose up on tiptoe, and struck a pose. Again, with her most beatific smile.

Only a few of us saw that, but those who did learned from her, the power of perseverance, and the power of hope. A young girl had lost almost everything, her family, her home, her leg, but she knew where she was going, and she knew how she could carry forward.

So from our patients at our hospital in Haiti, who are our teachers, and me, I congratulate all of you for what you've learned from your teachers, and wish you God speed, bon chance, good luck. <Speaking in Creole> Mèsi anpil. Thank you very much.



PHOTO BY DAVID ASCHKENAS

ALUMNA PAULA WAGNER DELIVERED THE KEYNOTE SPEECH FOR THE TEPPER SCHOOL OF BUSINESS. WAGNER, A GRADUATE OF THE COLLEGE OF FINE ARTS AND A MEMBER OF THE UNIVERSITY'S BOARD OF TRUSTEES, TOLD GRADUATES "IT IS A TIME TO CREATE YOUR OWN RULES, BE AN ENTREPRENEUR AND CHART YOUR OWN PATHWAY THROUGH THE EVER-CHANGING LANDSCAPE."



PHOTO BY KEN ANDREYO

VOCAL PERFORMANCE MAJOR IAN MCEUEN RECEIVED UNIVERSITY AND COLLEGE HONORS. MCEUEN IS GOING TO THE UNIVERSITY OF CINCINNATI'S COLLEGE-CONSERVATORY OF MUSIC TO CONTINUE HIS STUDIES WITH A FOCUS ON OPERA. "I AM SO EXCITED TO GO FORWARD INTO THE WORLD OF PERFORMANCE WITH THE TOOLS I HAVE GAINED FROM MY EDUCATION HERE AT CMU," HE SAID.



PHOTO COURTESY OF CARNEGIE MELLON QATAR

MORE THAN 700 FAMILY AND FRIENDS ATTENDED THIS YEAR'S GRADUATION CEREMONY IN QATAR, WHERE SYMBOLS OF QATAR, THE UNITED STATES AND SCOTLAND WERE REPRESENTED. THIRTY-FOUR STUDENTS GRADUATED WITH BACHELOR'S DEGREES IN BUSINESS AND COMPUTER SCIENCE.



PHOTO COURTESY OF CARNEGIE MELLON QATAR

URMILA ROSARIO (TPR'10) PRESENTS CARNEGIE MELLON QATAR DEAN CHUCK THORPE WITH THE CLASS TILE. ROSARIO SPOKE ON BEHALF OF THE STUDENTS DURING GRADUATION. CLASS TILES ARE PRESENTED DURING FRESHMEN CONVOCATION AND STUDENTS PASS IT AMONG THEMSELVES BEFORE RETURNING IT TO THE UNIVERSITY AT GRADUATION. IT WILL BE INSTALLED IN THE NEW BUILDING.

The Last Run

FAMILY TIES SPAN THREE GENERATIONS FOR THE DONATELLIS

■ Josh Centor

Dario Donatelli has done the same things his teammates on the Carnegie Mellon cross country and track and field teams have done — work hard, run in all types of weather, balance school with athletic commitments and listen to the head coach. For Donatelli, listening to the head coach is something he's been doing for many years.

Donatelli has spent the past four years running for his dad — also Dario Donatelli. The elder Donatelli is a 1981 graduate of Carnegie Mellon, where he earned All-American honors in cross-country and has spent the last decade as the head coach of the men's and women's cross country and track and field programs.

"We obviously have a special relationship," said the younger Donatelli. "He was my coach in grade school, so it wasn't a completely foreign experience. Having my father as my coach motivates me and gives me an extra reason to do well."

Coach Donatelli has relished the experience of spending time with his son.

"I did get to spend a lot of time with him," Donatelli said. "I'm expecting next year to feel different when he's gone."



THE DONATELLI FAMILY HAS MADE CARNEGIE MELLON A TRADITION: KATHY (FROM LEFT), DARIO SR., DARIO, VINCE, ANGELA, NICOLE AND JO.

Donatelli, who earned his degree in mechanical engineering, will be joining the U.S. Marine Corps, and anticipates being commissioned in October.

"At first, I was apprehensive, concerned and proud," said Donatelli, regarding his son's military aspirations. "I didn't know which emotion was more dominant but it's been a couple of years and it's settled in. He chose his path and he's put himself 100 percent behind it."

During his freshman year, the younger Donatelli was contacted by a recruiter. He switched from physics to mechanical engineering, and after two summers training in Quantico, Va., Donatelli committed to the Marines.

"I'm doing something for my country and I also think it's a good career opportunity," Donatelli said. "It's something I've come to look forward to — traveling and seeing other places around the

world."

He ended his collegiate career with a strong finish — pounding the pavement a few last times with dad watching all the way. Donatelli placed eighth in the 10,000-meter run, as the Tartans finished fourth in the University Athletic Association Championships in April.

The university has been a part of the Donatelli family for many years — older sister Nicole is a 2008 graduate and grandmother Jo is a contract manager for Facilities Management Services.

"I always kind of assumed I'd come to Carnegie Mellon," Donatelli said.

The senior Dario Donatelli said while it's been a great bonus to see his children near home for school, he offers a little advice for parents who work at the university and have children getting ready to come to campus in the fall.

"My biggest advice to parents is to treat your kids like they have gone away to school out of the area. Tell them they know where to find you at your office, etc. but don't expect me to come looking for you," Donatelli said. "Give them their space. When they need you or are ready, they'll stop in and see you."

PHOTO BY KEN ANDREVO

PHOTO BY BRAD STEPHENSON

Mother, Daughter Share Heinz Experience

■ Jonathan Muller

Geraldine and Lauren Halloran are starting a unique family tradition: obtaining master's degrees from the Heinz College.

Geraldine "Gerrie" Halloran is a 1993 graduate of the Heinz College's Master of Public Management (MPM) program, and her daughter, Lauren, received her Master of Biotechnology and Management (MSBTM) degree in May. They are one of the few families to have two generations of Heinz College graduates.

"Carnegie Mellon runs in the family," Lauren said. "My great-grandfather went to Carnegie Tech. He ran track for CMU and once beat Jim Thorpe in a race."

Thorpe, a 1912 Olympic gold medalist, is considered one of the greatest athletes in modern sports.

Gerrie, coordinator for health care programs at the Heinz College, was attracted to the MPM program because it allowed her to work full time and raise her children. Lauren graduated from the College of Charleston, but chose to follow in her mother's footsteps and continue her education here.

Lauren was part of the second graduating class of the MSBTM program, one of the first of its kind. The faculty teaches a curriculum based on real-world problem solving, bringing a wealth of industry experience into the classroom.

Lauren has been very pleased with

the interdisciplinary nature of the MSBTM program and has taken advantage of opportunities throughout the university. She traveled with a group of Heinz College and Tepper School of Business students to South Africa, taking courses on culture and economics. The program, in its third year, is organized through Tepper's Black Business Association.

While growing up, Lauren spent a lot of time at the Heinz College, and she feels right at home in Hamburg Hall. In her role on the executive board of the Health Care Policy Club she has had a chance to work with staff she has known since she was a child. Meanwhile, Gerrie works to support the MSBTM program and has gotten to know many of Lauren's classmates.

"Working with the students keeps you young," Gerrie said. "It's been wonderful having my daughter here on campus."



LAUREN (H'10) AND GERALDINE HALLORAN (H'93) ARE ONE OF THE FEW FAMILIES WITH TWO GENERATIONS OF GRADUATES FROM THE HEINZ COLLEGE.

piper
TRIVIA

Congratulations to Pat Herbster, Paulette Irwin, Bridget Jakub, Gail Newton and Robert Seacord for answering the May Piper Trivia question.

Go online to the Piper+ at <http://bit.ly/CMUpiper> for this month's question. Previous winners are ineligible. Winners will receive a prize from the Carnegie Mellon Bookstore.

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Student Mentor Focuses on Robotics, Teamwork and Leadership

■ Heidi Opdyke

“Organized chaos” is one way Ryan Cahoon (CS’12) describes his Tuesday nights during the academic year. Cahoon, a computer science major, volunteers with the McKeesport Area High School and Technology Center robotics team, which competes in the FIRST® (For Inspiration and Recognition of Science and Technology) program.

Patricia DePra, the regional director for FIRST®, said that college students are extremely valuable to the program. Supported by a strong network of sponsors and volunteers, FIRST® provides four programs: the FIRST® Robotics Competition (FRC) and the FIRST® Tech Challenge for Grades 9-12 (ages 14-18); the FIRST® LEGO League (FLL) for Grades 4-8 (ages 9-14); and the Junior FIRST® LEGO® League for Grades K-3 (ages 6-9).

“College students are a very valuable resource for high school students in the FIRST® program,” DePra said, “not only with the robotics experience, but with the college experience. High school students who might not have considered college have the opportunity to interact one-on-one with exceptional students like Ryan. This can, and does, change students’ career paths.”

The program focuses on helping participants gain self-confidence, develop skills and discover potential career paths. For Cahoon, who has volunteered with the McKeesport club for the past two years, it’s a way to give back. The Seattle native made two trips to the international championship event as a high school student.

“That was really special. Having 20,000 people that are all in the one area, enthusiastic about the same thing you are, up in the stands cheering was amazing,” Cahoon said. “You just have

all this support around you, and you know that there’s actually a part of this program that’s beyond my little bubble. It’s something that I hope the kids would be able to experience at McKeesport.”

Mike Dischner coaches the McKeesport team and said Cahoon has taken the team to new heights and opened the eyes of the students to what they can achieve.

“For someone like Ryan to spend the time that he does with an urban school that’s not fancy and doesn’t have a lot of money, I can’t express how lucky we are to have him,” Dischner said. “He chooses to keep coming back. What he gives to these students is invaluable.”

McKeesport qualified for the championships in its rookie season in 2005. Since then, they’ve been focused on a return trip. Cahoon said this year was a great experience for them as they stretched their talents with a more ambitious design. The robots can be as large as 5 feet in height and weigh as much as 120 pounds.

Dischner agreed.

“Over the summer we’re going to continue to grow,” Dischner said. “If we have enough money, we’re going to build some parts ahead of time and build some manipulators and drive systems and try things out. We’re going to try and get some preparation for the season. We’ve never been able to do that before.”

Cathy Light, executive assistant to CMU President Jared L. Cohon, has two sons who are members of the McKeesport team. She said the skills the high school students learn go beyond engineering and programming.

“It’s not just about building the robots, but about teamwork and leader-



RYAN CAHOON (LEFT) WORKS WITH MCKEESPORT SOPHOMORE MARIO ALTIERI.

ship,” Light said. “It really is running a small business and teaching leadership skills.”

Light said team members are responsible for finding corporate sponsorships as well as having fundraisers. They also learn how to organize group trips to regional competitions and write thank you letters. As a parent, she said she was impressed with Cahoon’s dedication to the program.

“I’ve been here for three years now, and I’ve always heard about what great students Carnegie Mellon has, not just academically but in the community. He continues to blow me away with the thought he puts into all aspects.”

While McKeesport’s team didn’t qualify for nationals, they did receive the “Gracious Professionalism” Award at the Pittsburgh regional competition. Cahoon said a strong group of juniors would be returning to lead the team next year.

“The idea of gracious professionalism is embedded in the culture at FIRST® in that you go out and compete

like crazy but you’re always maintaining a professional attitude the entire time,” Cahoon said. “I think the kids were awarded for the perseverance in the face of adversity. So that was really cool to see them recognized for their attitude, not necessarily for their competition. In this kind of thing it is just as important.”

The experience helped move the team forward, Dischner said.

“We went up about two levels with the design this year,” the coach said. “We were working metal working designs. We had a design that was extremely radical, that turned out very well. Unfortunately, we ran into snow and lost two weeks.”

Cahoon came to CMU to be a part of the robotics program.

“I love the atmosphere,” he said. “It felt more open and kind of friendly, it felt like it had a very welcoming atmosphere, which is something I was attracted to especially for my undergraduate work.”

After college, he plans to serve with Teach for America before enrolling in

CONTINUED ON PAGE 10

Physics Aims To Take RoboCup To World-Class Levels

■ Byron Spice

It’s a World Cup year, but soccer star David Beckham just can’t bend it like he once did because of an Achilles tendon injury. The soccer-playing robots on Carnegie Mellon’s CMDragons team, however, are displaying unprecedented ball control skills as they prepare for RoboCup competition in Singapore.

Thanks to a new physics-based planning algorithm, the 6-inch-tall players should be able to out-dribble most of the competition and maybe even work in a new Beckham-like kick or two.

RoboCup may not attract the same massive crowds as the World Cup, but it is the world’s largest robotics and artificial intelligence event with about 3,000 participants expected in Singapore June 19-25. The CMDragons are stars at RoboCup, having won the Small-Size

League in 2006 and 2007, and finishing second in 2008. A preliminary version of the physics-based planning algorithm helped the team dominate its early matches last year before a computer glitch eliminated the team during the quarterfinals.

“Physics-based planning gives us an advantage when a robot is dribbling the ball and needs to make a tight turn, or any other instance that requires an awareness of the dynamics of the ball,” said Stefan Zickler, a newly minted Ph.D. in computer science who developed the algorithm for his thesis. “Will the ball stick with me when I turn? How fast can I turn? These are questions that the robots previously could never answer.”

Past robots have drawn from a repertoire of pre-programmed behaviors

to play their matches, said Manuela Veloso, professor of computer science and leader of Carnegie Mellon’s two robot soccer teams. That was OK for avoiding obstacles and reacting to the other team, but not for the level of play to which RoboCup aspires.

“To reach RoboCup’s goal of creating robot teams that can compete with human teams, we need robots that can plan a strategy using models of their capabilities as well as the capabilities of others, and accurate predictions of the state of a constantly changing game,” said Veloso, who is president of the International RoboCup Federation.

For his thesis, Zickler used physics-based planning to enable the robots to make bank shots suitable for playing mini-golf, and it’s possible the algorithm

CONTINUED ON PAGE 10



ROBOTS USE PHYSICS TO MAKE BANK SHOTS DURING ROBOCUP COMPETITIONS.

Obama Affirms Importance of Education, Innovation

■ Ken Walters

For the first time CMU played host to the President of the United States when President Barack Obama gave an address that focused on the state of the economy, health care, education and clean energy June 2 from Wiegand Gymnasium in the University Center.

After the speech, Carnegie Mellon President Jared L. Cohon supported Obama's call for investment in education and innovation to build a new and stronger foundation for the nation's economy — one that will allow America to maintain a strategic edge globally.

"This administration clearly understands the importance of investing in education, research and innovation and what that investment provides to the country in terms of economic growth," Cohon said. "President Obama understands perfectly that it's the key to growth and he understands government must play a key role in making those investments."

More than 300 people were on hand to hear Obama speak at the invitation-only event. He opened his 42-minute speech by thanking Cohon "and the entire Carnegie Mellon community, for welcoming me once again, and for the terrific work that he and the administration, faculty and staff do here each and every day."

The speech marks the second time that Obama has visited Carnegie Mellon. He made a campaign stop on June 26, 2008, when the then-senator for Illinois hosted a forum of industry leaders as part of a summit on ensuring America's competitiveness in the global economy. His wife, Michelle, also visited campus

during the 2008 presidential campaign. CMU also has hosted Vice President Al Gore, Sen. John McCain and the prime minister of Australia.

"We are very honored that President Obama chose Pittsburgh and Carnegie Mellon as the venue for his speech," Cohon said. "As the president said, Pittsburgh is a leading example of an industrial city that has transformed itself economically, and I think the administration recognizes that Carnegie Mellon is a major actor in that ongoing transformation."

In his speech, Obama mentioned the potential to create new businesses in fields such as education technology and advanced medical devices. Cohon noted that both Carnegie Mellon and the University of Pittsburgh have worked together to generate new companies in these very fields.

"Pittsburgh affirms the president's vision that to invest in the future of research is to make a down payment on job creation," Cohon said. "As the president said, this is a very competitive world and it's just going to get more competitive for nations and for regions like ours. So, it's an ongoing process, but we feel very good about where we are and very good about our prospects because of the universities more than anything else."

Obama's speech, which also included comments on the oil spill that is threatening the Gulf Coast and a comprehensive energy and climate bill, was webcast by the White House. You can access the video and full text of his speech at www.cmu.edu/multimedia/obama/.



PHOTO BY KEN ANDREYO

HUMANITIES & SOCIAL SCIENCES DEAN JOHN LEHOCZYK (FROM LEFT) ACCEPTS A SILVER LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) PLAQUE FROM AURORA L. SHARRARD (E'04, '07), DIRECTOR OF INNOVATION FOR THE GREEN BUILDING ALLIANCE. ALSO PICTURED ARE PITTSBURGH CITY COUNCILMAN BILL PEDUTO AND RALPH HORGAN, ASSOCIATE VICE PROVOST FOR CAMPUS DESIGN AND FACILITY DEVELOPMENT.

Gregg Hall Greening Earns Silver

■ Abby Ross

Aurora L. Sharrard (E'04, '07), director of innovation for the Green Building Alliance, presented Carnegie Mellon with a Silver Leadership in Energy and Environmental Design (LEED) plaque for the renovated Porter Hall 100 (Gregg Hall).

The "green" renovation project, completed in summer 2008, included the transformation of the 217-seat auditorium, the creation of a 3,200-square-foot second floor above the auditorium, and the restoration of the building exterior and windows outside the lecture hall. The new space above the auditorium houses the Information Systems Program in the College of Humanities and Social Sciences (H&SS).

The project's green elements include energy efficient lighting, appliances and computers; regionally manufactured materials that contain recycled components; and environmentally friendly paint, coatings, adhesives and sealants. In addition, 60 percent of the construction waste was recycled.

SAMS Celebrates 10 Years CONTINUED FROM PAGE ONE

has become highly competitive. More than 730 rising high school juniors and seniors applied for 55 open spots in this year's program, which runs June 26–Aug. 6. An additional 15 students are returning to SAMS for a second year.

There are no housing or dining fees for SAMS students, and there is no tuition thanks to internal, alumni, foundation and corporate support.

Students take courses and complete research projects in computer science, engineering, math and science. They also participate in SAT preparation courses, as well as workshops focused on the college application process. The program culminates in the SAMS research symposium, similar to the Meeting of the Minds undergraduate research symposium.

"The SAMS science and engineering research projects engage students in learning through problem solving in a real-world context," said Indira Nair, vice provost for education. "Such learning is highly motivating and is often cited by students as the reason they chose to study STEM [Science, Technology, Engineering and Mathematics] areas in college and pursue STEM careers."

Jeffrey Peterson, a physics professor in the Mellon College of Science, has been teaching a SAMS electronics course for five years. He has observed many students who develop the confidence to pursue careers in fields they previously thought were out of their reach.

"The students build circuits every day, starting with very simple ones and working up to quite complex circuits. Many students are very timid at first, convinced this type of work is beyond their ability," Peterson said. "Most of the circuits don't work at first, but they learn to use an oscilloscope to diagnose problems. Pretty soon they are modifying the designs and coming up with their own. By the end, some students say, 'I could be an engineer.'"

Since its inception, more than 800 students from 41 states, the District of Columbia, Puerto Rico and the Virgin Islands have attended the program. As of September 2009, 83 SAMS alumni had enrolled at Carnegie Mellon, including 36 in the College of Engineering, 22 in the College of Humanities and Social Sciences, 12 in the Mellon College of Science, five in the School of Computer Science and one in the College of

Fine Arts.

"While one goal of SAMS is 'to grow our own,'" Walton said, "another goal is to create a nationwide network of students and professionals who support one another and collaborate on academic projects and research."

"Many students make lifelong friends," said Damian Dourado, CMARC assistant director. "We've heard that some students coordinate their college visits so that they can reconnect with one another in person. They also use the SAMS Facebook page to see if other alumni plan to attend academic conferences."

SAMS alumni have attended numerous other prestigious colleges and universities including Columbia, Cornell, Dartmouth, Duke, Georgia Tech, Harvard, MIT, Princeton, Washington University in St. Louis and the University of Pennsylvania.

Institutional Research and Analysis conducted a SAMS alumni survey in 2008, and numerous alumni reported they were pursuing graduate-level education or attending medical school. Other alumni reported they were working for organizations such as NASA, the

National Institutes of Health, Wellington Investment Management and Motorola.

Whitney Harris Brown was a member of the inaugural SAMS class and will deliver the keynote lecture at this year's SAMS research symposium. She completed her undergraduate education at Stanford University and is a graduate student in physiology at Yale University. SAMS provided Harris Brown with valuable academic experiences such as her first calculus course, as well as an opportunity to meet her future husband, fellow SAMS alumnus Lt. Burnes Brown. She advises SAMS students to take advantage of the chance to build a national network of friends and future colleagues.

"It is impossible to know where you will be in the future, but the relationships that you build and the bonds that you make with such a talented, amazing group of people will last through the years," she said. "Everyone in this program has ideas, aspirations and abilities, and they will be great friends as well as great resources in the future."

For more about the SAMS reunion and program, visit www.cmu.edu/cmARC/sams-reunion/index.html.

Student-Athletes Aces In Classroom

■ Mark Fisher

It's commonplace for students to earn straight As at Carnegie Mellon. But it's rare for a student who also juggles the demands of being a star athletic performer. It's even less likely for that top student-athlete to carry a 4.0 grade-point-average throughout his four-year collegiate career. But this year, for the first time in history, Carnegie Mellon beat the odds with three of a kind ... three aces, if you will.

Soccer players Austin Good and Jon Hall and swimmer Jason Huber, all four-year varsity letter winners with cumulative 4.0 GPAs, received the Department of

Athletics' Dr. William Brown Academic Athletic Achievement Award as the top male student-athletes with the highest grade-point averages. Diane Mattingly, a four-year letter winner in track and field with a 3.87 GPA, received the Brown Award as the top female student-athlete.

"The recipients of the William Brown Academic Athletic Achievement Award are the epitome of what it means to be a student-athlete," said Director of Athletics Susan Bassett. "All of the award winners are standouts on their respective teams and they have achieved great things in the classroom at one of the nation's

finest universities. They have shown the entire community that you can be outstanding in multiple areas and we are so proud of them all."

The Dr. William Brown Academic Athletic Achievement Award was named for the late William Brown, a former biology professor at Carnegie Mellon who served as the Athletic Department's Faculty Athletic Representative. Brown passed away in 2007.



TOP STUDENT-ATHLETES DIANE MATTINGLY (FROM LEFT), JON HALL, JASON HUBER AND AUSTIN GOOD POSE DURING THE SPRING SPORTS BANQUET WITH CMU'S NCAA FACULTY ATHLETICS REPRESENTATIVE JIM GARRETT.

Mentor Focuses on Robotics

CONTINUED FROM PAGE EIGHT

graduate school.

"I've gotten hooked on trying to help high school students," he said.

Along with working at McKeesport, Cahoon assists FIRST's regional efforts as a webmaster and helps maintain the website SteelCityRobotics.org, which is a resource for teams in the area.

"Pittsburgh has a wealth of expertise in robotics that CMU has been integral in building," DePra said. "We are grateful to the CMU Robotics Academy, a FIRST® partner who runs the FLL program here in Pittsburgh, and to the many mentors and volunteers from CMU who make the high school FRC program possible. We're in a terrific place here in

Pittsburgh for robotics."

John Bares, director of the National Robotics Engineering Center and a Robotics Institute faculty member, was a keynote speaker in the opening ceremony for the Pittsburgh Regional FRC this year.

McKeesport and other FIRST® teams are looking for additional professional and college mentors not only in robotics but also in business, communications and more. For more information about the McKeesport team, contact Dischner at 412-664-3650, 412-337-9707 or Mdischner@mckasd.net. For information about the regional program, contact DePra at pdepra@usfirst.org.

Physics Aids RoboCup Team

CONTINUED FROM PAGE EIGHT

could also help the robots get creative with their kicks during soccer matches. But the computational requirements for kick planning are too great for routine use during matches, given the computational power and time available. So the algorithm will be used primarily for the computationally easier task of dribbling.

Each Small-Size League team consists of five robots. The CMDragon robots include two kicking mechanisms — one for flat kicks and another for chip shots. They also are equipped with a dribble bar that exerts backspin on the ball. Each team builds their own players; Michael Licitra, an engineer at Carnegie Mellon's National Robotics Engineering Center, built the CMDragons' highly

capable robots. Like many robots in the league, the CMDragons have omnidirectional wheels for tight, quick turns.

The CMDragons, whose members include Joydeep Biswas, a Robotics Institute master's degree graduate and now a first-year Ph.D. student in robotics, and computer science undergraduate Can Erdogan, plan to use a more aggressive strategy this year.

"We've noticed that in our last few matches against strong teams, the ball has been on our side of the field way too much," Zickler said. "We need to be more opportunistic. When no better option is available, we may just take a shot at the goal even if we don't have a clear view of it."

NEWS BRIEFS

ECE Professors Earn NSF Career Awards



Electrical and Computer Engineering professors Bruno Sinopoli (top photo) and Onur Mutlu have received five-year Career Awards from the National Science Foundation for their research. Mutlu received a \$549,306 grant to develop the architecture for creating high-performance memory systems. Sinopoli received a \$400,000 grant to develop computer tools for securing and controlling cyber-physical systems.



Mary Shaw Receives IEEE Award for Software

Mary Shaw, the Alan J. Perlis Professor of Computer Science, has been selected by the IEEE Computer Society's Technical Council on Software Engineering as the first recipient of its Distinguished Educator Award. The award recognizes Shaw for her work developing innovative curricula in computer science from the introductory to the doctoral level.

"I am deeply honored to receive this

Distinguished Educator Award," Shaw said. "This is an exciting time for software engineering educators. The penetration of computing into all aspects of society, together with new architectures for Internet-based applications and distributed computing, challenge us to teach new forms of software development that involve distributed teams, developers who are not computer professionals and systems composed of independent, Web-based components."

Shaw, a faculty member since earning her Ph.D. in computer science at Carnegie Mellon in 1972, was an associate dean for professional education from 1992 to 1999.

Researchers Study Soot Emissions

Researchers from Carnegie Mellon, the California Institute of Technology and the Georgia Institute of Technology are collaborating to study the effects of soot on global warming. Soot, tiny airborne particles that billow out of diesel trucks and industrial smokestacks, is not only harmful to humans, but may be causing harmful warming effects that could create more severe weather patterns and hotter temperatures worldwide. And in a study recently published in *Geophysical Research Letters*, Carnegie Mellon's Peter Adams and colleagues John H. Seinfeld of Caltech and Athanasios Nenes of Georgia Tech report that controls on black carbon soot might not slow global warming as much as previously thought.



Tuition Grant Continues For Staff, Faculty

Despite its tight financial situation Carnegie Mellon is committed to assisting its faculty and staff in affording college tuition for their children. CMU will continue to provide 100 percent tuition remission for children attending Carnegie Mellon in 2010-2011. In addition, a tuition grant of \$6,500 per year (up to \$3,250 per semester) for eligible children of staff who will be attending another institution will be provided. A new application for benefits must be submitted via HR Connection for each semester. The deadline for the Fall 2010 semester is July 1.

Golf Historian Chronicles 1973 U.S. Open



Carnegie Mellon historian Steven Schlossman and Adam Lazarus (HS'06), who received a master's degree from the university's Professional Writing Program, have teamed up to

research and tell the story of the 1973 U.S. Open Golf Championship in a new book titled "Chasing Greatness: Johnny Miller, Arnold Palmer and the Miracle at Oakmont."

"When Miller shot a 63 on what is thought to be the nation's hardest course, it instantly became one of the most luminous moments in golf history," said Schlossman, a professor of history who teaches the only collegiate-level course on the history of golf. "In the years since,

many factual errors had become part of the myth around this unforgettable championship. We wanted to solve the inconsistencies and recreate the drama for modern-day readers."

The book is available at the CMU Bookstore.

Scheines Reappointed Head of Philosophy



Philosophy Professor Richard Scheines has been reappointed head of Carnegie Mellon's Department of Philosophy, a position he has held since 2005. Scheines has been

on the CMU faculty since 1990 and has additional appointments in the Machine Learning Department and Human-Computer Interaction Institute. His research focuses on causal discovery, the philosophy of social science and educational technology and online courses.

Notable achievements under Scheines' tenure as department head include establishing the Patrick Suppes Chair (now held by Wilfried Sieg), working with the Department of History to upgrade the Ethics, History and Public Policy major, re-focusing the Center for the Advancement of Applied Ethics and Political Philosophy into more of a research center and creating a new Center for Formal Epistemology that will open on June 26.

Study Finds Obesity Is Eating Away at County

Carnegie Mellon researchers and students unveiled a new study that found obesity is

Smiley Award Recognizes Keepon, FaceFlip for Innovation

■ Byron Spice

Marek Michalowski, a Ph.D. student in robotics, and Keepon, an ingratiating robot that looks like a tiny yellow snowman, are the winners of this year's Smiley Award, presented annually to a Carnegie Mellon student for innovation in technology-assisted person-to-person communication.

The \$500 award, presented by the Computer Science Department and sponsored by Yahoo!, is named in honor of the ubiquitous Smiley emoticon, :-), created at Carnegie Mellon in 1982.

FaceFlip, a hilarious technological twist on the Web sensation called Chatroulette, received an honorable mention for creator Maxwell Hawkins, a freshman in computer science.

Keepon, <http://beatbots.net>, a spongy robot about the size, shape and color of two yellow tennis balls, was created by a Japanese scientist, Hideki Kozima, to study how small children develop social behavior. It also is used as a tool in therapy for children who have developmental disorders such as autism. Michalowski has worked with Kozima for several years, expanding Keepon's use by studying how rhythmic movements affect interpersonal communication. With two cameras as eyes and a microphone for a nose (but no mouth), Keepon can bob along to a musical beat or respond to a



PHOTO BY TIM KAULEN

KEEPPON, (LEFT), A ROBOT USED TO STUDY HOW SMALL CHILDREN DEVELOP SOCIAL BEHAVIORS, RECEIVED THIS YEAR'S SMILEY AWARD. SCOTT FAHLMAN PRESENTS MAXWELL HAWKINS (RIGHT) WITH AN HONORABLE MENTION SMILEY AWARD FOR HIS WORK ON FACEFLIP.

person's movements. Keepon is perhaps most famous for a couple of popular YouTube videos in which it dances to songs by the band Spoon.

"Keepon is undeniably cute, but that wasn't a deciding factor for the judges," said Scott Fahlman, a research professor of computer science and language technologies and the inventor of the Smiley emoticon. "When we saw the video of its interactions with autistic kids and how it got them to come out of their shells, we realized the potential of this thing and why Marek deserved recognition for his work."

Michalowski, who completed the

defense of his Ph.D. thesis in December, said winning the Smiley Award is a huge honor. "Although the robot was originally designed to facilitate interaction with children with autism, it's been exciting to see how rhythm has made Keepon resonate so powerfully with people around the world," he said. "And Keepon's minimal form certainly shares the simplicity of the emoticons we use to add emotional context to our everyday communications."

Hawkins created FaceFlip, <http://vimeo.com/11194351>, as a class project this spring. Its starting point is Chatroulette, a website that pairs random strang-

ers for webcam-based conversations.

At any point in a conversation, either participant can opt out and be randomly paired with another partner. Usually, the Chatroulette site displays video images of both participants; when a Chatroulette user happens upon a partner using FaceFlip, however, that user instead sees his or her own image sent back with the face — and only the face — flipped upside down.

"Everybody thought it was hilarious," Fahlman said. "It's very clever. And we were blown away when we learned that that this was conceived and implemented by a freshman."

costing Allegheny County residents more than \$500 million a year in medical expenses and lost work time. The study was compiled by a team of 21 Carnegie Mellon students from the departments of Engineering and Public Policy (EPP) and Social and Decision Sciences (SDS), under the supervision of EPP professors Ed Rubin and Marvin Sirbu. They used a lifestyle analysis approach that looked at a variety of ways to reduce obesity countywide.

One key result of the study is a proposed countywide soda tax to discourage consumption of soft drinks that contribute to obesity.

"A small tax of just one cent per ounce would reduce the enormous amount of soda that kids and adults consume daily," said Sharon Wagner, an EPP graduate student who helped manage the study.

James Garrett Receives Thomas Lord Professorship



James H. Garrett Jr., head of Carnegie Mellon's Department of Civil and Environmental Engineering, has been awarded the prestigious Thomas Lord Professorship of Civil and Environmental

Engineering. The Lord Professorship honors an educator whose work has had a profound impact on the university, his academic field and society.

Garrett is co-founder of the Center for Sensed Critical Infrastructure Research (CenSCIR), a five-year-old research center

developed to deliver "nervous systems" for critical infrastructure. Garrett and his colleagues envision infrastructure with various sensors that collect valuable data that can be used to make important decisions regarding infrastructure repairs and replacement.

Terry Buss Named Head of Heinz College Australia



Carnegie Mellon has appointed Terry F. Buss as the new executive director of the Heinz College in Adelaide, Australia. Buss, a distinguished professor of public policy at the

school, succeeds Tim Zak, who will return to a teaching position at the university's Pittsburgh campus.

Buss brings more than 30 years of international public service, teaching and research experience to the position. Before joining the Heinz College in 2008, he directed the International, Security and Defense Studies Program at the National Academy of Public Administration in Washington, D.C., for five years. Buss also was dean of the School of Policy and Management at Florida International University in Miami, and has held advisory positions with the World Bank, U.S. Department of Housing and Urban Development and the U.S. Information Agency.

Vaughan Named Student Affairs Director

Elizabeth Vaughan has been named director of Student Activities. Vaughan, who served as interim director for several months, succeeds Gina Casalegno, who became assistant dean of Student Affairs and interim director of the Career and Professional Development Center.

Vaughan has worked at Carnegie Mellon since 2004 in the Office of Student Activities serving in the roles of coordinator of Student Activities and housefellow. Prior to joining CMU, she worked at Southern Methodist University and at The Ohio State University with responsibilities for community involvement, leadership and program development.

She received a master's degree in higher education and student affairs from Ohio State. She received a bachelor's degree in biology from Allegheny College.

HHMI Grant Supports Undergraduate Research

Carnegie Mellon has received a \$1 million grant from the Howard Hughes Medical Institute (HHMI) to continue to help fund the Summer Undergraduate Research Program at the Mellon College of Science. HHMI has funded undergraduate research at Carnegie Mellon for more than 20 years, with close to 700 students participating in the summer program since 2000.

"Undergraduate research is at the foundation of a Carnegie Mellon education in the sciences. Many of our students say that one of the main reasons they chose Carnegie Mellon was because they would have the opportunity to conduct research," said Aaron Mitchell,

professor of biological sciences, who heads the HHMI research program. "HHMI has made it possible for undergraduate research to continue to thrive at our university."

Most students in the Summer Undergraduate Research Program cite their research experience as one of the top two most impactful components of their education — one-third have gone on to pursue a graduate degree in the science, technology, engineering or math fields.

Tepper School Launches New Executive Program

The Tepper School of Business will offer an innovative Executive MBA (EMBA) Program in Asset and Wealth Management in conjunction with HEC Lausanne, the Faculty of Business and Economics at the University of Lausanne, and the Swiss Finance Institute. The internationally focused dual degree program is designed for private and institutional investment managers, private banking relationship managers and other investment professionals. Graduates of this new program, which will begin in May 2011, will receive an executive MBA degree from both the Tepper School and HEC Lausanne.

"This program brings together two world-class research institutions and presents a unique opportunity for professionals working in the area of asset and wealth management," said Kenneth Dunn, dean of the Tepper School of Business. "The faculty will include some of the world's premier finance professors, researchers and practitioners. Graduates of this program will have earned prestigious professional credentials of the highest level in this field."

Hunt Institute Open House Flourishes

■ Heidi Opdyke

The Hunt Institute's annual open house on June 27-28 is an opportunity to learn more about the botanical library, but Lugene Bruno, acting curator of art and senior research scholar, hopes if it's someone's first visit, it won't be their last.

"There is a rich tradition of documenting plant discoveries with text and image," Bruno said. "Our collections and exhibitions reflect this mixture of science and art."

The institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library based on her original collections. "Mrs. Hunt was attracted and interested in the history of botany. She acquired books about plants from the 15th to 19th centuries, as well as portraits of botanists and artists, manuscripts, autographed letters and original art that related to these books," Periodicals Editor Scarlett Townsend said.

Renamed the Hunt Institute for Botanical Documentation in 1971, the current collections include approximately

29,000 books; 30,000 portraits; 30,000 watercolors, drawings and prints; and 2,000 autographed letters and manuscripts. Through a triennial series of international exhibitions of botanical art (begun in 1964) the institute has developed the largest collection of contemporary botanical art in the world. Although not a lending library, the institute's collections are available for study by the campus community and information has relevance in many fields, from biology, landscape studies, art and design, to literature and history.

During the open house, Bruno will offer a guided gallery tour of "Botanicals: Environmental Expressions in Art, the Alisa and Isaac M. Sutton Collection," which represents one of the finest private collections of contemporary botanical art in America. She also will talk about the influences on the Suttons' collecting interests and the important role of private and institutional collectors to both support the work of botanical artists and educate the public through exhibitions. These 54

WHAT: HUNT INSTITUTE'S ANNUAL OPEN HOUSE

WHERE: FIFTH FLOOR OF THE HUNT LIBRARY

WHEN: 12:30-4:40 P.M., SUNDAY JUNE 27 AND 1-5 P.M., MONDAY JUNE 28

GENERAL HOURS FOR THE INSTITUTE: 9 A.M.-NOON AND 1-5 P.M., MONDAY-FRIDAY; AND 1-4 P.M., SUNDAY

artworks are expressions of the purely aesthetic forms found in nature and a reminder that we are stewards of our natural resources for future generations.

Townsend will give a talk about the history of the reading room, which was designed to capture the essence of Rachel Hunt's personal library, and a walking tour of the antique furniture.

Librarian Charlotte Tancin will display examples from the 16th to 20th centuries and talk about the creation of such art and the role it has played in the history of science, from Leonhart Rauwolf's exploration of the Turkish empire, to the

United States' explorations and surveys for a railroad route from the Mississippi river to the Pacific ocean in the 1850s, to the Amazonian art of Margaret Mee.

Archivist Angela Todd will explore the legacy and legend of Sir Joseph Banks (1744-1820), the famed British naturalist, botanist and world traveler for whom Banksia is named.

In September, the institute will host its triennial International Exhibition of Botanical Art & Illustration. For more information, visit the institute's website at huntbot.andrew.cmu.edu/HIBD/Services/OpenHouse.shtml or call 412-268-2434.

Meeting of the Minds: Undergraduates Display Their Research

More than 450 students participated in CMU's annual Meeting of the Minds undergraduate research symposium May 5 in the University Center. Sponsored by the Undergraduate Research Office, the program encourages undergraduates to engage research and innovation. Many projects grow out of students' coursework in their majors, while others typify CMU's emphasis on interdisciplinary collaboration to solve real-world problems.

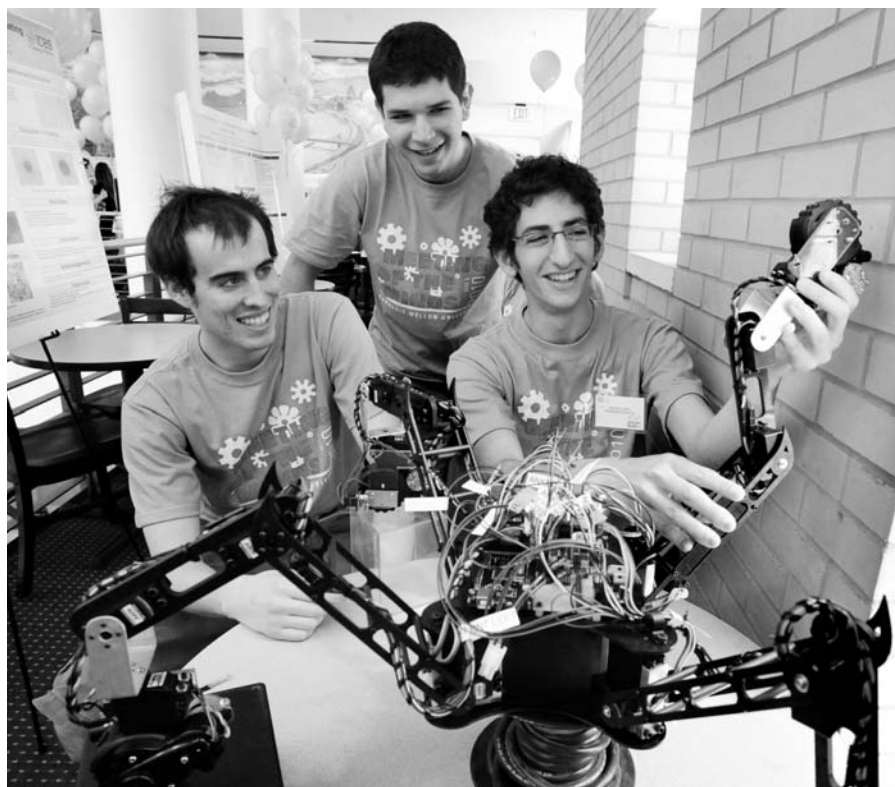


PHOTO BY TIM KAULEN

ABOVE: WIL HAMILTON (FROM LEFT), HARRISON ROSE AND MICHAEL ORNSTEIN WERE MEMBERS OF A TEAM THAT WORKED ON A ROBOT WITH A HYBRID LOCOMOTION SYSTEM THAT USES WHEELS AND LEGS TO ALLOW IT TO TRAVERSE OBSTACLES, SUCH AS STAIRS, AND MANEUVER AT HIGH SPEEDS.

RIGHT: CARNEGIE MELLON QATAR ALSO HELD A SYMPOSIUM. YI LUEN TESSA EXPLAINS A PROJECT INVOLVING DYNAMIC PATH PLANNING AND TRAFFIC LIGHT COORDINATION FOR EMERGENCY VEHICLE ROUTING. WITH TEAM MEMBER HEND GEDDAWI, THE PROJECT WON BEST COMPUTER SCIENCE POSTER, BEST POSTER DESIGN AND BEST OVERALL PROJECT. "THE MAIN MOTIVATION FOR OUR PROJECT WAS THE OBSERVATION THAT THE HEAVY TRAFFIC IN QATAR IMPEDES THE ROUTING OF EMERGENCY VEHICLES, WHICH COULD MAKE A CRITICAL DIFFERENCE BETWEEN LIFE AND DEATH," HEND SAID. "THIS PROJECT FOCUSES ON THE PREMISE THAT MERE SECONDS CAN SAVE A LIFE."



PHOTO BY TIM KAULEN

A VISITOR PLAYS WITH A MAGNETIC INK SKETCH PAD AS ELISHA CLAYTON, A JUNIOR IN MECHANICAL ENGINEERING, AND MICHAEL LYNES, A SENIOR IN ARCHITECTURE, LOOK ON. THE DEVICE IS A WATER-TIGHT DRAWING BOARD WITH A FERROMAGNETIC FLUID RESERVOIR AT THE BASE. WITH THE AID OF POWERFUL MAGNETS, THE FLUID CAN CLIMB UP AND ACROSS THE BOARD AND LEAVES INK MARKS ON PAPER.



PHOTO COURTESY OF CARNEGIE MELLON QATAR

Women's Association Awards Scholarships

■ Heidi Opdyke

The Carnegie Mellon Women's Association (CMWA) has been a part of the university community, connecting women across campus through activities since 1916. Membership is comprised of a diverse group of women associated with the university including faculty, administrators, trustees, staff, wives/partners and friends.

"This diversity gives our organization character," said CMWA President Kristine Cecchetti. "We are never at a loss for new ideas, suggestions and activities."

Cecchetti said women should join for several reasons.

"The first of which is my favorite; it's fun. It provides an outlet for women to get together with other similar-minded women and try something new," she said.

Activities hosted by the CMWA raise money for the scholarship fund. Activities during the 2009-10 academic year included ice skating, wine tasting, golf

and more. Annual activities also include a reception hosted by President Jared Cohon's wife, Maureen, who serves as the CMWA honorary president.

"Our most recent endeavor has been the revival of the cooking club, which so far is a blast," Cecchetti said. "We're always willing to try something new, so if you have an idea, join and share it."

Dues are \$10 annually, and membership runs from July 1-June 30. All dues and designated gifts go toward the Annual Scholarship Awards fund. For more information on the CMWA or to join, visit www.cmu.edu/cmwa.

Scholarship Winners

The CMWA presented three \$800 scholarships to graduating senior women who have made an impact on the university community. This year's winners are Erin M. Honcharuk (HS'10), Megan Larcom (HS'10) and Julie Ng (CIT'10).

"The CMWA's primary goal is to connect women across the university



ERIN HONCHARUK (FAR LEFT), CARNEGIE MELLON WOMEN'S ASSOCIATION (CMWA) PRESIDENT KRISTINE CECCHETTI, JULIE NG, CMWA FOUNDING MEMBER VIRGINIA SCHATZ AND MEGAN LARCOM ATTENDED THE CMWA LUNCHEON. HONCHARUK, NG AND LARCOM EACH RECEIVED \$800 SCHOLARSHIPS.

while raising funds for our scholarships," Cecchetti said. "The yearly scholarships are our focus because they highlight and encourage the continuation of the amazing goals these women achieve; supporting success in young women is what our organization is about."

Each year, the members of the CMWA work with deans and department heads to nominate outstanding senior undergraduate women from which the awardees are selected. The awards were presented by Maureen Cohon at a tea earlier this spring.

Father, Son Explore Roads, Relationship in New Book

■ Jocelyn Duffy

Looking for a Father's Day gift for your dad? Sam Gutkind, a math and physics major who has just completed his first year at Carnegie Mellon, and his father, local author Lee Gutkind, have published "Truckin' with Sam," a book chronicling their travels as a father-son duo.

Inspired by the music of the Grateful Dead and Gary Paulsen's book "The Car," the Gutkinds have been traveling together since 2003, when Sam was 13, in a series of long adventures that they dubbed "truckin'." Their first trip was a cross-country road trip to the Grand Canyon in a red Ranger pick-up truck. Since then they have driven the Alaska-Canadian highway, and ventured to exotic locales like Tibet and Tanzania.

"Most of the trip was about getting

there, stopping in places no one has ever heard of. Truckin' is about exploring and adapting," Sam, a freshman in the Mellon College of Science, said.

"Truckin' has defined our relationship as a father and son in a lot of ways," Lee added. "There were good lessons learned, there were very challenging experiences."

When his son was born, Lee became a first-time dad at 47. As a self-proclaimed "old new dad," Lee found that being an older parent held many unique challenges. The trips were one way to connect with his son.

"You're looking out the window, seeing life go by. You're listening to Mick Jagger, Bob Dylan and Jerry Garcia. And you're having conversations about what you see or what you think.

It gave me a good opportunity to think and pontificate to my son. I could talk to him about what I thought was important in life, and hope some of it seeped in," Lee said. "But if he was just listening to Mick Jagger, that was okay too."

Lee is the author or editor of more than a dozen books, including, "Almost Human — Making Robots Think," a behind-the-scenes look at the people and projects inside Carnegie Mellon's Robotics Institute. He knew that he wanted to write a book about his relationship with his son even before they took their first trip. During their travels, Lee kept a journal and encouraged Sam to do the same. The result was "Truckin' with Sam," part travelogue, part story about a father and son relationship, with the text written by Lee, interspersed with Sam's

journal entries and observations.

Sam says that he learned a lot while traveling with his father, about himself, his father and life in general.

"Our trips have made me a more contemplative person. I learned to think about things, I learned to be patient," Sam said. "It taught me not to fear the unfamiliar."

Sam will return to Carnegie Mellon in the fall, but he and his father will be truckin' across Australia this summer, where they plan on doing a few readings from their book and catching up with some long-lost relatives. They both hope to continue traveling together as long as they can.

"Truckin' With Sam" is available at www.truckinwithsam.com.

Starr Athlete



STANLEY ONYIMBA (FOURTH FROM LEFT), A FOUR-YEAR LETTERWINNER AT LINEBACKER FOR THE TARTANS, RECEIVED THE 2010 JIMMY STARR MEMORIAL SCHOLARSHIP AWARD AT A LUNCHEON AT THE PITTSBURGH ATHLETIC ASSOCIATION. ONYIMBA RECEIVED HIS BACHELOR'S DEGREE IN ECONOMICS FROM THE TEPPER SCHOOL OF BUSINESS. HE WILL BE WORKING FOR GOLDMAN SACHS IN NEW YORK CITY. THE JIMMY STARR MEMORIAL SCHOLARSHIP IS PRESENTED ANNUALLY TO A FOOTBALL PLAYER WHO BEST EXEMPLIFIES THE QUALITIES AND CHARACTER OF STARR, WHO WAS KILLED IN AN AUTOMOBILE ACCIDENT IN 1979 PRIOR TO THE START OF HIS SENIOR YEAR. FORMER FOOTBALL COACH CHUCK KLAUSING IS FIFTH FROM LEFT. ALSO PICTURED ARE PAST SCHOLARSHIP WINNERS JOE NARDONE, CHIP MILLER, DEAN GAROFOLA, DAVE RICHARDS, MIKE MINJOCK AND ADAM LOVROVICH.

PHOTO COURTESY OF ATHLETICS

PHOTO COURTESY OF KRISTINE CECCHETTI



JUDY AND KEN HALLINEN MAKE AN IMPACT BY WORKING AND GIVING TO CMU.

It was her father's dream — to have Judy Hallinen and her two siblings attend Carnegie Mellon. Amazingly, he saw all three graduate from the university, beginning a family tradition.

Hallinen (HS'83) met her future husband, Ken (TPR'82, HS'85), as an undergrad. Twenty-five years later, Carnegie Mellon is still home, as both are longtime employees of the university.

Judy is the university's assistant vice provost for educational outreach and director of the Leonard Gelfand Center for Service Learning and Outreach. Ken is director of resource planning and management in the university's Computing Services Department and also serves as an assistant track coach.

The Hallinens are proud to support Carnegie Mellon not only as alumni advocates and through their long-term devotion as staff members, but also with

their financial support. Because of their close interactions with students, they understand there is great need and want to do what they can to fill the void between students who want to attend CMU and the scholarship money necessary to fulfill those students' dreams.



When asked about their philanthropic commitment to the university, the Hallinens said: "Our reason for giving is because of our numerous interactions with students. It is obvious to us that the students who are here have been selected from a large group of applicants that are all capable of success. We know they are focused and work hard to achieve success not only in the classroom or in a lab or on stage, but also on athletic teams and in clubs. And, for many it is very difficult to afford to attend Carnegie Mellon."

In 2008, the Hallinens established an Andrew Carnegie Society Legacy

Scholarship by pledging \$2,500 a year for four years to help an undergraduate in financial need. "It's so hard to excel at what you're doing academically when you're not sure you can afford to be here next year," the couple said. "An ACS Scholarship guarantees the gift for all four years, and provides, we hope, a better comfort level."

The Hallinens encourage all members of the faculty and staff to support the university with a gift of any size, noting that Carnegie Mellon students make a big difference in the local community through fundraisers that contribute to local organizations, tutoring and mentoring programs, volunteer activities that have a great impact on individuals and neighborhoods, and through the sharing of expertise with local non-profits via service learning courses.

The couple stressed that southwestern Pennsylvania is made better by CMU students, and the contributions that enable them to have success also enable the students to make change in Pittsburgh and around the world after graduation. In their roles at CMU, both see the student accomplishments firsthand.

To participate in the 2009-2010 giving year, contributions must be received by Wednesday, June 30. Payroll deduction options are available for faculty and staff. Note that all gifts will count toward the university's campaign, Inspire Innovation: Campaign for Carnegie Mellon. Forms are available at www.cmu.edu/campaign/ways/fy-09_payrollrom.pdf.

For more information, contact Carole Panno at cp1g@andrew.cmu.edu or 412-268-1617 or visit www.cmu.edu/campaign/involved/faculty.

Q&A: Teaching Tips

CONTINUED FROM PAGE TWO

Norman: We think faculty need more opportunities to talk about teaching, and we believe they can truly benefit from dialogue with other people who love to teach. We really enjoy working with faculty, and urge them to contact us about any teaching matter — large or small — they'd like to discuss.

Ambrose: There are a lot of faculty at CMU who care about teaching. We have been going strong for 28 years, and if people didn't come, we wouldn't continue to be here.

What does Carnegie Mellon do in terms of developing junior faculty and graduate students?

Norman: We have a fairly intensive, interactive orientation for new faculty that focuses on teaching. We also have the Wimmer program, which provides funding and support for junior faculty with innovative teaching ideas. And we run a program for graduate students, which includes a series of really excellent teaching seminars, one-on-one consulting, microteaching workshops and professional development.

Ambrose: They take advantage of it, too. In fact, so many graduate students want to participate in these programs we can't meet the demand. We always have waiting lists for our seminars.

What upcoming activities is the Eberly Center hosting?

Ambrose: In the fall, we do an orientation for incoming faculty. Then over the year, we do workshops and seminars for faculty and graduate students. This year our workshops for faculty will focus on the principles from the book.

How can people seek assistance?

Ambrose: They can contact us via our website, www.cmu.edu/teaching/eberly/, our main phone number 412-268-2896, or any of our individual email accounts.

World Environment Day



PHOTO BY LARRY RIPPEL

PROFESSOR DAVID DZOMBAK (RIGHT), FACULTY DIRECTOR OF CARNEGIE MELLON'S STEINBRENNER INSTITUTE FOR ENVIRONMENTAL EDUCATION AND RESEARCH, GAVE CLOSING REMARKS AT THE U.N. WORLD ENVIRONMENT DAY "WATER MATTERS!" CONFERENCE, WHICH FEATURED THOUGHT LEADERS FROM ACROSS NORTH AMERICA. ALONGSIDE DZOMBAK IS DAVID AINSWORTH OF THE UNITED NATIONS CONVENTION ON BIODIVERSITY. "THE PITTSBURGH REGION HAS A TREMENDOUS AMOUNT OF WATER-RELATED ECONOMIC ACTIVITY INVOLVING PRODUCTS, PROCESSES AND SERVICES," DZOMBAK SAID. "IN THE COMING YEARS WE WILL BE MAKING VERY LARGE INVESTMENTS IN OUR WATER RESOURCE SYSTEMS AND OUR WATER INFRASTRUCTURE, AND WE SHOULD AIM TO CAPITALIZE ON THESE INVESTMENTS TO GROW OUR ECONOMIC CAPACITY AND JOBS IN THE WATER SECTOR." A CITYLIVE FOLLOW-UP EVENT IS PLANNED FOR 6:30 P.M. ON TUESDAY, JUNE 29 AT THE NEW HAZLETT THEATER.

Projects in Progress

CONTINUED FROM PAGE ONE

Apartment-style Living for Students

Two of the three large projects focus on apartment-style student housing, specifically the 12 units on Roselawn Terrace and the newly acquired 4700 Fifth Ave. at the corner of Neville Street and Fifth. The dozen row houses on Roselawn Terrace, just off Margaret Morrison Street near Forbes Avenue, will be getting a “full renovation,” complete with new kitchens, bathrooms and heating systems, said Bob Reppe, director of design for CDFD. Each unit, which houses five students, also contains laundry facilities.

The former senior housing facility at 4700 Fifth Ave., which CMU recently purchased from the West Penn Allegheny System and the Residence on Fifth, will be renovated into apartments with their own kitchens and bathrooms. Each apartment will measure between 500 and 600 square feet and will be large enough to house three students.

Reppe said 31 apartments for 93 residents will be completed this summer on the third, fourth and fifth floors of the five-story building.

“Right now we have many bedrooms, each with their own bathroom, that are adjoined to another bedroom and bathroom by a connecting door. We’re removing that door and converting one bathroom into a kitchen,” Reppe explained.

After renovations are completed this summer, Reppe said the university would apply to the city for a zoning change that would convert 4700 Fifth Ave. from a high-density district to a very-high density district. That change will allow CMU to create about 20 more apartments next summer on the building’s first floor, mezzanine and second floor.

“You’re going to see very little change to the exterior of the building with the exception of the windows. They’re all fixed windows now, so we’re replacing them with windows that open,” Reppe said.

The estimated cost of the Roselawn Terrace project is around \$2 million. Phase one of the 4700 Fifth Ave. work is estimated at \$1.75 million.

Intramural Field Gets a Facelift

Students will literally get a kick out of the third big construction project this summer as a majority of the intramural field is being converted into an NCAA regulation-size soccer field with synthetic, state-of-the-art, all-weather Field Turf — the same surface that exists in Gesling Stadium. The new 70-yards-wide-by-120-yards-long field, estimated at \$1.25 million, will be used for intercollegiate soccer practices and games, intramural play and club sports, such as lacrosse. The field will run parallel to Margaret Morrison Street.

The intercollegiate soccer teams, which previously shared Gesling Stadium with the football team, intramural sports and recreational users, will now practice and compete on the new field.

Director of Athletics Susan Bassett said the new field will positively impact more than 80 percent of the Carnegie Mellon student body. “A viable playing surface that can provide a home to our recreational athletes, as well as our soccer programs, will be life-changing for this campus,” she said.

Associate Director of Athletics Tony Wingen said the new field will have great impact when it comes to scheduling.

“It gets all of our outdoor varsity fall sports done with practice at a reasonable hour and frees up a lot of time for intramurals and club sports,” he said.

“In addition, soccer will be able to practice while football games are going on in the stadium, and football will be able to practice while soccer games are being held. It’s going to be great.”

Portable bleachers will be installed for the new soccer field and a scoreboard will be placed on the back of the existing stadium scoreboard for games on the new field.

To accommodate the regulation-size field, Reppe said the sidewalk under the scoreboard will be “bumped out” slightly near the driveway adjacent to the Tartans Pavilion, and a retaining wall will be constructed to hold the hillside from sliding.

Reppe pointed out that the new field would greatly reduce the costs of maintaining a heavily used natural grass field. He said the 100 hours of lawn mowing needed per year, not to mention the gasoline used and emissions from the lawn mower, will be reduced, as will the 500 pounds of grass seed, five tons of topsoil and 2,400 pounds of fertilizer needed each year.

A small portion of the existing intramural field near the East Campus Garage will remain natural grass for track and field athletes competing in the shot put, discus, hammer and javelin.

Backfilling Wean Hall

Since last Thanksgiving, CDFD has been managing more than \$5 million in renovations to more than 250 offices and a dozen classrooms left vacant when the School of Computer Science moved into the Gates and Hillman centers.

Joe Greenaway, director of construction for CDFD, said work, which included HVAC and wiring upgrades, would be wrapping up this summer. He said the majority of the new residents are from the Mathematical Sciences and Physics departments, the College of Humanities and Social Sciences, the College of Engineering and the Institute for Software Research.

Greening Warner Hall ...

Greenaway said the university is in the design phase of a project that will repair the leaky Warner Hall patio and at the same time convert it into a “greener” and more formal entryway for the university’s administration building.

He said the work will probably happen during this summer and extend into the fall during off-peak hours.



A REGULATION-SIZE SYNTHETIC SURFACE SOCCER FIELD IS BEING BUILT ON THE INTRAMURAL FIELD. THE PROJECT WILL REDUCE MAINTENANCE COSTS TO THE AREA.

... And More

Other summer projects include renovations to three Mellon College of Science laboratories in Mellon Institute for chemistry professors Kris Matyjaszewski, Mark Bier and Stefan Bernhard.

University Libraries’ dense book repository at 6555 Penn Ave. is being expanded. “The non-traditional stack set is more dense, so you can store 10 times the number of books in the same amount of space than you can in a traditional

library,” Reppe said.

All 111 windows and the large storefront window in the old GSIA building are being replaced. The new windows will match those in the Posner Hall addition.

Work on the Art Park, the triangular grassy area where the Holiday Bar used to be, will continue. The Art Park is designed to act as a canvas for eco-art students.

New 2012 Campus Master Plan is Under Way

■ Bruce Gerson

Carnegie Mellon is in the process of developing a new campus master plan and if the results are anything like the results of the 2002 plan — which yielded the Collaborative Innovation Center, Stever House, the Posner Center, the Doherty Hall renovations, the Gates and Hillman centers, and the development of the green and pedestrian friendly West campus — students, faculty and staff are in for a treat.

Bob Reppe, director of design for Campus Design and Facility Development, said work for the 2010 Institutional Master Plan is under way with the help of six world-class design and engineering teams, including Ayers Saint Gross, the campus planning firm that developed the existing 2002 Campus Plan.

The City of Pittsburgh Planning Commission requires colleges and universities to submit a new master plan every 10 years and CMU is working toward completion of the plan in advance of the May 2012 due date. Reppe said a draft of the master-planning document should be completed in the fall, when the document will be rolled out to campus and community groups for feedback. It will then be presented to the Pittsburgh Planning Commission before it goes before City Council for approval in early 2011.

Reppe said the current master-planning process is focusing on:

- The future of major campus development sites, including the Morewood Gardens parking lot and the

recently acquired properties along Forbes Avenue near Craig Street;

- A new nanotechnology center adjacent to Roberts and Wean Halls;
- A new building for the Tepper School, which could be either at the Skibo Gym site, the Morewood Gardens parking lot site or on Forbes near Craig;
- A programming study for the extension of Margaret Morrison Carnegie Hall toward Donner Hall;
- A new housing development study that may encompass the Woodlawn Apartments and three homes the university acquired at the corner of Margaret Morrison and Forbes; and
- A vehicular and pedestrian traffic improvement study along Forbes and Fifth, as well as a campus parking assessment; CMU is partnering with GAI Consultants, PennDOT and the Oakland Transportation Management Association on the study.

“We’ll be looking at traffic flow, pedestrian flow, bike counts, pet counts, where people are crossing, how many parking spots we have, where they are and what the utilization is,” Reppe said. “The CIC lot is two-thirds full on a very busy day. The top floor of the garage is only used at commencement. We need to be smarter about transportation, parking and how to calm, or tame Forbes Avenue.”

Town hall meetings to present and discuss the draft master plan will be scheduled this fall. Stay posted.

Silicon Valley Researchers Open Cloud Commons for Business

■ Chriss Swaney

Carnegie Mellon is launching an initiative, led by two of its Silicon Valley-based researchers, to address the need for industry-wide, globally accepted measures for calculating the benefits and risks of cloud-computing services.

"We are helping to develop a set of business-centric measures, mixing quantitative and qualitative data that will provide chief information officers with a standardized method for comparing cloud services from internal or external providers," said Jane Siegel and Jeff Perdue, senior scientists at Carnegie Mellon Silicon Valley.

The researchers are seeking industry involvement via a consortium being formed with thought-leaders from educational institutions, end user organizations and technology providers, who are experts in measuring and managing IT-enabled services. This initiative will develop a dynamic Service Measurement Index (SMI) that will be available for use by members of the Cloud Commons, an independent IT community supported by CA Technologies based

in New York. CA Technologies also is a founding member of the consortium and hosted the inaugural meeting of this group in May at its CA World 2010 customer conference in Las Vegas.

"Today, there is no single, unbiased source that helps users understand and measure the experience organizations are having with cloud computing," said Martin Griss, associate dean of CMU's Silicon Valley campus. "This new qualification effort is being led by the researchers at Carnegie Mellon Silicon Valley, where we are launching a new Service Management graduate education program as well as initiating research programs for large service systems."

"We are developing a framework and meaningful measures to enable decision-makers and senior managers to determine the costs, risks and quality of services for both external and internal cloud services," Siegel said.

Carnegie Mellon researchers said the drive to develop the consortium was prompted by a desire to help develop industry standards for measurement of services.

"The growth of the Internet and

increasing demands for faster and more economic ways for business to store and process information makes our new Cloud Services Measurement work an essential part of any IT professional's toolkit," said Perdue, who co-founded the service management graduate program at Carnegie Mellon Silicon Valley.

Organizations interested in joining the consortium may receive additional information by contacting Jeff.Perdue@sv.cmu.edu or Jane.Siegel@sv.cmu.edu.

Certificate Program Focuses on IT Management

Carnegie Mellon's Silicon Valley campus is launching a new part-time certificate program this fall for professionals interested in becoming leaders in the fast-paced IT-enabled service economy.

The four-course IT-enabled Service Management Certificate Program is designed to provide a sound technical foundation and skills essential to address the challenges in industrial IT-enabled service management, said Siegel and Perdue.

The new program is designed to help train the next generation of service

management professionals capable of operating and improving increasingly complex software-based service systems, according to Perdue, co-founder of the new Graduate Service Management Program.

"We see effective and agile service creation, delivery and management crucial to an increasing number of companies as a key differentiator for business success. Carnegie Mellon is excited to be offering this new program to the leading companies in Silicon Valley," Griss said.

Course participants must have a minimum of three years of IT-related experience, strong technical skills and a master's degree in engineering, software engineering, information systems or a related field.

"This unique program will give participants the background to deal with issues their organizations face in acquiring, managing and/or delivering world-class and innovative IT-enabled services, as well as a credential to use in moving to a new level in their careers," Siegel said.

Thorpe Sums Up Six Years

CONTINUED FROM PAGE ONE

Haggard's "Okie from Muskogee" and thought "What a place to be dean." Thorpe said he began to feel that Qatar, like Pittsburgh, prizes traditional values such as respect. Qatar was a place where not only was the dean respected, so were differences in cultures, religions and nationalities. Students respected professors, and professors respected students.

"The lesson learned," Thorpe said, "is that respect generates respect."

"A4"

In the United States, standard paper size is 8.5 x 11 inches. However, in the rest of the world it's A4, which is 6 millimeters (mm) narrower and 18 mm longer.

"This means EVERYTHING has to be adjusted, and not just documents," Thorpe told the crowd that came to listen. Electrical plug adaptors, income tax, roundabouts, Heinz ketchup, broom handles, vacuum cleaner bags: none of what is common in America translates to Qatar, he said. He added that people can't just go into another culture and expect everything to be the same but must adapt and learn as they go.

"The lesson learned is that details matter. A lot. Personally and culturally," he said.

"Right side up"

While working with students in the Introduction to Mobile Robotics course, Thorpe said he realized some students had their robots upside down. So he advised them to turn them "right side up." He soon realized something was amiss when

students placed their robots on their left sides, putting the right side of the robot up in the air, or "right side up."

Suddenly Thorpe realized such common turns of phrase were America-centric. His story of shoveling snow as a child was no longer relevant, and telling students to "hit one out of the park" was often met with blank stares from students who knew nothing of baseball.

"Language crosses quickly into cultures," Thorpe said.

The lesson is that language matters, and culture matters.

"Beatus Vir"

The most difficult part of being dean of a small campus, Thorpe said, is that it is like a family. When a member of that family dies, it hurts everyone. During Thorpe's tenure, student Fahad Al Jefairi was killed in a motor vehicle accident and Professor Bill Brown succumbed to a brain tumor.

One day in the library, Thorpe was looking through rare manuscripts that were being digitized as part of the Digital Heritage Project. In one manuscript he found the passage "Beatus Vir" written in multiple languages. Beatus Vir, Latin for "blessed is the man," are the first words in Psalm 1.

He was surprised to find this was the same passage that was read a year earlier at the memorial service for Brown. These words tied so many parts of life together for Thorpe, and he realized that day the lesson was to look for beauty and inspiration in unexpected places.



CHUCK THORPE AND HIS WIFE, LESLIE, HAVE SPENT THE LAST SIX YEARS WORKING TO HELP ESTABLISH CARNEGIE MELLON'S CAMPUS IN DOHA, QATAR.

"Never crossed a bridge"

Few people in Pittsburgh spend a day without crossing at least one bridge. Yet many people around the world have never crossed one. Carnegie Mellon Qatar has many Palestinian students who only have travel documents, which limits their mobility. They may have never seen a bridge.

"But Qatar is something of a bridge in itself," Thorpe said. Qatar is conservative and outward looking, and plays above its size. "Qatar is not facing west, nor is it facing east, north or south: Qatar is facing the future without fear."

Bridges go both ways though, Thorpe reminds.

"Both ways in hospitality, importance of family, importance of balancing tradition with modernization," he said.

The lesson is to build your own bridges, and cross them yourself. Carefully.

"I want to be a Carnegie Mellon professor."

A student once told Thorpe that he wanted to be a Carnegie Mellon professor because they had a great life. When asked what made their lives so great, the student told him "they play Frisbee with us, they play volleyball with us, they even play soccer with us."

At Carnegie Mellon Qatar, faculty and staff have surrounded the students with care.

"We have the ARC and student affairs and advising and faculty and the dean's office and IT and MPR and everyone else," Thorpe said.

Everyone here is involved with the students, and we are all working toward their success.

The lesson is about engaging the students and the community.

To watch the entire speech, visit <http://streamingserver.qatar.cmu.edu/SixQuotes.wmv>.