



the PIPER

CMU'S NEWS SOURCE FOR FACULTY & STAFF 5/13 ISSUE

Carnegie Mellon University

Elite Distinction

Cohon, Epple, Just and Shreve Named University Professors

■ Piper Staff

Carnegie Mellon President Jared L. Cohon and three professors, Dennis Epple, Marcel Just and Steven E. Shreve, have received the elite distinction of University Professor, the highest academic accolade a faculty member can achieve at Carnegie Mellon.

The rank of University Professor recognizes a faculty member for representing the intellectual leadership of Carnegie Mellon through their expertise and accomplishments in their respective fields of study.

Jared L. Cohon

Cohon will be stepping down as CMU's eighth president on June 30 after leading the university to unparalleled growth during the past 16 years.

"While Jerry's presidential contributions are fully appreciated by university professors and the entire university community, this prestigious honor is based on his truly exceptional scholarly and professional accomplishments outside of and on top of his presidency," said Provost and Executive Vice President Mark S. Kamlet.

A member of the National Academy of Engineering and the American Academy of Arts and Sciences, Cohon was elected chair of the Executive Committee of the Association of American Universities in 2010. In 2011, he received the National Engineering Award from the American Association of Engineering Societies.

Cohon is an expert on environmental and water resource systems analysis, a field that combines engineering, economics and applied mathematics. He has worked on water resource problems in the United States, South America and Asia and on energy facility siting, including nuclear waste shipping and storage. He is president of the Center for Sustainable Shale Development and chairman of the ALCOSAN Regionalization Review Panel, a committee that provides recom-



Thank You!

As I approach the end of my 16 years as president of Carnegie Mellon, I write to thank you, the university community, for giving me the privilege of serving in this position and for your support over these many years.

It truly is a privilege to be the president of CMU. Globally regarded as one of the best universities in the world, Carnegie Mellon's president is respected simply for having the title.

True story: Being the modest person that I am, I almost never tell strangers what my position is; it sounds to me too much like bragging. But, I make an exception whenever I go through Passport Control at airports (which is often). The conversation usually goes:

Immigration Agent (looking at my form): "I see you traveled on business. What was the nature of your business?"

Me: "I was visiting our alumni and academic programs. I am the President of Carnegie Mellon University."

Agent: "Oh! That's a great school. Welcome home!"

The university has made progress in many ways during my time here. Inevitably, the growth and innovations of the last 16 years will be associated with the "Cohon Era." I cringe when I hear people use the term because all of the great things that have happened here have been the result of your superb efforts, not mine. Our reputation and impact are the result of the brilliance, creativity, hard work and devotion of the 18,000 faculty, staff and students and the accomplishments of the more than 92,000 alumni who comprise the Carnegie Mellon community. Even after 16 years, I am still amazed by the pathbreaking research you do, and thrilled by the art you create and perform. And, I am enormously proud of the rich educational experiences you provide and our contributions to our communities. I am proud, too, of our collaborative, can-do culture in which each of us feels respected and supported.

Of the thousands of people who have contributed to our success, I must single out the deans and directors for their excellent leadership of our colleges and non-academic units. We purposefully operate in a decentralized manner, putting resources and authority in the hands of these key people. I like to think that CMU is more than the sum of its parts, but the parts have to be excellent if the whole is to be.

I have had the great good fortune to work every day, closely and collaboratively, with the Management Team: Mark Kamlet, Executive Vice President and Provost; Vice President and General Counsel Mary Jo Dively; Cheri Hays, Secretary of the Board of Trustees and Director of the President's Office; Vice President of University Advancement Robbee Kosak; and, Vice President for Campus Affairs Michael Murphy. They are a wonderful group and the best at what they do that Carnegie Mellon has ever seen. The six of us are supported by a terrific group of assistants – my thanks to the 6th Floor Crew and, for my personal sanity, Cathy Light, who has gone to amazing lengths to keep me on time and out of trouble.

Being the leader of this outstanding community has been an enormous honor. My wife, Maureen, who has been a great "First Lady" and my life partner, joins me in saying THANK YOU and in wishing you all the best.

Jared L. Cohon

Read about Carnegie Mellon's 116th Commencement activities in a special pullout section.

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JARED L. COHON

recommendations to improve water quality in Allegheny County.

Prior to coming to CMU, Cohon was dean of the School of Forestry & Environmental Studies at Yale University from 1992 to 1997. His career started in 1973 at Johns Hopkins University, where he enjoyed a 19-year tenure as a faculty member in the Department of Geography and Environmental Engineering. He also served as assistant and associate dean of Engineering and vice provost for Research at Johns Hopkins.

President Bill Clinton appointed Cohon to the Nuclear Waste Technical Review Board in 1995 and named him chairman in 1997. In 2002, President George W. Bush named Cohon to the Homeland Security Advisory Council, and in 2009, President Barack Obama reappointed him. He has served as chairman of the council's Academe, Policy & Research Senior Advisory Committee and was named vice chair of the Advisory Council's Sustainability and Efficiency



DENNIS EPPLE

Task Force.

After a sabbatical, Cohon will join the CMU departments of Civil and Environmental Engineering and Engineering and Public Policy.

Dennis Epple

Epple is the Thomas Lord Professor of Economics at the Tepper School of Business and head of the economics program.

"Dennis is clearly one of the leading public economists of his generation and his body of research exemplifies the interdisciplinary spirit at Carnegie Mellon. Combining the principles of economics with other fields such as organizational behavior, operations research and political science, he has expanded our ability to make quantitative assessments of policy where previously only qualitative assessments were feasible," said Robert M. Dammon, dean of the Tepper School of Business.

"In addition to the quality of his research, Dennis is also an exceptional teacher. He demonstrates a passion for his field and commitment to making sure that his work is understood by others and that his students learn how to apply fundamental concepts that they need to be successful in the marketplace," Dammon said.

Since joining the faculty in 1974, Epple has made fundamental contributions to the field of economics and provided outstanding leadership for the university's economics program. Combining disciplines to develop new approaches to policy questions, Epple's research achievements are notable in diverse fields, such as learning curves, hedonic regressions, the economics of education and mobility and redistribution.

Epple is co-editor of the *Journal of Public Economics* and is a former co-editor of the *American Economic Review*. He also has served on the Board of Editors of several other premier academic publications and was elected a fellow of the Econometric Society in 2003.

Epple also has served the university in a variety of official capacities, including head of Economics and as acting dean of the Tepper School of Business (1990-91). He is a recipient of the school's George Leland Bach Teaching Award, which is selected by MBA students to recognize excellence in the classroom.



MARCEL JUST

Marcel Just

Just is the D. O. Hebb Professor of Psychology and director of CMU's brain-imaging facility and the Center for Cognitive Brain Imaging.

"Marcel Just is one of the leading researchers in the field of brain science," said John Lehoczky, dean of the Dietrich College of Humanities and Social Sciences. "His research has had tremendous impact on the use of brain imaging to gain an understanding of human cognition and important societal issues such as autism and dyslexia. I am sure that he will continue to have a major impact in the years to come."

Just is a renowned neuroscientist who focuses on how language comprehension and problem-solving emerge from brain processes. He has contributed to understanding reading comprehension, autism, dyslexia, multi-tasking and computational modeling.

Just's eye-fixation research produced a major theory of reading. Recently, he developed a prominent explanation for autism, proposing that compromised communication between the frontal cortex and other brain areas causes autistic behavior such as social and communication disorders and restricted interests.

Additional groundbreaking discoveries include showing that reading remediation physically changes the white matter in the brains of dyslexic children while improving their reading performance, and demonstrating that listening to someone speak during driving massively decreases the brain activity associated with driving.

Just and CMU colleague Tom Mitchell applied trailblazing machine-learning techniques to identify a person's thought from its brain activation signature, culminating in a "mind-reading" demonstration on "60 Minutes." The research shows that the inherent organization of the brain shapes the structure of all human concepts (e.g. objects, numbers, emotions, social interactions) and established the field of neurosemantics.

Just addresses public policy issues relevant to his research. He's testified on autism before the Congressional Subcommittee on Human Rights & Wellness and on distracted driving to the Pennsylvania Congressional Transportation Committee.



STEVE E. SHREVE

Steve E. Shreve

Shreve, the Orion Hoch Professor of Mathematical Sciences, has been a member of the Carnegie Mellon faculty since 1980.

Working with students and colleagues, including Dietrich College of Humanities and Social Sciences Dean John Lehoczky, Shreve has played a key role in laying the foundations for the modern mathematical theory of optimal portfolio construction in the presence of market uncertainty, work that has built on that of Nobel Laureate Robert Merton. He has become internationally recognized for this and his other work in mathematics applied to finance, including the development of models for pricing exotic derivative securities and convertible bonds.

"Steve Shreve is among the top mathematical finance researchers in the world," said Fred Gilman, dean of the Mellon College of Science. "While his research accomplishments alone would make him worthy of being named a University Professor, he has contributed even more by bringing his expertise to the classroom. His dedication to the mathematical and computational finance programs at the university has made Carnegie Mellon one of the best universities in the field."

In addition to his research, Shreve helped found Carnegie Mellon's highly regarded bachelor's, master's and doctoral programs in computational and mathematical finance. These programs bring together the expertise of the Department of Mathematical Sciences in the Mellon College of Science, the Department of Statistics in the Dietrich College of Humanities and Social Sciences, the Tepper School of Business and the School of Public Policy and Management in the Heinz College. The programs have been ranked among the top in the country, and the programs' graduates are in high demand at the world's top financial institutions.

Shreve has authored many important books on the mathematics of financial derivatives, including "Methods of Mathematical Finance" and the two-volume "Stochastic Analysis for Finance." He has served as the president of the Bachelier Finance Society, the leading professional society for quantitative finance, and is a fellow of the Institute of Mathematical Statistics.



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

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University Center Addition To Expand Fitness, Recreation Space

New Entrance To Face Forbes Avenue

■ Bruce Gerson

Build it and they will come.

That's the recent history Carnegie Mellon is banking on as it enters the design phase for a \$22 million, 45,000 square-foot University Center addition that will include enhanced fitness and recreation space, a black box theater for student performance groups and a new front door and lobby area facing Forbes Avenue.

"The new soccer and intramural field is a microcosm of what is possible when we improve our facilities," said Director of Athletics, Physical Education and Recreation Susan Bassett. "We doubled our inventory and quadrupled our activity."

Currently about 1,000 individuals swipe their ID cards daily to use the fitness and recreation spaces in the University Center and Skibo Gym despite the limited resources. Bassett said since she's arrived at CMU in 2005, she's seen an "exponential" increase in the amount of participation in recreational and instructional programs, physical education and

group exercise classes, intramurals and free recreation.

She credits her staff with generating interest in fitness through various outreach efforts and exceptional teaching, but believes many more will become engaged with expanded facilities.

"I'm very confident that by increasing our space for activities and offering a bright, inviting environment, many more people will be encouraged to participate.

"The sky's the limit. We will transform campus life in terms of access to fitness in a way none of us can imagine," she said.

Project components include:

- More than 8,000 square feet of fitness space, including free weights, weight machines and cardiovascular equipment;
- Three exercise studios, including a dedicated spinning studio with a video screen to simulate biking trails;
- Additional locker rooms;

- A black box theater for student performance groups;
- An administrative office suite;
- An improved circulation and equipment desk area;
- A pool balcony with HVAC improvements;
- And a new entrance and lobby area off of Forbes Ave.

Leading the addition design is Cannon Design of Baltimore, an architectural firm that has designed more than 250 projects for more than 200 higher education institutions.

"Cannon had the most impressive combination of experience with athletics and recreation facilities and design concepts that really were exciting for this project," said Bassett who was on the selection committee. "They brought excellent creativity and an approach to design that blew everyone else out of the water. They were clearly head and shoulders above everyone else."

Senior Project Manager Andrew Reilly of Campus Design and Facility Development said Cannon, which was

selected from a group of 17 firms, will be partnering with Lami Grubb Architects of nearby Swissvale, Pa. He said Lami Grubb has completed many projects at CMU, such as several dining facilities and Entropy+.

While the addition will improve fitness and health for the university community, Bassett believes it also will enhance campus life and help to recruit and retain students, faculty and staff.

"Athletics and recreation is a key component of campus life and a key ingredient that will help take CMU to a higher level. The addition will open up many new possibilities," she said.

The design phase of the project, which will include university focus groups, is slated to continue through 2013 with construction beginning in spring 2014.

Reilly said during construction the University Center turnaround may be temporarily relocated and the University Center entrance to the East Campus Garage will undergo periodic closures.

Spring Carnival Snapshots



THE MASCOT SCOTTY GREETED THE LIVE SCOTTY ALONG WITH LARRY CARTWRIGHT, A TEACHING PROFESSOR IN CIVIL AND ENVIRONMENTAL ENGINEERING, AND HIS OTHER SCOTTISH TERRIER FRIENDS NEAR THE BUGGY COURSE DURING CARNIVAL.



JOSEPH ROBERTSON (DC'13) PUSHES THE SPIRIT BUGGY AROUND A TURN.

PHOTOS BY KEN ANDREYO

We
did it!

WE CROSSED THE \$1B MARK.

WE CONNECTED WITH MORE ALUMNI THAN EVER.

WE HELPED GROW CMU'S GLOBAL VISIBILITY.

THANKS TO ALL OF YOU — NEARLY 50,000 ALUMNI, FACULTY, STUDENTS, PARENTS AND STAFF — WHO SUPPORTED THE INSPIRE INNOVATION CAMPAIGN, WE ARE IN THE HOMESTRETCH OF AN HISTORIC EFFORT THAT'S ALREADY IMPACTING EVERYTHING FROM NEW RESEARCH FACILITIES TO FACULTY AND STUDENT SUPPORT.

BUT WE'RE NOT DONE YET. HELP US CONTINUE THE CELEBRATION AS WE PREPARE TO CROSS THE CAMPAIGN FINISH LINE IN JUNE.

Master Piper

Graduate Hopes To Continue Love of Scottish Heritage

■ Pam Wigley

“Do you want to be a piper, or do you want to play the bagpipe?”

The correct answer to that question, the man told 12-year-old Andrew Bova, would determine whether he would give the boy lessons. He was instructed to go home and sleep on his decision and return the next day with an answer. More than a decade later, Bova clearly recalls his response.

“I want to be a piper.”

So with that resolve, Bova followed his heart, and will earn his master’s degree in music for bagpipe performance at CMU’s commencement.

The degree is the first one known to be granted in the United States.

Bova, who received an undergraduate degree in bagpipe performance from CMU in 2011, learned many years after choosing to be a piper that there is a distinction between playing the bagpipes and being a piper. The former does just that — plays the instrument. The latter studies not only the instrument but also



ANDREW BOVA WILL RECEIVE A MASTER’S DEGREE IN FINE ARTS FOR BAGPIPE PERFORMANCE ON MAY 19.

the history and tradition of piping, and is dedicated to a high standard of playing.

As a boy, Bova began his musical journey playing the flute. He and his older brother, who played the drums, were recruited to play during a war re-

enactment at Fort Meigs in their hometown of Perrysburg, Ohio. Bova spotted the piper there who would later inspire him to pursue piping. He continued to play flute and served as principal flautist with the Toledo Youth Orchestra, but he was determined to become a piper, and set his sights on Carnegie Mellon.

“I wanted to be part of a conservatory training program, to be immersed in my craft,” he said. “There is a pervasive standard of excellence at Carnegie Mellon, no matter what area of study you’re in. That standard is so high, you’re always pushing yourself to do better, and I wanted that type of environment.”

Outside of the university, Bova performs as part of the Canada-based 78th Fraser Highlanders Pipe Band, which is considered one of the world’s top pipe bands. He is one of approximately 25 pipers who perform with snare, tenor and bass drummers. The band regularly competes in the World Pipe Band Championships in Glasgow, Scotland, which Bova referred to as the

Super Bowl of piping.

He also has found time to organize and perform in benefit concerts in his hometown for Operation Smile, an organization that provides free cleft palate surgery. Born with a cleft palate himself, Bova said without the means to have had the surgery he would never have been able to play a wind instrument — let alone eat or speak well.

“The concerts were my way of giving back,” he said. “Plus, you can educate people about the instrument, and they see that there is a range of music you can play.”

He plans to continue educating others and has interviewed with The Royal Conservatoire of Scotland in Glasgow to earn his doctorate. He hopes to land his dream job of teaching in the United States one day.

“There’s such a thirst for knowledge here, and you can really make an impact,” he said. “That’s what I’d really like to do.”

Female Chemical Engineering Grads See More Job Opportunities

■ Chriss Swaney

Carnegie Mellon women are poised to add more oomph to the U.S. economy as they enter a job market that remains a wild card in the recovery picture.

Erin Donnelly, Stephanie Engel, Rocio Garay, Abby Schaeffer and Mala Shah are among the growing ranks of female chemical engineers in a male-dominated field working at chemical plants and manufacturing facilities from coast-to-coast.

The 38 women in the class of 2013 will hone their CMU problem-solving skills and innovation from the plant floors of Caterpillar and Boeing to the clean rooms of Intel and PPG Industries.

“This has been a wonderful year for chemical engineering with women graduates making up more than 50 percent of our 2013 class,” said Andy Gellman, head of CMU’s Chemical Engineering Department and co-director of the Scott Institute for Energy Innovation. “I think these increases are due in part to the jobs boom built on energy, and the desire for women to compete in areas once traditionally reserved for men.”

Shah, of Elmwood Park, N.J., will head to Caterpillar in Peoria, Ill., after she snares her chemical engineering diploma at CMU May 19.

“I’ll be an associate engineer in Caterpillar’s leadership and technical development program where I can really put some of my classroom work to real-world use,” she said. “I loved CMU because of its multicultural values, and its atmosphere of pushing me beyond my expectations.”

For Donnelly of Long Island, N.Y., the CMU experience has been very rewarding.

“I’ll be supporting the chemical and coating technologies utilized in the manufacturing of the Boeing 737, and I’m absolutely thrilled. My job search, as a soon to be CMU graduate, has shown me that our degrees are recession proof,” Donnelly said. “I call it the CMU bubble.” She also credits her leadership skills gained from campus organizations for advancing her career goals.

While the economy slowly chugs along, Donnelly and her classmates boast multiple job offers. Both Garay of Cincinnati, Ohio, and Engel of Erie, Pa., had three to four job offers during the fall semester. Garay will work at Braskem, a supplier for consumer product and automotive industries.

Engel, who worked at PPG last summer, turned her internship into a full-time job. She will be working at a PPG plant near Barberton, Ohio, just two hours from her family home.

“I really enjoy getting into my steel-toed shoes and diving into all the plant’s process-oriented work,” Engel said. “CMU did a fantastic job of preparing me for the competitive job market.”

Not all female CMU grads are scaling the manufacturing ladder. Schaeffer, a senior from New York City, opted to work for giant chipmaker Intel.

“You simply can’t go wrong with an engineering degree. It opens so many doors,” Schaeffer said. “I also think my junior year abroad at London’s Imperial

College helped me mature and better understand the global economy.”

This ever-improving allocation of female talent continues to lead to substantial productivity. More than 57 percent of the bachelor’s degrees awarded

in 2011 went to women, according to the U.S. Department of Education. And the U.S. Labor Department estimates that the engineering profession will continue to rank as one of the top U.S. job creators for the next decade.

Green Flying Machines



JOHN COLLINS, THE GUINNESS BOOK WORLD-RECORD HOLDER FOR FLYING PAPER AIRPLANES THE FARTHEST DISTANCE, KICKED OFF THE SECOND ANNUAL STEINBRENNER INSTITUTE ENVIRONMENTAL EXPO WITH ELABORATE DEMOS OF AMAZING FLYING MACHINES MADE OUT OF PAPER. THE EXPO SHOWCASED THE ENVIRONMENTAL RESEARCH AND SUSTAINABILITY PROJECTS OCCURRING AT CMU.

COMMENCEMENT 2013

CMU Honors Cohon's 16-year Tenure as President



PHOTO COURTESY OF CARNEGIE MELLON QATAR

AT THE CARNEGIE MELLON QATAR GRADUATION CEREMONY ON MAY 6, DEAN ILKER BAYBARS PRESENTED PRESIDENT JARED L. COHON WITH THE SWORD THAT HAS BEEN USED AS THE MACE DURING CMU-Q GRADUATION CEREMONIES IN APPRECIATION OF HIS COMMITMENT TO THE QATAR CAMPUS. COHON, WHO DELIVERED THE KEYNOTE ADDRESS, SAID SEEING THE DOHA "PROGRAMS GROW AND THRIVE OVER THE LAST NINE YEARS HAS BEEN ONE OF THE HIGH POINTS OF MY TIME AS PRESIDENT. I COULD NOT BE PROUDER OF WHAT WE HAVE ACCOMPLISHED TOGETHER."

■ Piper Staff

Jared L. Cohon deserves, and will rightfully get, the last word.

Cohon will deliver the keynote address as he presides over his 16th and final commencement as Carnegie Mellon's president. He will be stepping down from the presidency on June 30 after 16 years at the helm.

CMU's 2013 commencement ceremony will begin at 11 a.m., Sunday, May 19 in Gesling Stadium, where more than 4,200 bachelor's, master's and doctor's degrees will be conferred. The ceremony will be webcast at www.cmu.edu/commencement.

This year's student speaker is Brian Groudan (DC'12), who graduated in December with majors in information systems and human-computer interaction. Read more about Groudan and his message on page six.

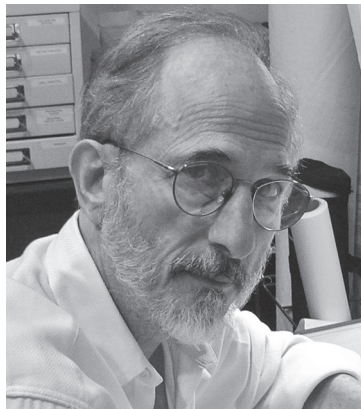
Receiving honorary degrees at this year's commencement are Jules Fisher (A'60), Charles Geschke (S'73), Mark A. Nordenberg, Ratan N. Tata and Charles M. Vest.

Learn more about the honorary degree recipients below.

CMU To Award Five Honorary Degrees

■ Piper Staff

It is a Carnegie Mellon tradition to award honorary degrees at commencement to exemplary leaders whose life and work serve as an inspiration for Carnegie Mellon students, faculty and staff. The diversity of this year's candidates represents the intersection of business, technology and the arts, a university hallmark. Receiving honorary degrees will be:



Jules Fisher (A'60)
Lighting Designer and Producer
Doctor of Fine Arts

Carnegie Mellon can claim many stars among its alumni. However, few have shaped their field as Jules

Fisher has. Fisher's contributions in lighting design have set the standard for theatrical lighting that brings a scene to life, creating an ambiance that draws viewers as active participants in a performance, often creating new technologies to achieve specific artistic effects.

Following graduation, he was soon immersed in the off-Broadway production scene with "All the Kings Men." In 1963, Fisher broke onto Broadway, lighting "Spoon River Anthology." During that season, he also lit his first two musicals, Stephen Sondheim's "Anyone Can Whistle" and Noel Coward's "High Spirits." He has gone on to win eight Tony Awards, the most a lighting designer has ever earned. In a field where technology change is constant, Fisher

remains an innovative leader.

His influence spans Broadway and off-Broadway productions, film, television, ballet, opera, and rock concert tours. For example, he designed the lighting for Kevin Kline's production of "Hamlet" for WNET-TV, and lit productions of "Porgy and Bess" at the New York City Opera and *Il Trittico* at the MET. Fisher was the production supervisor for tours of the Rolling Stones, KISS and David Bowie. He has designed lighting for Crosby, Stills and Nash; Whitney Houston; and the Simon and Garfunkel concert in Central Park. For President Bill Clinton's first inaugural, he lit the Quincy Jones concert, which was nominated for an Emmy Award.

Fisher is a founder and principal in Fisher Dachs Associates (FDA), one of the world's leading theatre planning and design consultants, as well as Fisher Marantz Stone (FMS), the internationally recognized architectural lighting

design consultancy. He is a partner with Peggy Eisenhauer (CMU 1983) in Third Eye, providing lighting for the entertainment industry. Fisher has been a mentor and advocate of numerous young designers, extending opportunities to generations of Carnegie Mellon students.

Charles M. Geschke (S'73) Chairman of the Board, Adobe Systems Incorporated Doctor of Science and Technology

Charles Geschke co-founded Adobe Systems, one of the world's most diversified software companies, in 1982 with John Warnock. Adobe has made an important impact on the digital landscape with its reputation for excellence and a portfolio of highly recognizable software brands, including Adobe Photoshop, Flash, Acrobat, InDesign and Dreamweaver.

CONTINUED ON PAGE SIX

Cool at School

Student Commencement Speaker To Reflect on Staying True to One's Self

■ Abby Simmons

From the moment Brian Groudan (DC'12) arrived at Carnegie Mellon from Long Island, he knew college would be different from high school.

This place had a different definition of what it meant to be “cool.”

“In high school, we’re taught to police ourselves. It’s not cool to try hard, it’s not cool to show enthusiasm,” Groudan said.

Rather, what passes as cool at CMU is working on an interesting project over the weekend, talking with a friend on the black couches in the University Center or painting the Fence.

“I felt like I’ve gotten so much out of my student experience here that I wanted to convey that and share that with everyone,” Groudan said. “Commencement is about everyone, and that’s what I want my speech to be about. That shared CMU experience, and what it means to be a CMU student.”

Groudan’s orientation experience inspired him to get involved in student life. He served as an orientation counselor his sophomore and junior years and was a resident assistant his senior year.

One of his favorite memories is of

serving as booth chair for the Alpha Kappa Psi business fraternity’s first Spring Carnival entry, an award-winning Blitz booth modeled after the board game Monopoly.

“I got to experience what it was like building a structure from the ground up with an organization where everyone is so reliable and so passionate and willing to stay up all night just to put on those finishing touches,” Groudan said.

As a high school student, Groudan didn’t know what major he wanted to pursue, but he chose CMU for its strong technical and creative programs.

“You don’t need to have it all figured out when you get here. CMU helps you discover,” Groudan said.

He ended up with two majors — information systems and human-computer interaction — and a minor in communication design. It allowed him to be curious and explore a diverse range of interests.

“Brian is the kind of student that you love to have in the classroom — he is extremely intelligent and hard-working, but at the same time is easy to get along with. I think of him as a triple threat — strong developer and designer,

has business savvy and is a team player,” said Jeria Quesenberry, assistant teaching professor for the Information Systems program.

Groudan’s approach to solving problems calls upon his expertise in different fields.

“Nowadays problems that are presented to you aren’t presented in a way that’s neatly packaged. You have to draw upon skills from all these different disciplines,” Groudan said.

This year, Groudan and three fellow seniors co-founded PayTango, a fingerprint-based payment and identification system, which has been tested on campus and is making national headlines.

“None of this was planned, and we’ve seen tremendous help from CMU every step of the way,” Groudan said.

He finished his degree requirements in December and moved to Silicon Valley in January to further develop the company at the Y Combinator startup accelerator.

“Sometimes I feel like I haven’t left Pittsburgh at all. I love this place, and I definitely want to keep close ties,” he said.



BRIAN GROUDAN (DC'12)

The move to Silicon Valley has given him an early glimpse into how the world works.

“There are a lot of people out there just trying to be cool, kind of like what we experience in high school. Just be yourself, and don’t let that go,” Groudan said.

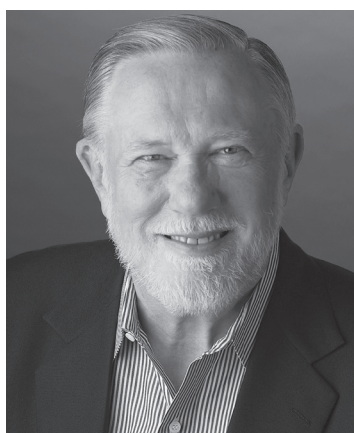
For more on Groudan’s work with PayTango, see “It Takes A Village” on page 9.

Honorary Degree Recipients Inspire Through Their Work CONTINUED FROM PAGE FIVE

Their initial innovation, the Adobe PostScript printer language, marked the first step in a quiet revolution that democratized publishing and enhanced the dissemination of ideas and information. The Portable Document Format (PDF) was launched in 1993. Today, governments, corporations and individuals worldwide use PDFs for universal, reliable document exchange.

In 2000, Geschke retired from his position as Adobe’s president, remaining as co-chairman with Warnock of its board of directors. In 2009, the two were awarded the National Medal of Technology and Innovation by President Barack Obama. They also received the Marconi Prize in 2010. The American Electronics Association honored them with the Medal of Achievement in 2006, making them the first software leaders to receive this medal.

In 2000, Geschke was ranked as the seventh most influential graphics person of the last millennium by Graphic Exchange magazine. He is a member of the American Philosophical Society, the National Academy of Arts and Sciences



and the National Academy of Engineering, and he has been honored by the Association for Computing Machinery, Institute of Electrical and Electronics Engineers, National Computer Graphics Association, and Rochester Institute of Technology.

Geschke was awarded an honorary degree from Xavier University, his alma mater, in 2011, and from John Carroll University in 2012. He served four years as board chairman at the University of San Francisco. He received his Ph.D. in computer science from Carnegie Mellon in 1973.



Mark A. Nordenberg
Chancellor and Distinguished Service Professor of Law,
University of Pittsburgh
Doctor of Humane Letters

Mark A. Nordenberg has served as chancellor of the University of Pittsburgh since 1995. Founded in 1787, Pitt is one of the oldest institutions of higher learning west of the Allegheny Mountains. Pitt also is recognized as one of this country’s leading research universities — with wide-ranging program strengths, students who regularly claim national

and international honors and a ranking in the top five of all American universities in terms of federal research support.

Chancellor Nordenberg joined Pitt’s law faculty in 1977 and later served as dean of the Law School. He holds the special faculty rank of Distinguished Service Professor of Law. He has been honored for teaching excellence by both the law school and the university. His area of specialty is civil litigation, and he has served on the U.S. Advisory Committee on Civil Rules and the Pennsylvania Civil Procedural Rules Committee.

He also has been a committed contributor to the community, leading efforts focused on such key issues as the consolidation of city and county governments, the challenges faced by the state’s urban schools, the workforce development needs of the region, and issues of leadership and governance in the Pittsburgh public schools.

Chancellor Nordenberg places an especially high value on his partnership with President Cohon and on the culture of institutional collaboration that they

Schedule of Events

Commencement weekend at Carnegie Mellon involves much more than the ceremony itself. Below is a list of events for May 18-19.

Saturday, May 18

8 - 9 a.m.

Phi Beta Kappa Honor Society Initiation Ceremony

McConomy Auditorium, UC

An optional, complimentary breakfast will precede the ceremony at 7:15 a.m. in the Connan Room, UC.

8 a.m. - 2 p.m.

Commencement Welcome Area

Wean Commons, UC

First Aid Area

Athletic Equipment Desk, UC

9:30 a.m.

Navy ROTC Commissioning Ceremony

Soldiers & Sailors Memorial Hall

(off campus)

4141 Fifth Ave., Pittsburgh, PA 15213

10 - 11 a.m.

Honors Ceremonies

Various locations across campus.

10 a.m. - 8 p.m.

Cap & Gown Distribution

McKenna/Peter/Wright Room, UC

Noon - 8:30 p.m.

Diploma Ceremonies and Department Events

Specific times and locations are listed on page 8.

12:30 - 2 p.m.

Human-Computer Interaction Undergraduate Presentation

Room 7500, Wean Hall

Join the HCII graduates as they present their work for families and peers.

4 - 6 p.m.

CMU Graduating Student Reception

Tartans Pavilion, Resnik House

The CMU Alumni Association will host a reception for all graduating students and their families.

5 - 7 p.m.

Carnegie Mellon Advising Resource Center (CMARC) Reception

Singleton Room, Roberts Engineering Hall

6 - 8:30 p.m.

Commencement Welcome Area

Wean Commons, UC

7 p.m.

Robing for Doctor's Hooding Ceremony Participants

Rangos Hall, UC

8 p.m.

Doctor's Hooding Ceremony

Wiegand Gym, UC

Sunday, May 19

7:30 - 10 a.m.

Diploma Ceremonies and Department Events

Specific times and locations are listed on page 8.

8 a.m.

Baccalaureate Ceremony

Wright-Rogal Chapel, UC

The Carnegie Mellon Council of Religious Advisers invites graduates and their families to attend a non-denominational, multi-faith event. A light breakfast will be served.

8 - 11 a.m.

Cap & Gown Distribution

McKenna/Peter/Wright Room, UC

8 a.m. - 2 p.m.

Commencement Welcome Area

Wean Commons, UC

First Aid Area

Athletic Equipment Desk, UC

8:30 - 10 a.m.

School of Computer Science Breakfast

Perlis Atrium, Newell-Simon Hall

10 a.m.

Robing for Commencement Participants

Various locations across campus.

10:15 a.m.

Procession of graduates

11 a.m.

Main Commencement Ceremony

Gesling Stadium

Noon - 5 p.m.

Cap & Gown Return

McKenna/Peter/Wright Room, UC

12:30 - 7 p.m.

Diploma Ceremonies and Department Events

Specific times and locations are listed on page 8.

have nurtured together. President Cohon and Chancellor Nordenberg served as the founding co-chairs of such major technology-based economic development initiatives as the Pittsburgh Digital Greenhouse, Pittsburgh Life Sciences Greenhouse, Pittsburgh Robotics Foundry and Technology Collaborative. They also were co-recipients of such honors as Pittsburghers of the Year by Pittsburgh magazine, Persons of Vision by Pittsburgh Vision Services, the Keshet Award from the Edward and Rose Berman Hillel Jewish University Center and the Community Impact Award from the Pittsburgh Area Jewish Committee.



ing and bringing increased cohesion to the network of Tata companies.

Until 2012, Tata was the chairman of Tata Sons and several major Tata companies. Under his leadership, the Tata Group and its affiliates were able to acquire many world-renowned companies. Currently, he is chairman emeritus of several Tata companies and chairman of the philanthropic Tata Trusts.

Serving at the helm of India's biggest industrial group led Tata to become a global citizen and accomplished innovator. Also a committed philanthro-

pist, he is passionate about many issues, including improving the quality of life for people in rural areas, water conservation and ocean vitality, and improving the nutrition of children and pregnant women.

Tata sits on the board of directors of Alcoa and Mondelez International. He also serves on the board of trustees of Cornell University and the University of Southern California.

Among his many honors, Tata received Lifetime Achievement Awards from the Rockefeller Foundation and Ernst & Young. The Government of India honored Tata with its second-highest civilian award, the Padma Vibhushan in 2008, and he accepted the Carnegie Medal of Philanthropy on behalf of his family in 2007.

Tata received a Bachelor of Architecture degree from Cornell University in 1962. He completed the Advanced Management Program at Harvard Business School in 1975. He has received honorary doctorates from universities in Asia, Europe, India and the United States.



Charles M. Vest

President, National Academy of Engineering;
President Emeritus, Massachusetts Institute of Technology
Doctor of Science and Technology

Charles M. Vest is president of the National Academy of Engineering and president emeritus of the Massachusetts Institute of Technology, where he served as president from 1990 to 2004. During his tenure, MIT launched its OpenCourseWare initiative; co-founded the Alliance for Global Sustainability;

CONTINUED ON PAGE EIGHT

Diploma Ceremonies

Graduates will receive their diplomas at department diploma ceremonies. Caps and gowns are required.

Architecture

Saturday, May 18
Ceremony: 2 p.m.
Philip Chosky Theater, Purnell Center
Reception: following ceremony
Great Hall, CFA

Art

Sunday, May 19
Reception: 12:30 p.m.
Regina Gouger Miller Gallery,
Purnell Center
Ceremony: 2:30 p.m.
Philip Chosky Theater, Purnell Center

Bachelor of Humanities & Arts/ Bachelor of Science & Arts/ Bachelor of Computer Science & Arts

Sunday, May 19
Ceremony: 8:30 a.m.
Kresge Theater, CFA
Reception: 9:30 a.m.
Alumni Concert Hall, CFA

Biological Sciences * +

Saturday, May 18
Ceremony: 2 p.m.
Auditorium, Mellon Institute
4400 Fifth Ave.
Reception: following ceremony
Social & Conference Rooms,
Mellon Institute

Biomedical Engineering

Saturday, May 18
Ceremony: Noon
McConomy Auditorium, UC
Reception: 1 p.m.
Schatz Dining Room, UC

Business Administration (Bachelor's) +

Sunday, May 19
Reception: 12:30 p.m.
Ceremony: 2 p.m.
Soldiers & Sailors Memorial Hall
4141 Fifth Ave.

Business Administration (Master's & Doctor's) +

Saturday, May 18
Ceremony: 2 p.m.
Reception: following ceremony
Soldiers & Sailors Memorial Hall
4141 Fifth Ave.

Chemical Engineering +

Sunday, May 19
Ceremony: 1:30 p.m.
Carnegie Lecture Hall, Carnegie Museum
4400 Forbes Ave.
Reception: following ceremony
Phipps Conservatory
1 Schenley Park/
700 Frank Curto Dr.

Chemistry +

Sunday, May 19
Ceremony: 2 p.m.
Auditorium, Mellon Institute
4400 Fifth Ave.
Reception: following ceremony
Social & Conference Rooms,
Mellon Institute

Civil & Environmental Engineering +

Sunday, May 19
Reception: 12:30 p.m.
Ceremony: 2 p.m.
University of Pittsburgh Alumni Hall
4227 Fifth Ave.

Design

Saturday, May 18
Ceremony & Reception: 3 p.m.
Rangos Hall, UC

Drama

Sunday, May 19
Ceremony: 12:30 p.m.
Philip Chosky Theater, Purnell Center
Reception: following ceremony
Lobby, Purnell Center

Economics +

Sunday, May 19
Reception: 12:30 p.m.
Ceremony: 2 p.m.
Soldiers & Sailors Memorial Hall
4141 Fifth Ave.

Electrical & Computer Engineering

Sunday, May 19
Ceremony: 12:30 p.m.
Reception: following ceremony
Wiegand Gymnasium, UC

Energy Science, Technology & Policy

Sunday, May 19
Ceremony & Reception: 8 a.m.
Singleton Room, Roberts
Engineering Hall

Engineering & Public Policy *

Sunday, May 19
Ceremony & Reception: 8 a.m.
Rangos 2 and 3, UC

Engineering & Technology Innovation Management *

Sunday, May 19
Ceremony & Reception: 8 a.m.
Rangos 2 and 3, UC

English

Saturday, May 18
Ceremony: 2:30 p.m.
McConomy Auditorium, UC
Reception: following ceremony
Schatz Dining Room, UC

Entertainment Technology Center

Sunday, May 19
Reception, followed by dinner: 4 p.m.
Ceremony: following dinner
East Club Lounge, Heinz Field
100 Art Rooney Ave.

Heinz College +

Saturday, May 18
Ceremony: 2 p.m.
Carnegie Music Hall, Carnegie Museum
4400 Forbes Ave.
Reception: following ceremony
Carnegie Music Hall Foyer,
Carnegie Museum

History

Sunday, May 19
Reception: 8 a.m.
Lower Level Coffee Lounge,
Baker Hall
Ceremony: 9 a.m.
Giant Eagle Auditorium, Baker Hall

Information Networking Institute

Sunday, May 19
Ceremony: 3 p.m.
Reception: 4 p.m.
Rodef Shalom Congregation
4905 Fifth Ave.

Information Systems *

Saturday, May 18
Ceremony: 6 p.m.
Philip Chosky Theater, Purnell Center
Reception: following ceremony
Lobby, Purnell Center

Materials Science & Engineering+ Sunday, May 19

Ceremony: 1 p.m.
Reception: following ceremony
Winchester Thurston School Auditorium
555 Morewood Ave.

Mathematical Sciences

Sunday, May 19
Ceremony: 1 p.m.
McConomy Auditorium, UC
Reception: following ceremony
Perlis Atrium, Newell-Simon Hall

Mechanical Engineering

Saturday, May 18
Ceremony & Reception: 2 p.m.
Wiegand Gymnasium, UC

Modern Languages

Sunday, May 19
Ceremony: 8:30 a.m.
Rangos 1, UC
Reception: following ceremony
Skibo Coffeehouse, UC

Music

Sunday, May 19
Ceremony: 12:30 p.m.
Great Hall, CFA
Reception: following ceremony
Alumni Concert Hall, CFA

Philosophy

Sunday, May 19
Breakfast Reception: 8 a.m.
Ceremony: 9 a.m.
Gregg Hall/Room 100, Porter Hall

Physics

Sunday, May 19
Ceremony: 12:30 p.m.
Reception: following ceremony
Room 7500, Wean Hall

Product Development

Saturday, May 18
Ceremony: 10 a.m.
Reception: following ceremony
Singleton Room, Roberts Engineering Hall

Psychology

Sunday, May 19
Ceremony & Reception: 12:30 p.m.
Rangos Hall, UC

School of Computer Science +

Sunday, May 19
Ceremony: 1:30 p.m.
Reception: following ceremony
Carnegie Music Hall, Carnegie Museum
4400 Forbes Ave.

Social & Decision Sciences

Sunday, May 19
Breakfast Reception: 7:30 a.m.
Schatz Dining Room, UC
Ceremony: 8:30 a.m.
McConomy Auditorium, UC

Statistics

Sunday, May 19
Ceremony: 12:30 p.m.
Gregg Hall/Room 100, Porter Hall
Reception: following ceremony
Lower Level Coffee Lounge,
Baker Hall

Student-Defined Majors (Dietrich College)

Sunday, May 19
Ceremony: 9 a.m.
Reception: 9:30 a.m.
Adamson Wing/Room 136A
(upper level lobby), Baker Hall

* Seating is limited. Contact the department or see cmu.edu/commencement for details.
+ Complimentary shuttle service will be available to transport guests to the ceremony.

Walking and driving directions to off-campus sites will be available at the Commencement Welcome Area.
UC = University Center
CFA = College of Fine Arts Building

Honorary Degree Recipients Inspire

CONTINUED FROM PAGE SEVEN

enhanced the diversity of its students and faculty; established major new institutes in neuroscience and genomic medicine; and redeveloped much of its campus.

In 2007, Vest was elected to serve as president of the National Academy of Engineering. Under his leadership, the NAE proposed 14 critical challenges for engineers in the 21st century, which, if met, will improve the quality of life for humankind. This "Grand Challenges" program brought about summits at universities and contributed to a better understanding of the importance of engineering. Expanding internationally, NAE's Frontiers of Engineering program included partnerships with China, Japan, Germany and the European Union. With the Institute of Peace, the NAE addressed how the application of technology, knowledge, and methods of engineering and science can enhance conflict prevention and resolution.

Vest has played a prominent role in redefining engineering research, practice and education, and in identifying the attributes future engineers will require to compete and lead in the emerging global economy. He serves on the boards of several nonprofit organizations and foundations devoted to education, science and technology. He has authored a book on holographic interferometry and two books on higher education. A recipient of honorary doctoral degrees from 17 universities, he was awarded the 2006 National Medal of Technology by President Bush and received the 2011 Vannevar Bush Award from the National Science Board.

A Ph.D. in mechanical engineering, he taught at the University of Michigan in the areas of heat transfer, thermodynamics and fluid mechanics, and conducted research in heat transfer and engineering applications of laser optics and holography.

It Takes A Village

CMU Community Helps Start Student Startup

■ Abby Simmons

The Carnegie Mellon community opened doors — literally and figuratively — to help four seniors launch PayTango, which Inc. magazine has named among “America’s Coolest College Startups.”

Brian Groudan (DC’12), Kelly Lau-Kee (A, CS’13), Umang Patel (DC’13) and Christian Reyes (DC, CS’13) developed the fingerprint-based identification and payment system to eliminate the need to carry around student identification and debit cards.

PayTango grew out of a project for School of Computer Science Assistant Professor Luis von Ahn’s inaugural Tech Startup Lab course in fall 2012.

“Luis von Ahn had two class rules: 1) Make this the primary purpose of your life and 2) Come to class. He might have been joking, but we took him very seriously,” Groudan said.

While the idea started as a class project, CMU’s culture for entrepreneurship and people helped the students move the company forward.

Von Ahn encouraged the team to enter the PennApps hackathon at the University of Pennsylvania in September, and they won several awards. Afterward, the students approached CMU’s Housing and Dining Services to test their technology.

Randy Weinberg, director of the Information Systems program, provided the students with advice before making their pitch.

“Dr. Weinberg told us, ‘Don’t put them into a position where they can say no to you. Always begin with a conversation, learn from the people you meet and adjust your product or service to meet your customers’ needs,’” Patel said.

The students presented PayTango to Joshua Frederick, director of Information Technology; Kim Abel, then-director of Housing and Dining Services and now director of Learning and Development; and fellow administrators.

“They asked us tough questions from all angles — finance, security, tech-

nology. That pushed us to work hard,” Patel said.

Michael Baux, director of Dining Services, has been a champion of PayTango. He introduced the students to Mark Hastie, who along with his brother, operates The Underground and Skibo Café on campus, and owns Gullifty’s in Squirrel Hill. Their staff embraced the opportunity to support the entrepreneurs.

PayTango tested its system with 100 students at The Underground in February. By March, all Pittsburgh-based students signed up for a university meal plan or flexible dollar program were able to enroll, and PayTango expanded to Skibo Café and The Exchange, operated by Mike Clarkson and Kevin Huber.

While Groudan, Patel and Reyes spent most of the spring semester at Silicon Valley’s Y Combinator startup accelerator, Baux served as a liaison between the company and campus dining staff in Pittsburgh.

“Michael is always there to answer our questions. He’s given us feedback on how to pitch this to other universities,” Patel said.

Countless others have provided technical expertise, shared advice and made introductions to potential investors. Those individuals include College of Engineering faculty member Marios Savvides, School of Computer Science faculty member James Morris and Human-Computer Interaction doctoral student Chris Harrison.

Lau-Kee turned to faculty at the School of Design for their guidance while she developed different iterations of the PayTango terminal.

“The faculty has been incredibly supportive of this venture. My education here has encouraged me to take risks and always seek out challenges,” Lau-Kee said.

Students in Kinshuk Jerath’s Marketing I course at the Tepper School of Business developed a marketing plan for PayTango during the fall semester,



PHOTO BY KEN ANDREYO

PAYTANGO’S REGISTRATION PROCESS TAKES ABOUT 20 SECONDS. USERS PLACE TWO FINGERS ON THE TERMINAL’S FINGERPAD, SWIPE THE CARD THEY WANT TO REGISTER AND TYPE IN A PHONE NUMBER. ANY CARD WITH A MAGNETIC STRIPE CAN BE REGISTERED IN THE SYSTEM, INCLUDING CREDIT, DEBIT, GIFT, LOYALTY AND IDENTIFICATION CARDS. ON REPEAT VISITS, USERS SIMPLY PLACE THEIR FINGERS ON THE FINGERPAD TO MAKE A PAYMENT. THE SERVICE IS PAID FOR THROUGH CONTRACTS WITH MERCHANTS, MAKING IT FREE FOR USERS.

and students in Jenna Date and Vincent Aleven’s Undergraduate Project in Human-Computer Interaction course worked with Housing and Dining Services to collect and analyze user feedback in the spring semester.

When the students moved to Silicon Valley, they connected with CMU alumni who previously participated in the Y Combinator program and met with Jonathan Kaplan (TPR’90), creator of FlipCam and CMU’s Open Field Entrepreneurs Fund.

“Starting a company is very challenging, especially when you have a full course load. The Information Systems Department gave us space to work in, provided mentorship and were very flexible in course scheduling,” Groudan said.

Paige Houser, administrative coordinator for the Information Systems program, set up conference calls, reserved rooms and literally unlocked doors for the team. That level of care continued as the students moved to Silicon Valley — she emailed the students low-cost, easy-to-prepare recipes and checks in on how they are doing.

“The PayTango group is a very talented and appreciative set of students,” Houser said.

After commencement, the entire team will move to Silicon Valley. PayTango plans to use the round of seed funding it has raised to hire more staff, further biometrics development, expand to additional universities and introduce the system to fitness centers over the next year.

OUTSIDE PRAISE

Brad Keywell, co-founder of Groupon and Lightbank, mentioned CMU and PayTango in a Wall Street Journal blog on April 26. He said:

“Universities must continue to build the educational structure and curriculum to support students who value both a college education and creating businesses. And Carnegie Mellon did just that. It stepped up to support its students, providing three campus locations as PayTango guinea pigs. While some of the most successful entrepreneurs — founders and co-founders of Apple, Disney, Facebook, Rolls-Royce, Tumblr, Coca-Cola and others — didn’t have a college degree, those who opt for higher education need to take advantage of the flurry of networking opportunities and campus incubators like the Carnegie Mellon students did.”

Graduation Celebration



PHOTO COURTESY OF CARNEGIE MELLON QATAR

STUDENTS AT CARNEGIE MELLON QATAR CELEBRATE THEIR GRADUATION CEREMONY ON MAY 6. EIGHTY-ONE STUDENTS — 43 IN BUSINESS ADMINISTRATION, 14 IN COMPUTER SCIENCE, 18 IN INFORMATION SYSTEMS AND SIX IN BIOLOGICAL SCIENCES — RECEIVED THEIR CARNEGIE MELLON DIPLOMAS.

“Big Brain Theory”

Robotics Grad Student Competes on Discovery Channel Show

■ Byron Spice

It was mid-October, the first day of filming for Discovery’s new reality show, “Big Brain Theory: Pure Genius,” and Eric Whitman and his fellow contestants were standing in a California desert, not sure what to expect.

Like the other nine competitors, Whitman, a fifth-year Ph.D. student in robotics, had answered an ad seeking people who liked to design and build things. But the producers didn’t share a lot of details in advance, and he worried that the challenges would turn out to be rinky-dink, Tinkertoy-like stuff.

“So there we are on the first day, and the first thing we see is two pickup trucks have a head-on collision, with flames shooting out,” Whitman recalled. “And we all said to each other, ‘They’re serious about this.’”

For seven weeks, Whitman and the others lived as a group in a converted warehouse in Burbank, Calif., but spent most of their waking hours working on one challenge after another for the series, which premiered May 1 on Discovery Channel.

Cameras followed the competitors for 12-16 hours every day — with a half day off for Thanksgiving — as they



ERIC WHITMAN TOOK A SEVEN-WEEK BREAK FROM THE ROBOTICS INSTITUTE TO COMPETE ON DISCOVERY CHANNEL’S “BIG BRAIN THEORY.”

undertook technical challenges, such as stopping explosives from detonating when two pickups smack each other head-on; building a portable bunker that can withstand fire, high-pressure water and jet engine exhaust; and constructing a robot to compete in athletic events.

“Given a year, these challenges would be easy,” Whitman said. “But given three days, with a limited budget and limited time to design, source parts and build, it was tough.”

For each of the eight challenges, the contestants were given 30 minutes to come up with a solution. An expert panel of judges chose two people with the best plans, who became team captains and chose up sides from the remaining players, “the same way as middle school dodgeball,” Whitman said.

Each week, a player was eliminated from contention for the show’s \$50,000 prize, but all of the players continued to participate in each new challenge.

Whitman, a New Jersey native who earned a bachelor’s degree in mechanical and aerospace engineering at Princeton University before coming to the Robotics Institute for graduate school, admits some trepidation about how he will appear.

“All of these contestants were brilliant people,” he explained. But most had particular engineering or technical areas of expertise. As a roboticist, Whitman drew upon a wider range of skills, which made him valuable as a generalist on the teams. The downside, he noted, is that he often ended up working in areas where he claims no special expertise. “My fear is that I will end up looking like a mediocre electrical engineer, rather than a really good generalist,” he said.

At Carnegie Mellon, Whitman concentrates on developing software for a Sarcos humanoid robot in the lab of his adviser, Chris Atkeson, professor of robotics. So spending seven solid weeks building stuff was a welcome diversion, as were experiences such as sharing a peanut-butter-and-jelly sandwich with host Kal Penn of “Harold & Kumar” fame.

“I had so much fun I’d do it again, no question, if I could,” Whitman said.

NEWS BRIEFS

Phone Game Provides Teaching Opportunities

A silly telephone game that became a viral phenomenon in Pakistan has demonstrated potential for teaching poorly educated people about automated voice services and provided a new tool for them to learn about jobs, say Roni Rosenfeld, professor in CMU’s Language Technologies Institute; Agha Ali Raza, a Ph.D. student in language technology and a native Pakistani; and Umar Saif, an associate professor of computer science at Pakistan’s Lahore University of Management Sciences.

In the game, called Polly, a caller records a message and Polly adds funny sound effects, such as making the caller sound like a drunk chipmunk. The caller can then forward the message to friends, who in turn can forward it or reply to it.

Rosenfeld said it is pioneering the use of entertainment to reach illiterate and low-literate people and introduce them to the potential of telephone-based services. Such phone services could help non-affluent, poorly educated people find jobs, find or sell merchandise, become politically active, create speech-based mailing lists and even support citizen journalism.

Staff Picnic Planned for May 22

President Jared L. Cohon and Provost and Executive Vice President Mark Kamlet will host the annual Staff Picnic from 11:30 a.m. to 2 p.m. in Wiegand Gym and Rangos Ballroom, University Center. The picnic is in recognition of staff contributions to the university.

CMU Engineers To Help Assess U.S. Dams

Faculty and students are working with the U.S. Army Corps of Engineers to help assess the risk of dam failures nationwide. The recently released 2013 American Society of Civil Engineers Infrastructure Report Card collectively gave the 84,000 dams a D grade.

“We are working to develop tools that will give engineers greater integration of the different sources of information they use to determine this risk,” said Burcu Akinci, a professor of civil and environmental engineering at Carnegie Mellon.

Akinci and James H. Garrett, Jr., the Thomas Lord Professor and dean of the College of Engineering, are leading a research team that includes professors working on research in the IBM Smarter Infrastructure Lab — part of the Pennsylvania Smart Infrastructure Incubator — that supports the computational modeling and visualization aspects of this project.

Andy Award Nominations Now Open

Nominate staff for the 2013 Andy Awards, the university-wide recognition program that honors individual staff members and teams of colleagues for their outstanding performance, commitment to excellence and significant impact on the university. Awards are given in six categories: Dedication, Commitment to Students, Innovation, Culture, University Citizenship and Community Contributions.

The deadline for nominations is July 10. For information on the nomination process, go to www.cmu.edu/andyawards/nomination/index.html.

Sorrells Library To Close Until Aug. 10

Immediately following final exams this spring, the Sorrells Engineering & Science Library in Wean Hall will close temporarily for major renovations. Significant reconfiguration and improved lighting will create a more welcoming environment. Informal group study and quiet study areas will be added throughout the library.

Contact Head of Science Libraries Matt Marsteller at matthewm@andrew.cmu.edu or 412-268-7212 with questions or concerns.

Roberts Road Closed Until October 2015

Roberts Road is now closed from the FMS pedestrian bridge to the top of the drive near Scaife Hall through the duration of the Scott Hall Project (October 2015). For more information and project updates, see the Scott Hall Construction website at www.cmu.edu/cdfd/NBET/current-progress.html.

Social Media Affects Human Rights

Smartphones and social media are giving the world instant, first-hand accounts of human suffering and political repression during events such as the 2010 Haiti Earthquake, recent elections in Kenya and the ongoing uprising in Syria.

To investigate how social media and big data analytics are changing human rights fact-finding, and to better understand the ways that these technologies can advance human rights protection in the future, the MacArthur Foundation awarded an 18-month, \$175,000 grant to CMU’s Center for Human Rights Science, directed by Jay D. Aronson.

“Raw textual narratives, video and photos

that depict human suffering raise global awareness and may lead to humanitarian aid from governments, private donations from individuals and even military intervention in some cases,” Aronson said. “For seasoned human rights activists, including many technologists, though, these new forms of data also raise serious questions about credibility, comprehensiveness and analytical methods.”

Nourbakhsh Named to Museum Initiative

Illah Nourbakhsh, professor of robotics and a developer of GigaPan — huge panoramas of digital images in vivid detail — was one of five individuals chosen to explore the rapidly changing field of photography in the Carnegie Museum of Arts’ new Hillman Photography Initiative, which aims to be a living laboratory for exploring photography and its impact on the world.

The initiative will explore the intersections among artistic practices and technological research and support the development of projects that break down barriers to participation and encourage the general public to see the museum and photography in a new light.

Zaslow Memorialized With Plaque, Scholarship

To honor the memory of Jeffrey L. Zaslow (DC’80), a best-selling author and longtime Wall Street Journal columnist, Carnegie Mellon unveiled a new plaque and announced a scholarship program in his name.

Zaslow, who majored in creative writing in the Dietrich College’s Department of English, may be best remembered at Carnegie Mellon for co-authoring “The Last Lecture” with the late CMU Computer Science Professor Randy Pausch.

A Creative Mind in Cannes

Student Casts Heinz College Presence at International Film Festival

■ Abby Simmons

Glittering lights, red carpet, movie stars and lavish parties in the French Riviera — fledgling filmmaker Taylor Grabowsky will be living a dream at the prestigious Cannes International Film Festival (May 15-26), where his first short film “Donor Heart” will premiere as part of the Cannes Court Mètrage, or “Short Film Corner.”

In addition to his movie screening, Grabowsky (A’06, HNZ’14) is the first Heinz College Master of Entertainment Industry Management (MEIM) student to participate in the Creative Minds in Cannes program’s Filmmaker Institute.

“I feel blessed to have these opportunities, and over-the-moon in many ways to have my first short film go to the Cannes International Film Festival,” Grabowsky said.

Grabowsky made a connection with the Filmmaker Institute with help from Maureen May, the Heinz College’s associate director for career services. His efforts helped establish a formal partnership between the university and institute.

May worked with MEIM Program Director Daniel Green to secure funding from the Heinz College Career Services

Office and the MEIM program to cover the cost of attendance for a student each year through a competitive application process.

“This is an incredible opportunity for Taylor and future MEIM students to make an early impact among elite Hollywood and international filmmakers,” May said.

Grabowsky will be part of a group of filmmakers given seven days to produce a five-minute film, which will be judged by a panel of industry professionals. In addition, he will attend networking events, workshops and Cinema Master Classes hosted by industry icons such as Quentin Tarantino and Martin Scorsese.

Participants also are invited to complete an internship at Campus Movie-Fest, a Los Angeles-based collegiate film competition set for June 20–22.

The Filmmaker Institute expands on opportunities for MEIM students at Cannes.

The Heinz College began sending students to another program, the American Pavilion, last year. Students work for U.S. film companies such as Fox Studios, Paramount Pictures, DreamWorks Studios and The Weinstein Company



TAYLOR GRABOWSKY MET OSCAR-NOMINATED ACTRESS JESSICA CHASTAIN AT A MASTER OF ENTERTAINMENT INDUSTRY MANAGEMENT “NETWORK NEW YORK” EVENT EARLIER THIS SCHOOL YEAR.

or agencies including ICM Partners, William Morris Endeavor and United Talent Agency. This year’s representatives are Katelyn O’Leary (HNZ’14), Divya Joseph (HNZ’14) and Jingya Liu (HNZ’14).

Attending festivals has become an instrumental part of the MEIM curriculum. All first-year students attend South by Southwest in Austin, Texas, and

second-year students attend the Sundance Film Festival in Park City, Utah.

“Students who attend these festivals come to understand the real-world application of film acquisition and distribution in a way that isn’t possible by simply learning about it in the classroom,” Green said.

While building the Heinz College/
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The plaque, revealed at a private ceremony during Spring Carnival, fittingly faces a plaque for Pausch on “The Pausch Bridge.” The “Jeffrey L. Zaslow Scholarship for Writing Students” was made possible by gifts from several of Zaslow’s friends and admirers.

Grievance Committee Changes Name

The Staff Council Grievance Committee has changed its name to the Relations and Grievance Advisory Committee to better reflect its mission and vision for CMU staff.

The committee, comprised of Staff Council representatives, serves staff by providing information and resources to help staff achieve an engaging, rewarding and supportive work experience and a successful work-life balance. It strives to help all employees by fostering an ethical and respectful environment for all members of the university community.

The committee provides information about the grievance process, supportive listening, non-judgmental feedback and referrals to university resources.

For more information, visit www.cmu.edu/staff-council/committees/relations_grievance_advisory/index.html.

Singh Earns NSF CAREER Award

Aarti Singh, assistant professor of machine learning, has received a Faculty Early Career Development (CAREER) Award from the National Science Foundation to develop computationally efficient and principled methods of extracting clusters and graphs from “big and dirty” data sets.

The work could have major impact on

applications that involve grouping similar variables and learning complex interactions between them, including those in neuroscience and health care.

For instance, accurately mapping neural pathways will help diagnose and treat brain pathologies at an early stage, and help understand brain functioning. Likewise, clustering patients and discovering disease-spreading pathways based on few measurements of relevant genetic features or indicators could help prevent and cure diseases, and also minimize health care costs.

Researchers Work on Edible Electronics

Christopher Bettinger, an assistant professor in the departments of Materials Science and Engineering and Biomedical Engineering, and Jay Whitacre, a professor of materials science and engineering, are creating edible power sources for medical devices that can be taken orally using materials found in the daily diet.

“Our design involves flexible polymer electrodes and a sodium ion electrochemical cell, which allows us to fold the mechanism into an edible pill that encapsulates the device,” Bettinger said.

CMU researchers report that the edible device could be programmed and deployed in the gastrointestinal tract or the small intestine depending upon packaging. Once the battery packaging is in place, Bettinger’s team would activate the battery.

Dzombak To Head Civil and Environmental Engineering

■ Chris Swaney

Carnegie Mellon has named David A. Dzombak to head its Department of Civil and Environmental Engineering (CEE), effective Aug. 1. He succeeds James H. Garrett, Jr., who in December 2012 was named dean of CMU’s top-ranked College of Engineering. CEE acting head Irving Oppenheim will continue to lead the department until Dzombak assumes his duties.

Since Nov. 1, Dzombak, the Walter J. Blenko, Sr. University Professor at CMU, has been serving as interim vice provost of Sponsored Programs. His experience with sponsored programs and research compliance will be helpful in forging new collaborative relationships between the College of Engineering and these important administrative units.

“Professor Dzombak is an internationally recognized expert in environmental engineering, and his experience in both professional and



DAVID A. DZOMBAK

public service will be an asset as he joins the college leadership team as the new department head of Civil and Environmental Engineering,” said Garrett, the Thomas Lord Professor of Civil and Environmental Engineering. “His reputation for high quality research, passion for teaching undergrads and graduates, commitment to professional service and collegiality make him an excellent choice for this position.”

Anderson Feted in Grand Fashion

■ Pam Wigley

After more than 40 years of service to the School of Drama, Barbara Anderson was celebrated at a reception and dinner on Saturday, April 20. Nearly 150 people greeted her in the Purnell Center Lobby.

School of Drama Head Peter Cooke welcomed the crowd and congratulated Anderson on her extraordinary career at CMU and in the field of costume design.

“Her longevity and impact on the field of design in theatre, film and television has made her a remarkable talent in the pantheon of great American designers,” Cooke said in a press release prior to the event.

Executive Vice President and Provost Mark Kamlet spoke on behalf of the university’s leadership team and

noted her service to CMU, particularly her participation on numerous committees.

The reception was followed by a private dinner in the John Wells Studio, which was transformed by the event committee of faculty, staff and students from the School of Drama. From centerpieces of glittering platform shoes overflowing with flowers to bright fabric sashes puddling to the floor to crystal chandeliers sparkling above the crowd, the evening was the perfect tribute.

“Barbara’s influence on costume design, and designers in general in the spheres of theatre, film and television, cannot be underestimated. Several generations of designers can trace roots



A RED CARPET MOMENT: BARBARA ANDERSON IS ACCOMPANIED BY HER CHILDREN, CATHERINE AND CHRISTOPHER.

PHOTO BY ERICA DILGER



GARY KLINE WELCOMES BARBARA ANDERSON TO THE STAGE AT A GALA IN HER HONOR.

PHOTO BY ERICA DILGER

to Barbara,” noted John Shaffner (A’76), former student and half of the award-winning team Production Design by Shaffner/Stewart.

“If you were lucky enough to be one of her students, you practice, carry forward and pass along the traditions of Barbara’s teachings,” agreed Joe Stewart (A’77).

Anderson was honored during her academic career with the university’s Ryan Award and the College of Fine Arts’ Hornbostel Award, both for excellence in teaching.

She also co-authored the textbook “Costume Design” with her husband Cletus, a former CMU design professor.

Anderson’s prolific design career in film, television, opera and theater includes many George Romero (A’61) productions such as “Creepshow” and “Day Of The Dead”; PBS productions such as the American Playhouse film “The Silence At Bethany,” the Emmy Award-winning “Leatherstocking Tales,” “Decades of Decision,” and the “Once Upon a Classic” series, among others; specialty costumes for “Mister Rogers’ Neighborhood”; and historical costumes for the John Heinz Regional History Center.

Anderson was accompanied by her daughter, Catherine (A’89), and son, Christopher, and her grandchildren Taylor and Madeline. She thanked the crowd for a lovely evening and tipped her hat to all who made the event happen.

“It’s been an honor to call Pittsburgh home, and it’s been a true privilege to be part of the School of Drama family,” she said.

Three Selected for German Fellowships

■ Piper Staff

Chemical Engineering senior Nancy Ko has been selected as one of 75 people to participate in the 30th annual Congress-Bundestag Youth Exchange for Young Professionals, a yearlong, federally funded fellowship for study and work in Germany.

While in Germany, she will attend a two-month intensive German language

course, study at a German university or professional school for four months and complete a five-month internship with a German company in her career field.

Alumna Faith Hall (DC’02) and graduate student Riley Ohlson (HNZ’13) have been named Robert Bosch Foundation Fellows. The fellowship program is designed to provide young American leaders with a yearlong

professional exchange program in Germany and the European Union.

Following an intensive language instruction period in their hometowns, the fellows will spend the summer in Berlin receiving group language training. In September, they will begin a series of three professional seminars across Europe and two work assignments at leading German institutions.

Heinz College To Have Presence at Cannes

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Filmmaker Institute partnership, Grabowsky learned that he could obtain a filmmaker accreditation by earning a spot at the Cannes Court M trage, which offers a higher level of access to screenings and networking events at the festival.

Working with CMU’s graduate and undergraduate film clubs, Grabowsky wrote, directed and produced “Donor Heart” in less than two weeks this spring.

“It’s a visual narrative, and the message has to do with self-sacrifice for the

sake of another,” Grabowsky said.

His inspiration for the film came from a prompt for submissions to the Pittsburgh-based Center for Organ Recovery and Education’s “A Pledge for Life” Film Festival, which will be held in June to “entertain, enlighten and inspire” viewers to become a registered organ donor.

The filmmaker relied on his CMU connections and friends to help cast parts. Steven Robertson (A’15) stars as a man on the street whose lifeblood is his

ukulele. Upon meeting and befriending an eight-year-old boy, Owen Stout, their fortunes change in the act of giving.

“Taylor is an ambitious, smart individual who I’m proud to have in the MEIM program,” Green said. “He also happens to be a nice guy who cares about the well-being of his peers and wants to help ensure the success of others. That attitude may partly explain the appeal of his short film. It has a timeless message about hope that resonated with the judges.”

Grabowsky also recently accepted a summer internship with CBS Films in Los Angeles.

Like all MEIM students, he will spend his second year in Los Angeles. May said Grabowsky’s experience at Cannes would give him a jumpstart on building a contact list that reads like a “Who’s Who” in the entertainment industry.