



# the PIPER

CMU'S NEWS SOURCE FOR FACULTY & STAFF 5/16 ISSUE

Carnegie Mellon University

Read about Carnegie Mellon's 119th Commencement in a special pullout section. Pages 5-8

CELEBRATION of EDUCATION AWARDS

## Transformative Teaching Takes Center Stage

■ Kelly Saavedra

The Celebration of Education Awards recognize distinguished faculty members and educators for their outstanding contributions to the university, their commitment to students' development and well-being and their impact through teaching.

This year's honors took place on Tuesday, April 26 at a ceremony in the Cohon University Center.

Congratulations to this year's award recipients!

### Robert E. Doherty Award for Sustained Contributions to Excellence in Education

**Eric Grotzinger**  
Biological Sciences

(nominated by Maggie Braun, John Hannon and Karen Stump)

Eric Grotzinger's impact on students has been so great, alumni are still writing letters of support for him 30 years later.

"Never before or since have I observed an adviser take on this role so wholeheartedly and enthusiastically," one alumnus said.

"Eric's interest in the undergraduates he stewards does not cease after graduation. He and I have stayed in close touch throughout my graduate, post-doctoral and professorship years," wrote another.

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## Great Scott!



The Sherman and Joyce Bowie Scott Hall, an architectural marvel and new nexus on the west campus, was dedicated on April 30. See the story on page three.

## Researchers Explain Complex Ideas In Three Minutes

■ Ann Lyon Ritchie

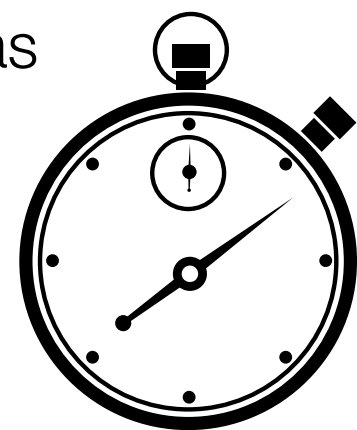
Think about your life's work. Now, pitch it to a complete stranger in a matter of seconds. One hundred and eighty seconds to be exact. That's the Three-Minute Thesis (3MT) in a nutshell.

On April 5, 10 doctoral candidates at Carnegie Mellon University talked about their meaningful, even life-changing, research. They were not defending their research but rather showcasing their communication skills in a 3MT competition that rewards researchers who can give the clearest, most compelling explanations of their work.

The University Libraries hosts the annual competition, which begins among dozens of doctoral candidates and culminates in a championship in CMU's McConomy Auditorium.

Dean of Libraries Keith Webster brought the exercise from his former employer The University of Queensland in Australia, where the exercise was first developed. The idea has spread to universities worldwide.

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# Research in Three Minutes

CONTINUED FROM PAGE ONE

Open to all disciplines, about 300 doctoral candidates have risen to the challenge during its three years at CMU.

“I do find the cross-disciplinary approach to be strong: we’re not judging the quality of research, but rather a student’s ability to communicate their work clearly and compellingly irrespective of field,” Webster said.

A couple of rules apply: namely the strict three-minute time limit and that participants may use a single, static slide as a visual aid. Judges evaluate the contestants on communication style, comprehension and engagement.

“This year’s finalists were all excellent,” Webster said. “3MT has become part of the annual cycle at CMU,

so students look ahead to the event, and take advantage of training opportunities organized by our colleagues in the CMU Global Communications Center, housed in the Hunt Library, and the student organization Public Communication for Researchers.”

Pratiti Mandal, from the College of Engineering, won the championship for her mechanical engineering solution to prevent the failure of fuel cells for alternative energy vehicles. Her pitch hushed the audience when describing the problem of a car going powerless suddenly in the middle of traffic. Mandal gleaned the \$3,000 first place award and earned the \$500 people’s choice award, based on ballots submitted by the audience.



President Suresh presents Pratiti Mandal, winner of the three-minute thesis competition, with the first-place prize.



The clock is set as judges take notes on the competitors.

field, but she was grateful for the experience.

“Science is not just for scientists to relish but for paying back to the society. It is of utmost importance to justify your research and contribution,” she said.

A second place tie went to Shinjini Kundu in biomedical engineering, who spoke on predicting osteoarthritis, and Juliann Reineke in the Dietrich College’s Department of English, who proposed a solution drawn from 18th-century literature for modern-day veterans reintegrating as civilians.

Third place went to Amit Datta in electrical and computer engineering for his work on the use of personal data on the Web. Conference and travel grants of \$2,000 and \$1,000 went to the second and third place winners, respectively.

Webster said competition was steep this year. He’s seen an increase in the quality of presentations over the years and credits CMU faculty for encouraging more students to participate, as well as the availability online of recordings of past participants.

Participation has its benefits. The Department of Statistics’ Giuseppe Vinci, who admits to spending a great deal

of time at the whiteboard in his office, was able to practice talking about the application of his statistical methods of network analysis in brain research. Jonathan Kush, from the Tepper School of Business, saw it as a chance to polish his elevator speech to future employers.

The championship panel of judges was made up of CMU President Subra Suresh, Vice Provost for Education Amy Burkert, College of Fine Arts Dean Dan Martin, CMU Trustee and Executive Director of the Posner Fine Arts Foundation Anne Molloy, and Annie Arnold, chemistry graduate student and winner of the 2015 3MT.

“The Three-Minute Thesis has been an excellent addition to our campus programming,” Burkert said.

“I enjoy participating each year because the competition offers a glimpse into the amazing work our graduate students are doing to make a positive impact in the world. I also appreciate the fact that 3MT provides the opportunity for more of our doctoral students to enhance their ability to communicate their thesis work in an effective manner to a broad audience. Such a communication skillset is becoming even more important.”



## the PIPER

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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](http://www.cmu.edu/police/annualreports).

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## Heinz in Hollywood



Carnegie Mellon’s L.A.-based master’s degree program in entertainment industry management celebrated 10 years of preparing leaders for the field. Posing with a proclamation from L.A. Mayor Eric Garcetti praising the program’s contributions to Hollywood are program principals (l-r) Dan Green, Kathryn Heidemann, Dan Martin, John Tarnoff, Ramayya Krishnan and Brenda Peyser.

# Building Connections

## Sherman and Joyce Bowie Scott Hall Opens Window to the World

CONTINUED FROM PAGE ONE

■ Emily Durham

Walking across the Forbes Avenue Junction Hollow bridge toward Carnegie Mellon University, the view is changing.

The Sherman and Joyce Bowie Scott Hall, dedicated on April 30, provides both visual and intellectual stimulation, enhancing the College of Engineering's innovative culture and fostering interdisciplinary research. Engineering always has had a "maker culture" of creating cutting-edge tools and products to benefit the modern world. With new lab space and new technologies, researchers and students can take that environment to a new level.

"Scott Hall will help us turn our maker culture into a maker ecosystem," said Dean James H. Garrett Jr.

Like a puzzle piece, the building and its amenities connect fields of study and expand collaboration across CMU. Researchers and students have easier access to advanced technologies for turning ideas into reality.

The building is the new home for the Wilton E. Scott Institute for Energy Innovation, the Department of Biomedical Engineering, the Engineering Research Accelerator (formerly known as the Institute for Complex Engineered Systems), the Disruptive Health Technologies Institute and a nanotechnology research facility.

The 109,000-square-foot Scott Hall, designed by OFFICE 52 Architecture, has two main sections: the North Wing and the Claire and John Bertucci Nanotechnology Laboratory. They meet at the Arthur C. Ruge Atrium and the Collaboratory, a sweeping four-story space that connects the levels of the North Wing.

From Forbes Avenue, the North Wing is visible on angled white steel support columns strategically placed to avoid the utilities below. The glass, which creates the outer wall of the building, changes color as it reflects light from different angles throughout the day. As a nod to the nanofabrication work taking place within the walls, many of the windows include a design feature that represents a mathematical and nanoscience concept called photonic quasicrystal.

The Bertucci Nanotechnology Lab is tucked between Porter, Hamerschlag, Roberts and Wean halls, turning what was a small service and parking area into a large workspace. Its entrance is through a glass pavilion. Above the lab is a green roof with skylights to provide more space for work, camaraderie and relaxation inside and outside the building. The space is tied to the lawn of the Hornbostel Mall.

Within the lab is the 10,000-square-foot Eden Hall Foundation Nanofabrication Cleanroom, which will allow faculty and researchers to explore new avenues of nanoscience. Cleanrooms are tightly controlled environments that maintain concentrations of airborne particles within certain limits. The space will be completed this summer and fully operational in 2017.

With many other buildings nearby, Scott Hall becomes a new nexus on campus.

The Collaboratory and Ruge Atrium, which contains a café, are designed to encourage informal discussions to promote the types of collaborations that can lead to major breakthroughs.

"The building will physically bring together hundreds of faculty and students from a variety of disciplines, allowing them to work together in ways they had not been able to before," Garrett said.



Pictured at the building dedication were (l-r) Claire and John Bertucci, for whom the Bertucci Nanotechnology Lab is named, Engineering Dean Jim Garrett, President Suresh and Joyce Bowie and Sherman Scott, for whom Scott Hall is named.



Above: John Bertucci pulls the lever, dropping a curtain to unveil the new building.

Below: Entrance to the Bertucci Nanotechnology Lab is through a glass pavilion tucked between Porter, Hamerschlag, Roberts and Wean halls.



## FOUNDER FACTS

- The Wilton E. Scott Institute for Energy Innovation is named after Sherman Scott's father. Both the Sherman and Joyce Bowie Scott Hall and the Wilton E. Scott Institute for Energy Innovation were funded by Sherman Scott and his wife Joyce Bowie Scott.
- John and Claire Ruge Bertucci funded the Bertucci Nanotechnology Lab, and named the Ruge Atrium for Claire Bertucci's father, Arthur C. Ruge, who was a Carnegie Tech alumnus.
- Sherman and Joyce Bowie Scott and John and Claire Ruge Bertucci are alumni who met at CMU.
- Joyce Bowie Scott, an alumna of the College of Fine Arts, is an artist at the J. Bowie Scott Studio. Several of her paintings will hang in Scott Hall.
- Jonathan Rothberg, a CMU chemical engineering graduate, and his family have a café in the building, Rothberg's Roasters. Another Rothberg's Roasters is housed in the Hunt Library.
- The cleanroom in Scott Hall was funded by the Eden Hall Foundation.
- Scott Hall and Scott Institute were supported by the Richard King Mellon Foundation. The Swanson family and other generous donors also contributed to make Scott Hall possible.

# CMWA Awards Centennial Scholarships

■ Abby Simmons

Carnegie Mellon Women's Association (CMWA) marked its 100th anniversary with a significant increase in student support.

On April 21, CMWA presented a graduating female student from each of CMU's seven schools and colleges with a \$1,000 scholarship at its Centennial Awards Celebration.

**Front row (from left): Mopewa Ogundipe, Alyssa Wang, Ashley Sobhani, Virginia Schatz. Back row (from left): Rebecca Alford, Allison McGugan, Pattye Stragar, Mary Suresh, Alexa Hansen, Ann Rutt, Rita Ciccariello, Eleni Rodriguez, Christa Cardone, Colleen Libertz, Lisa Georgi**

"For many women, a CMU education is transformational, positioning them with the expertise, passion and direction to change the world. CMWA scholarships support their successful launches to careers in academia, the private sector, government and service," said CMWA President Alexa Hansen.

Member dues and donations fund the scholarships, which have been awarded since 1964. In previous years, CMWA provided three or four scholarships annually, alternating among academic disciplines.

Deans and department heads nominate students for the scholarships based on academic excellence, contributions to their schools/colleges or the university, service to others, and past and potential future impact.

**A group of visionary women established the Women's Club, now the CMWA, in 1916. The organization supports faculty, staff, partners and students in scholarship, community, connections and friendships at the university.**



PHOTO BY TIM KAULEN

This year's scholarship recipients are:

## **Rebecca Alford** *Mellon College of Science*

Alford not only has a passion for science, but also for supporting underrepresented groups in science, technology, engineering and mathematics (STEM) disciplines. She was a speaker at the Grace Hopper Celebration of Women in Computing Conference, TEDx-CMU and the Rosetta Conference for computational molecular modeling. Throughout her undergraduate career, the chemistry major has conducted computational biology research with Professor Jeffrey Gray at Johns Hopkins University. She was named first author on a peer-reviewed journal article and is working on a second manuscript.

## **Allison McGugan** *Tepper School of Business*

While pursuing a double major in business and decision sciences, McGugan was an integral part of elevating the women's soccer program to four NCAA appearances and two UAA championships. She was a member of Lambda Sigma national honor society and the Kappa Alpha Theta sorority. McGugan served as head teaching assistant for Organizational Behavior courses and worked with the Carnegie Mellon Business Association to plan the Tepper Business Dress Etiquette show. She also completed internships with Geneva Trading LLC and IBM.

## **Mopewa Ogundipe** *School of Computer Science*

Ogundipe possesses strong technical abilities and a desire to serve as a mentor to others. She was co-director of Strong Women Strong Girls and an

outreach coordinator for Women@SCS. Ogundipe helped to launch SCS4ALL, which provides support for underrepresented groups and creates programming for all computer science students. She was a teaching assistant for two robotics courses and interned at Instagram, Kahn Academy and Waitr. She also received the National Award for Aspirations in Computing from the National Center for Women and Information Technology.

## **Eleni Rodriguez** *H. John Heinz III College*

A leader in the Healthcare Policy and Management Program, Heinz College leaders often called upon Rodriguez to represent the college and her program when prospective students visited campus. She was an active member of the Heinz Health Care Club and mentored first-year students. Last summer, she worked with the CEO of Allegheny HealthChoices Inc. to analyze and report on the impact of a managed long-term services and supports program for behavioral health. Following graduation, Rodriguez will join Booz Allen Hamilton's Health Policy team as an associate in Washington, D.C.

## **Ann Rutt** *College of Engineering*

This undergraduate researcher in the Materials Science Department is graduating as a co-author on three peer-reviewed papers. In addition to her major in materials science and engineering, Rutt completed a second major in biomedical engineering. A leader in CMU's Greek community, she most recently served as the president of the Panhellenic Council. Rutt was a founding member of Alpha Phi sorority at

CMU and held multiple offices within her chapter. She also served as a resident assistant for two years.

## **Ashley Sobhani** *Dietrich College of Humanities and Social Sciences*

Global Studies major Ashley Sobhani is dedicated to addressing sexual assault and gender-based violence issues. She was a member of the Sexual Assault and Relationship Violence Committee, served as president of the Got Consent advocacy group and co-organized the first TartanHacks Social Impact category. Her senior capstone project explored the emergence of youth activists in modern Iran, with a focus on women. Sobhani also interned with the Tahirih Justice Center, a U.S. nonprofit that seeks to protect immigrant women and children from gender-based violence.

## **Alyssa Wang** *College of Fine Arts*

Wang is an accomplished musician who has performed around the world. The violin performance major minored in creative writing and conducting. She won first place at numerous competitions in California and Pittsburgh and served as concertmaster in orchestras such as the Carnegie Mellon Philharmonic and San Francisco Youth Symphony Orchestra. In 2015, Wang and three fellow students established the Heritage Scholarship Campaign, an undergraduate merit scholarship endowment fund for future School of Music students. The campaign has raised nearly \$150,000 in direct and matching gifts to date.

# COMMENCEMENT 2016

## Earl Lewis To Deliver Keynote Address

### Renowned Historian Will Receive Honorary Degree



**Earl Lewis**

President, The Andrew W. Mellon Foundation

Earl Lewis, president of the Andrew W. Mellon Foundation and one of America's leading advocates for supporting the humanities and the arts in higher education, will be the keynote speaker at Carnegie Mellon's Commencement at 11 a.m., Sunday, May 15 in Gesling Stadium on the Pittsburgh campus.

Lewis also will receive an honorary Doctor of Humane Letters degree. Lewis is a renowned social historian and fellow of the American Academy of Arts and Sciences. He visited Carnegie Mellon this past October, when he delivered the opening address for the Center for Africanamerican Urban Studies and the Economy's 20th Anniversary Conference. He presented the keynote address for the center's opening in 1995.

"Dr. Lewis' dedication to diversity, the humanities, the arts and the use of digital learning tools to improve education resonates deeply with our core values here at Carnegie Mellon University," said President Subra Suresh. "We are honored and very fortunate to have Dr. Lewis as our keynote speaker."

A longtime supporter and friend of the university, Lewis said he was looking forward to returning to Carnegie Mellon.

"As someone who has had a relationship with Carnegie Mellon University for the last two decades, I am thrilled to receive this honor," he said.

Prior to joining the Mellon foundation as its sixth president in 2013, Lewis was provost and executive vice president for Academic Affairs and the Asa Griggs Candler Professor of History and African-American Studies at Emory University. He previously held faculty appointments at the University of California at Berkeley and the University of Michigan.

Lewis is the author and co-editor of seven books, including "The African American Urban Experience: Perspectives from the Colonial Period to the Present"; "Defending Diversity: Affirmative Action at the University of Michigan"; the award-winning "To Make Our World Anew: A History of African Americans"; and the heralded book series "American Crossroads."



Earl Lewis (center) spoke at the 20th anniversary celebration for the Center for Africanamerican Urban Studies and the Economy (CAUSE). Pictured with Lewis are Professor Joe Trotter (left), director of CAUSE, and Provost Farnam Jahanian.

## Student Speaker Sophie Rose Zucker Will Receive Chemistry, Writing Degrees



**Sophie Rose Zucker**

This year's student speaker is Sophie Rose Zucker, a member of the Science and Humanities Scholars Program who will be receiving a bachelor's degree in chemistry with University Honors and a bachelor's degree in creative writing with College Honors.

In addition to her academic pursuits, Zucker has been an active member of the Carnegie Mellon community. She has been a four-year member of Alpha Chi Omega Sorority, serving on its executive board as vice president for recruitment.

Zucker was president of MORF, CMU's feminist club, and has been involved in the annual MOSAIC Conference, which focuses on gender issues. She also was editor-in-chief of The Oakland Review, CMU's literary magazine, and wrote and directed the Chemistry Department's Murder Mystery Dinner Theater production this year.

Zucker has accepted a job with Epic Systems, in Madison, Wis., a software company for health care organizations.

More than 5,000 bachelor's, master's and doctoral degrees will be conferred at Carnegie Mellon's main commencement ceremony.

# Honorary Degrees Awarded to Leaders in Arts, Business and Science



## Holly Hunter (A 1980)

Actor, Producer  
Doctor of Fine Arts

Academy Award-winner Holly Hunter is among the elite actors in the entertainment industry.

After graduating from Carnegie Mellon's School of Drama in 1980, she began her illustrious career on the stages of Broadway, off-Broadway and in regional theaters, where her credits include "Buried Child," "A Doll's House," Michael Weller's "Ghost on Fire" and Beth Henley's "Crimes of the Heart." Her first leading role in film was as a police officer in "Raising Arizona," directed by Joel and Ethan Coen.

Since then she has garnered four Academy Award nominations, two for Best Supporting Actress for her performances in "The Firm" and "Thirteen," and two for Best Actress for her work in "Broadcast News" and "The Piano." She won the Oscar and Golden Globe Award for Best Actress for her 1993 performance in "The Piano" as Ada, a mute Scottish woman.

Hunter also has starred in television, earning six Emmy Award nominations and winning twice for Best Actress for her work in "Roe vs. Wade" and "The Positively True Adventures of the Alleged Texas Cheerleader-Murdering Mom."

From 2007 to 2010, she played an Oklahoma City detective in the TNT series "Saving Grace," a role for which she received Emmy, Golden Globe and Screen Actors Guild nominations. She recently reunited with "The Piano" director Jane Campion for the Sundance Channel's mini-series "Top of the Lake," and earned a Screen Actors Guild Best Actress nomination for her performance as a charismatic spiritual leader.

Hunter's most recent work includes the critically acclaimed off-Broadway production of David Rabe's "Sticks and Bones," Warner Brothers' "Batman vs. Superman," Terrence Malick's "Weightless" and Pixar's "The Incredibles Part 2."



## Robert S. Langer

David H. Koch Institute Professor,  
Massachusetts Institute of Technology  
Doctor of Science and Technology

Robert S. Langer, the David H. Koch Institute Professor at the Massachusetts Institute of Technology, is the most cited engineer in history.

He has written over 1,330 articles and has nearly 1,100 patents worldwide. His patents have been licensed or sublicensed to more than 300 pharmaceutical, chemical, biotechnology and medical device companies.

Langer was a member of the United States Food and Drug Administration's Science Board, the FDA's highest advisory board, from 1995–2002, serving as its chairman from 1999–2002.

Forbes Magazine (1999) and Bio World (1990) named him one of the 25 most important individuals in the world in the field of biotechnology. Time Magazine and CNN (2001) named him one of the 100 most important people in America. And America's Best listed him among the top 18 people in science or medicine.

Langer has received more than 220 major awards. He is one of only four living individuals to have received both the U.S. National Medal of Science (2006) and the U.S. National Medal of Technology and Innovation (2011).

He is the only engineer to receive the Gairdner Foundation International Award; 82 recipients of this award have subsequently received a Nobel Prize.

In 1998, Langer earned the Lemelson-MIT prize, the world's largest prize for invention for being "one of history's most prolific inventors in medicine." In 2015, he was presented with the Queen Elizabeth Prize for Engineering.

Langer is a member of four national academies, the National Academy of Medicine, the National Academy of Engineering, the National Academy of Sciences and the National Academy of Inventors.

He received his bachelor's degree from Cornell University in 1970, and his doctorate from the Massachusetts Institute of Technology in 1974, both in chemical engineering. He has received honorary doctorates from universities around the world.



## Sonia Manzano (A 1972)

Actor, Author  
Doctor of Fine Arts

Sonia Manzano changed the face of American television, and in the process helped to educate and entertain children for more than four decades as "Maria" on the iconic, long-running children's television series "Sesame Street."

As a first-generation Puerto Rican growing up in the Bronx, Manzano remembers watching television and never seeing her life experience reflected in the shows of the time. She soon changed that.

After graduating from the High School of Performing Arts in New York, a scholarship brought her to Carnegie Mellon, and as a junior she earned a starring role in the original off-Broadway production of "Godspell," a musical with several CMU ties. John-Michael Tebelak (A 1970) created the show as a directing major at CMU, and Stephen Schwartz (A 1968) wrote its music and lyrics.

Within a year, she landed the role of Maria and soon began writing scripts for the series. She eventually earned 15 Emmy Awards as a member of the show's writing staff, and was nominated twice for an Emmy for Outstanding Performer in a Children's Series. She recently received the Daytime Emmy Award for Lifetime Achievement.

Manzano's work has been tirelessly focused on bringing differing perspectives and views of the world to children. After 44 years playing Maria, she left the show in July 2015.

She is the author of two picture books, "No Dogs Allowed" and "A Box Full of Kittens." Her first young adult novel, "The Revolution of Evelyn Serrano," won a Pura Belpré Award, for celebrating the Latino culture in an outstanding work of literature for children and youth. Her Christmas picture book, "Miracle on 133rd Street," and her memoir "Becoming Maria: Love and Chaos in the South Bronx," were published in 2015.

Manzano received The Congressional Hispanic Caucus Award in Washington, D.C., and the Hispanic Heritage Award for Education in 2003. She received an honorary doctorate in fine arts from the University of Notre Dame in 2005, and was voted one of the most influential Hispanics by *People en Español* Magazine in February 2007.



## James R. Swartz (TPR 1966)

Founding Partner, Accel Partners  
Doctor of Business Practice

James R. "Jim" Swartz is one of the most successful venture capitalists in the world.

Swartz is the founder of the Palo Alto, Calif.-based Accel Partners, a prominent global technology venture capital firm with offices in Silicon Valley, London and Bangalore, India. Accel has been a lead investor with numerous pioneering technology companies, including Facebook, Veritas Software and Dropbox.

A longtime industry leader, Swartz is former chairman of the National Venture Capital Association and a 2007 recipient of its Lifetime Achievement Award.

Passionate about the arts and sports, Swartz is a trustee of the Sundance Institute and the San Francisco Museum of Modern Art. From 1999–2002, he served on the management committee of the Salt Lake Organizing Group for the 2002 Winter Olympics, and is director emeritus of the U.S. Ski and Snowboard Foundation. He is an accomplished Grand Prix sailboat skipper, and has won numerous championships and World Cups.

In 2007, he and his wife, Susan, founded Impact Partners, a financial and advisory firm that supports independent cinema that addresses pressing social needs. Impact Partners has helped to produce several Academy and Sundance award winners. Swartz was founder of the Deer Valley Music Festival and chairman of the YMCA of Martha's Vineyard capital campaign.

Swartz earned his bachelor's degree in engineering from Harvard University and his master's degree in industrial administration from Carnegie Mellon's Tepper School of Business. He is the recipient of a Carnegie Mellon Alumni Merit Award as well as the Tepper School's inaugural Lifetime Achievement Award.

Swartz is a founding member and chair of Carnegie Mellon President Subra Suresh's Global Advisory Council and is a member of the Tepper School's Board of Advisors. The new Swartz Center for Entrepreneurship, which will serve as a hub for university-wide entrepreneurial activities, is being named in his honor.

# COMMENCEMENT 2016

## Schedule of Events

Commencement weekend at Carnegie Mellon involves much more than the ceremony itself. Below is a list of events for May 13-15.

### Friday, May 13

2 p.m.

#### **Phi Beta Kappa Honor Society Initiation Ceremony**

McConomy Auditorium, first floor, Cohon University Center

A reception will immediately follow in the Connan Room, first floor, Cohon University Center.

4:30 p.m.

#### **2016 Senior Leadership Awards Ceremony (invitation only)**

Rangos Hall, second floor, Cohon University Center  
Doors open at 4 p.m.

6 p.m.

#### **Alumni Awards**

Chosky Theatre  
Purnell Center for the Arts  
Doors open at 5 p.m.

### Saturday, May 14

8 a.m. - 2:30 p.m.

#### **Commencement Welcome Area**

Wean Commons, first floor, Cohon University Center

8 a.m. - 8 p.m.

#### **Cap & Gown Distribution Open**

McKenna/Peter/Wright Rooms, second floor, Cohon University Center

9 a.m.

#### **Navy ROTC Commissioning Ceremony**

Soldiers & Sailors Memorial Hall (off campus)  
4141 Fifth Ave., Pittsburgh, PA 15213

9 a.m.

#### **Honors Ceremonies**

Various locations across campus.

11:30 a.m. - 1 p.m.

#### **Human-Computer Interaction Institute (HCII) Undergraduate Commencement Presentation**

Room 7500, Wean Hall  
A presentation for HCII graduates to their families and peers.

3:30 p.m.

#### **Robing for Doctor's Hooding Ceremony Participants**

Carnegie Music Hall Foyer, Carnegie Museum, 4400 Forbes Avenue, Pittsburgh, PA 15213 (off campus)  
Robing is for doctor's candidates and faculty hooders. Guests should proceed directly to the ceremony.

4 - 6 p.m.

#### **Graduating Students and Families Open House**

Alumni House  
Join the Alumni Association for a light reception to celebrate the amazing accomplishments of our graduating students.

4:30 p.m.

#### **Doctor's Hooding Ceremony**

Carnegie Music Hall, Carnegie Museum, 4400 Forbes Avenue, Pittsburgh, PA 15213 (off campus)

5 - 7 p.m.

#### **Carnegie Mellon Advising Resource Center (CMARC) Reception**

Singleton Room, fourth floor, Roberts Engineering Hall  
Sponsors will send invitations directly to invitees.

### Sunday, May 15

8 - 11 a.m.

#### **Cap and Gown Distribution Open**

McKenna/Peter/Wright Rooms, second floor, Cohon University Center

8 a.m. - 2:30 p.m.

#### **Commencement Welcome Area**

Wean Commons, first floor, Cohon University Center

8:30 - 10 a.m.

#### **School of Computer Science Undergraduate Breakfast**

Perlis Atrium, third floor, Newell-Simon Hall

9 a.m.

#### **Gesling Stadium Opens**

10 a.m.

#### **Robing for All Commencement Ceremony Participants**

Various locations across campus.

10:15 a.m.

#### **Procession of Graduates**

All guests should be seated at this time.

11 a.m.

#### **Main Commencement Ceremony**

Gesling Stadium

Noon - 5 p.m.

#### **Cap and Gown Return Open**

McKenna/Peter/Wright Rooms, second floor, Cohon University Center

12:30 - 2:15 p.m.

#### **School of Computer Science Master's Student Luncheon**

Perlis Atrium, third floor, Newell-Simon Hall



At commencement, the Carnegie Mellon Pipes and Drums Band will lead the procession of faculty and platform group members into Gesling Stadium.

## Diploma Ceremonies

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

### Architecture

Saturday, May 14  
 Ceremony: 12:30 p.m.  
 Philip Chosky Theater, Purnell Center  
 Reception: following ceremony  
 Great Hall, CFA

### Art

Sunday, May 15  
 Reception: 12:30 p.m.  
 Regina Gouger Miller Gallery,  
 Purnell Center  
 Ceremony: 3 p.m.  
 Philip Chosky Theater, Purnell Center

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

Sunday, May 15  
 Ceremony: 8:30 a.m.  
 Kresge Theater, CFA  
 Reception: 9:15 a.m.  
 Alumni Concert Hall, CFA

### Biological Sciences \*

Saturday, May 14  
 Reception: 10:30 a.m.  
 Social & Conference Rooms,  
 Mellon Institute, 4400 Fifth Avenue,  
 Pittsburgh, PA 15213  
 Ceremony: Noon  
 Auditorium, Mellon Institute  
 Lunch Reception: 1:30 p.m.  
 Social & Conference Rooms,  
 Mellon Institute

### Biomedical Engineering

Sunday, May 15  
 Reception: 7:30 a.m.  
 Tartans Pavilion, Resnik House  
 Ceremony: 8:45 a.m.  
 McConomy Auditorium,  
 Cohon University Center

### Business Administration (Bachelor's) +

Sunday, May 15  
 Reception: 2 p.m.  
 Ceremony: 3 p.m.  
 Soldiers & Sailors Memorial Hall  
 4141 Fifth Avenue, Pittsburgh, PA 15213

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

Friday, May 13  
 Ceremony: 7:30 p.m.  
 Reception: following ceremony  
 Soldiers & Sailors Memorial Hall  
 4141 Fifth Avenue, Pittsburgh, PA 15213

### Chemical Engineering

Saturday, May 14  
 Ceremony: Noon  
 Wiegand Gym, Cohon University Center  
 Reception: 1 p.m.  
 Tartans Pavilion, Resnik House

### Chemistry +

Sunday, May 15  
 Ceremony: 2 p.m.  
 Auditorium, Mellon Institute  
 4400 Fifth Avenue, Pittsburgh, PA 15213  
 Reception: following ceremony  
 Social & Conference Rooms,  
 Mellon Institute

### Civil & Environmental Engineering \*

Sunday, May 15  
 Reception: 12:30 p.m.  
 Tartans Pavilion, Resnik House  
 Ceremony: 2:30 p.m.  
 Wiegand Gym, Cohon University Center

### Design

Saturday, May 14  
 Ceremony & Reception: 11:30 a.m.  
 Rangos Hall, Cohon University Center

### Drama

Sunday, May 15  
 Ceremony: 1 p.m.  
 Philip Chosky Theatre, Purnell Center  
 Reception: following ceremony  
 Lobby, Purnell Center

### Economics +

Sunday, May 15  
 Reception: 2 p.m.  
 Ceremony: 3 p.m.  
 Soldiers & Sailors Memorial Hall  
 4141 Fifth Avenue, Pittsburgh, PA 15213

### Electrical & Computer Engineering +

Sunday, May 15  
 Ceremony: 2 p.m.  
 Reception with light refreshments:  
 following ceremony  
 Petersen Events Center  
 3719 Terrace Street, Pittsburgh, PA 15261

### Energy Science, Technology & Policy

Sunday, May 15  
 Ceremony & Reception: 8 a.m.  
 Singleton Room, Room 401  
 Roberts Engineering Hall

### Engineering & Public Policy \*

Sunday, May 15  
 Ceremony & Reception: 7:30 a.m.  
 Rangos 2 and 3, Cohon University Center

### Engineering & Technology Innovation Management \*

Sunday, May 15  
 Ceremony & Reception: 7:30 a.m.  
 Rangos 2 and 3, Cohon University Center

### English

Saturday, May 14  
 Ceremony: 2 p.m.  
 McConomy Auditorium,  
 Cohon University Center  
 Reception: following ceremony  
 Schatz Dining Room,  
 Cohon University Center

### Entertainment Technology Center

Sunday, May 15  
 Reception, followed by dinner: 4 p.m.  
 Ceremony: following dinner  
 East Club Lounge, Heinz Field  
 100 Art Rooney Avenue,  
 Pittsburgh, PA 15212

### Heinz College

Saturday, May 14  
 Ceremony: 11 a.m.  
 Reception: following ceremony  
 Petersen Events Center  
 3719 Terrace Street, Pittsburgh, PA 15261

### History

Sunday, May 15  
 Reception: 8 a.m.  
 Ceremony: 8:45 a.m.  
 Gregg Hall/Room 100, Porter Hall

### Information Networking Institute

Sunday, May 15  
 Ceremony: 3:30 p.m.  
 Reception: 4:30 p.m.  
 Rodef Shalom Congregation  
 4905 Fifth Avenue, Pittsburgh, PA 15213

### Information Systems (Dietrich College) \*

Saturday, May 14  
 Ceremony: 6 p.m.  
 Philip Chosky Theater, Purnell Center  
 Reception: following ceremony  
 Lobby, Purnell Center

### Institute for Politics & Strategy

Saturday, May 14  
 Ceremony: 3 p.m.  
 Giant Eagle Auditorium, Baker Hall  
 Reception: following ceremony  
 Lower Level Coffee Lounge, Baker Hall

### Integrated Innovation for Products & Services \*

Saturday, May 14  
 Ceremony: 9 a.m.  
 Gregg Hall/Room 100, Porter Hall  
 Reception: following ceremony  
 Integrated Innovation Institute  
 4612 Forbes Avenue, Pittsburgh, PA 15213

### Materials Science & Engineering +

Sunday, May 15  
 Ceremony: 2 p.m.  
 Reception: following ceremony  
 The Twentieth Century Club  
 4201 Bigelow Boulevard,  
 Pittsburgh, PA 15213

### Mathematical Sciences \*+

Sunday, May 15  
 Ceremony: 1 p.m.  
 McConomy Auditorium  
 Cohon University Center  
 Reception: 2:30 p.m.  
 Special Events Hall and Outdoor Garden  
 Phipps Conservatory and Botanical  
 Gardens  
 1 Schenley Park, 700 Frank Curto Drive,  
 Pittsburgh, PA 15213

### Mechanical Engineering \*

Saturday, May 14  
 Ceremony: 11 a.m.  
 Carnegie Music Hall, Carnegie Museum,  
 4400 Forbes Avenue, Pittsburgh, PA 15213  
 Reception: following ceremony  
 Carnegie Music Hall Foyer

### Modern Languages

Sunday, May 15  
 Ceremony: 8 a.m.  
 Rangos 1, Cohon University Center  
 Reception: following ceremony  
 Schatz Dining Room,  
 Cohon University Center

### Music

Sunday, May 15  
 Ceremony: 1 p.m.  
 Kresge Theater, CFA  
 Reception: following ceremony  
 Alumni Concert Hall, CFA

### Philosophy

Sunday, May 15  
 Reception: 8 a.m.  
 Lower Level Coffee Lounge, Baker Hall  
 Ceremony: 9 a.m.  
 Giant Eagle Auditorium, Baker Hall

### Physics

Sunday, May 15  
 Ceremony: 12:30 p.m.  
 Reception: following ceremony  
 Room 7500, Wean Hall

### Psychology

Sunday, May 15  
 Ceremony & Reception: 1 p.m.  
 Rangos Hall, Cohon University Center

### School of Computer Science (Bachelor's & Doctor's) +

Sunday, May 15  
 Ceremony: 1:30 p.m.  
 Carnegie Music Hall, Carnegie Museum  
 4400 Forbes Avenue, Pittsburgh, PA 15213

### School of Computer Science (Master's) +

Sunday, May 15  
 Ceremony: 3 p.m.  
 Carnegie Music Hall, Carnegie Museum  
 4400 Forbes Avenue, Pittsburgh, PA 15213

### Social & Decision Sciences \*

Saturday, May 14  
 Ceremony: 11 a.m.  
 McConomy Auditorium,  
 Cohon University Center  
 Reception: following ceremony  
 Schatz Dining Room,  
 Cohon University Center

### Software Management

The diploma ceremony will take place in August at a site near the Silicon Valley campus. Details will be sent directly to graduates.

### Statistics +

Sunday, May 15  
 Reception: prior to and following ceremony  
 Ceremony: 2 p.m.  
 Winchester Thurston School Auditorium  
 555 Morewood Avenue, Pittsburgh, PA 15213

### Student-Defined Majors (Dietrich College)

Saturday, May 14  
 Ceremony: 11 a.m.  
 Reception: following ceremony  
 Adamson Wing/Room 136A  
 (upper level lobby), Baker Hall

\* Guests are limited. Contact the department or see [cmu.edu/commencement](http://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.

CFA = College of Fine Arts Building



# Transformative Teaching Takes Center Stage

CONTINUED FROM PAGE ONE

PHOTOS BY COOPER KOSTELIC



Eric Grotzinger with his wife, Shelley, (left) and longtime friend and colleague Nancy Ho

As associate dean, Grotzinger served on a number of university advisory committees and advised students and staff in each of the university's four colleges. His ability to ignite enthusiasm in others has made him a role model for all of MCS. Grotzinger has not only had a direct impact on students, he has had a large and sustained role in the educational mission of the Mellon College of Science.

"It's hard to think of any educational initiative within MCS that does not have Eric playing a large role and making sure that things are going smoothly," his colleagues wrote in his nomination letter. "It is fair to say that there is no part of undergraduate education in MCS that has not been touched by Eric, and is better because of it."

Grotzinger is chair of the new MCS Core Education Committee, establishing the measurable competencies and experiences that every MCS student should have upon graduation. The new core education rolled out this past fall with an emphasis on the student as a scholar, professional, citizen and person.



Drew Bagnell

## William H. and Frances S. Ryan Award for Meritorious Teaching

**J. Andrew Bagnell** | Robotics Institute and Machine Learning  
(nominated by Reid Simmons, Martial Hebert and Matthew T. Mason)

Drew Bagnell is always on the lookout for innovative ways to enhance the educational experience at CMU.

An associate professor in the Robotics Institute, National Robotics Engineering Center and Machine Learning Department, Bagnell saw the need for a graduate-level course geared toward robotics that would focus on statistical techniques, such as machine learning and optimization. The course he developed in 2006, Statistical Techniques in Robotics, is wildly popular, primarily because of Bagnell's teaching style.

"He prepares meticulously crafted lectures, presenting difficult material in a

very accessible way," wrote his nominators. "He gives a lot of personal attention to students, both in and outside of class. His class notes are widely circulated and we understand are used by other faculty, at various institutions, in preparation for their lectures."

Since then, he has developed two more advanced graduate courses that likewise have been well received.

"Drew is a demanding but very fair, instructor," his nominators wrote. "His courses are consistently highly rated and his Statistical Techniques course is almost treated as a required course by many of the robotics students."

Bagnell has mentored a half-dozen post-doctoral fellows, two of whom have since been hired at Carnegie Mellon.

"Despite — or maybe because of — his demanding style, he is a very popular choice for serving on student's thesis and qualifying committees," his nomination letter reads.

Bagnell has designed, marketed and led the highly competitive and incredibly successful Robotics Institute Summer Scholars (RISS) program. Now in its

10th year, the program matches students with faculty and work on research projects for 10 weeks.

"Part of the measure of the success of the RISS program is the several dozen alumni of the program who have subsequently been accepted into the robotics graduate programs," his nominators wrote. "Much of the credit for the success of the program goes to Drew's foresight and dedication."

## Mark Gelfand Service Award for Educational Outreach

**George Kantor** | Robotics Institute

(nominated by Theresa Richards, Patricia Rote, Thomas Pope, Joseph Jackson and Chuck Whittaker)

George Kantor has been at the heart of outreach efforts on campus, in the greater Pittsburgh community and beyond.

A researcher and educator at the Robotics Institute, Kantor has spent countless hours volunteering as the lead mentor of the Girls of Steel FIRST® team. FIRST — For Inspiration and Recognition of Science and Technology — is an organization that runs an annual competition during which teams of high school students are given six weeks to design and build a robot to play a game.

The team has participated in regional competitions in Pittsburgh, Washington, D.C., Cincinnati and Cleveland, winning multiple awards, including awards that qualified the team for the world championship competition in St Louis five times. Most recently, they won the Entrepreneurship Award at the Greater Pittsburgh Regional Competition and the Engineering Inspiration Award at the Queen City Regional Competition.

"An impressive aspect of George's continued leadership and outreach is the extent to which he has been able to bring together members of the Carnegie Mellon community to participate with Girls of Steel," his nominators wrote. "Among the many volunteers are students, faculty and staff from Tepper, Heinz College and Computer Science. These volunteers all help make Girls of Steel a resounding success, and have made the CMU robotics community stronger as a result."

The Girls of Steel team comprises 65 girls from 31 Pittsburgh-area schools as far away as Johnstown and as close as the Oakland and Shadyside neighborhoods. Kantor is involved with all aspects of the Girls of Steel, from teaching technical skills to fundraising.

While his accomplishments with Girls of Steel are the central pillar of his nomination for the Gelfand Award, his nominators also point to his research and teaching, which have had significant impact in the community.

Kantor and other faculty members developed low-cost airboats for use in flood disaster mitigation and water sampling in underdeveloped countries. In collaboration with local teachers, he is working to develop projects that use the airboats in classes in area high schools as a way of introducing mobile robotics to students and getting kids excited about robotics in general.



George Kantor with his children (center) and Girls of Steel

CONTINUED ON PAGE TEN

# Transformative Teaching Takes Center Stage

CONTINUED FROM PAGE NINE



Lynn Walker (left) with Kunal Ghosh

## Award for Outstanding Contributions to Academic Advising and Mentoring

**Kunal Ghosh** | Physics

(nominated by Ryan Davis, Isabelle Goldstein, Stephen Garoff and Helmut Vogel)

Kunal Ghosh has a passion for advising students in academic and personal matters.

As assistant head of undergraduate affairs and a teaching professor in the Department of Physics, he is the primary adviser for every physics major from the time they declare their major until the end of their third semester.

Since he arrived at CMU in 2001, he has remained undeterred on his quest to help students become well-rounded, healthy human beings. And he delivers this message to the students in a nonjudgmental, noncoercive and yet compelling way.

For students in any kind of trouble — whether it be academic or personal — he puts every ounce of his energy into helping them. He is proactive, always asking faculty to identify students who have shown any sort of problems and then he seeks the students out. He schedules series of meetings with them to work through the problems.

Ghosh knows and uses every resource the university has to offer to help students. For academic problems, he will work with the student for as long as they will come to the meetings. For problems

that involve physical or mental health, he does not stop until he knows the student is safe.

“There is no doubt he has saved large numbers of students’ academic careers, and possibly some lives as well,” his nominators wrote. “Student letters speak clearly to the way Kunal has met the most critical yet most difficult advising challenges.”

Ghosh’s community-building includes his fostering and running of several clubs for physics students. His Physics Upperclass Course Center helps any physics major with any course and emphasizes to the students the importance of helping each other.

“There is no doubt that this community along with Kunal’s advising is largely responsible for our undergraduate physics program being one of the largest in the country,” his nominators said.

Ghosh serves on many Mellon College of Science and university committees and regularly participates in CMU’s “Big Questions” talks, aimed at helping first-year students identify and develop their personal values.

## Barbara Lazarus Award for Graduate Student and Junior Faculty Mentoring

**Lynn M. Walker** | Chemical Engineering

(nominated by Shelley L. Anna, John R. Kitchin and Kathryn A. Whitehead)

In the words of her nominators, Lynn Walker is “a natural” mentor.

Walker has been a professor of chemical engineering at CMU since 1997. In her research group, she has advised more than 32 undergraduate students, 11 master’s degree students and 21 Ph.D. students, a large fraction of whom are women and under-represented minorities. These students have earned coveted jobs at major chemical companies and universities, in no small part due to Walker’s behind-the-scenes efforts.

Walker is known for giving her students ample opportunity to direct their own thesis projects, pushing them

to propose new ideas, to find out which scientific questions interest them most and to develop rigorous research plans to uncover the answers. This approach has served her students well, with many students earning positions and growing into leadership roles at major companies.

Walker has won the Chemical Engineering Department’s Kun Li Award for Excellence in Education twice — a rare accomplishment. The award is voted on by the senior class and presented to the faculty member who most positively influenced their undergraduate experience.

“Few students could have claimed not to have connected with Lynn in

some way outside of lecture,” wrote one student, citing late-night visits by Walker to the computer lab adjacent to her office to find out what that evening’s all-nighter was all about.

Walker also has gone far out of her way to ensure young faculty settle in comfortably, both to their professional pursuits at CMU and also to their lives in Pittsburgh. She has been known to lend tools and painting supplies, to lend

a hand with home repairs and moves, and she hosts regular “Campfires with Lynn” and other informal gatherings in which junior faculty can feel at home to talk about stresses, lament failures and celebrate successes.

“Her support of junior faculty goes well beyond just having coffee, which she also will happily do any hour of any day,” her nominators said.

## Teaching Innovation Award

**Christopher M. Jones** | Modern Languages

(nominated by Nevine Abraham, Susan G. Polansky, Therese Tardio, G. Richard Tucker, Sue-mei Wu and Bonnie Youngs)

Chris Jones has played a key role in the design, development, implementation and dissemination of Elementary French I and II Online, at CMU and elsewhere through the Open Learning Initiative (OLI).

Over the 16 years since the course’s inception, Jones has built on the French course model and design process to lead the development of three additional online language programs in Spanish, Chinese and Arabic in the Department of Modern Languages. His contributions have put CMU on the map for its hybrid, online language courses.

Beginning with French, Modern Languages’ programs in online learning grew in part out of a response to requests by some students whose program demands hindered them from taking one of the courses that meets four times per week.

Jones spearheaded the development of French Online, which ultimately resulted in eight semesters of web-based instruction in French and Spanish.

Jones has been responsible for design and administrative oversight for all online programs in collaboration with faculty content creators and support staff.

“Modern Languages’ online courses are hybrid models, designed for students to work online and also to meet in weekly sessions with an instructor and language assistant for further development of their skills,” his nominators wrote. “French Online is the most developed, widely used and researched of the programs. It has since been used by thousands of independent learners and dozens of institutions, from high schools to universities across the country.”

Research focused on the learning outcomes of French Online has demonstrated that students who continue their studies transition well into regular classroom-based courses.

Jones has achieved national and international recognition for his leadership in the field of technology-enhanced language and culture learning. One colleague in the field said, “Even more important than the unarguable pedagogical excellence of the materials, in my opinion, is the thoughtfulness and professional integrity with which Dr. Jones has written about the challenges of developing such materials, of preparing and supporting the teachers who use them, and of educating and supporting the students who use them.”



Christopher M. Jones

## Frankenstein, Newstead Earn Graduate Student Awards

Will Frankenstein and Clive Newstead are this year’s Graduate Student Service and Teaching Award winners, respectively.

Frankenstein, a Ph.D. candidate in engineering and public policy, was vice president for external affairs of the Graduate Student Assembly last year and is a founding member and past president of Allies Grad, CMU’s graduate group for LGBTQ students. He served as the 2015 Northeast Regional Chair for the

National Association of Graduate and Professional Students.

Newstead is a Ph.D. student in mathematical sciences, who has served as a TA and instructor for several undergraduate courses. He is a fellow at the Eberly Center for Teaching Excellence and Educational Innovation, where he applies principles from pedagogical research to support the professional development of other graduate students.

## Teaching Innovation Award

### Maralee Harrell | Philosophy

(nominated by David Danks)

A significant challenge in philosophy courses is learning how to read and critically analyze philosophical arguments.

Associate Teaching Professor Maralee Harrell is being honored with the Teaching Innovation Award for her development and implementation of argument diagramming as a central tool in teaching Introduction to Philosophy.

Harrell was not content with students' reports that argument diagramming was useful in this and other courses. Instead, she designed a series of studies involving pre- and post-testing of students in different course sections taught in different ways.

Those studies revealed a large positive impact of argument diagramming: students who were taught to read, construct and use argument diagrams showed significant improvements in a range of critical thinking skills — particularly understanding, evaluating, creating and analyzing arguments.

Argument analyses and critical thinking skills are not exclusive to philosophy, so Harrell has worked closely with Danielle Wetzel to incorporate argument diagramming into the English Department's Interpretation and Argument course. As in the philosophy course, pre- and post-testing showed argument diagramming significantly improves writing skills, particularly the quality, clarity and detail of students' arguments.

"Introductory philosophy courses are notoriously difficult to teach so that students acquire key skills, rather than just rote knowledge of various philosophical theories," wrote David Danks in Harrell's nomination letter. "Mara's development and use of argument diagramming in Introduction to Philosophy has provided a significant advance in our ability to succeed at this goal."



Maralee Harrell

## Team Teaching Innovation Award

### Art, Conflict and Technology in Northern Ireland Team

(nominated by James Duesing)



Amy Burkert (right) poses with the winning Teaching Innovation Award Team: (l-r) Illah Nourbakhsh, John Carson, Jennifer Keating-Miller and her son Liam.

Through "Art, Conflict and Technology in Northern Ireland," Jennifer Keating-Miller, John Carson and Illah Nourbakhsh introduced students to a history of social strife and reconciliation efforts in North Ireland from the 1960s to the present.

Keating-Miller from the Department of English; Carson from the School of Art; and Nourbakhsh of the Robotics Institute co-taught the course, which considered the influence of technological advances on how narratives are shared within a community and around the world.

During class, students reflected on and analyzed a variety of literary and visual art sources from the time period and learned how to create mixed-media projects using Gigapan and Hear Me systems from CMU's CREATE Lab.

The class was far-reaching in its approach, cross-listed in three colleges where it attracted students from many majors in the university and supported by a variety of sources. The faculty worked with an assortment of resources to fund a Spring Break 2015 field trip to Belfast, where they met a variety of writers and artists, whose work they studied, and stakeholders in reconciliation efforts throughout the region.



Clive Newstead (center, left) and Will Frankenstein (center, right) with Amy Burkert and Farnam Jahanian

# CELEBRATION of EDUCATION

## College Teaching Awards

Below are the 2016 recipients.

### COLLEGE OF FINE ARTS

#### Henry Hornbostel Teaching Award

John Folan

*T. David Fitz-Gibbon Chair and Director, Urban Design Build Studio, School of Architecture*

### DIETRICH COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

#### Elliott Dunlap Smith Award for Teaching and Educational Service

Alex John London

*Professor and Director, Center for Ethics and Policy, Department of Philosophy*

### H. JOHN HEINZ III COLLEGE

#### Martcia Wade Teaching Award

Mark Wessell

*Associate Teaching Professor*

### MELLON COLLEGE OF SCIENCE

#### Julius Ashkin Teaching Award

Po-Shen Loh

*Associate Professor, Department of Mathematical Sciences*

### The Richard Moore Education Award

Brooke M. McCartney

*Associate Professor, Department of Biological Sciences*

### SCHOOL OF COMPUTER SCIENCE

#### Herbert A. Simon Award for Teaching Excellence

Ryan O'Donnell

*Associate Professor, Department of Computer Science*

### TEPPER SCHOOL OF BUSINESS

#### Gerald L. Thompson Teaching Award in the B.S. Business Administration Program

Oliver Hahl

*Assistant Professor*

#### Richard M. Cyert Teaching Award in the Undergraduate Economics Program

Ariel Zetlin-Jones

*Assistant Professor*

#### MBA George Leland Bach Excellence in Teaching Award

Fallow Sowell

*Associate Professor*

READ MORE ONLINE AT [CMU.EDU/PIPER](http://CMU.EDU/PIPER)

# Inside Out

## Students' Visionary Architectural Design Wins International Competition



■ Bruce Gerson

A semester-long class project embraced by two student architects has grabbed the attention of leading professionals in the architecture and software industries.

“Ecoschool” by juniors Sophie Nahrmann and Sinan Goral was a double winner in the International FLUX Sustainable Architecture @ Scale Emerging Architects Design Competition. Their visionary project, designed to be a framework for sustainable housing units, won the contest’s Most Innovative and People’s Choice awards.

The competition drew entries from students around the world — from the University of Oregon and Massachusetts Institute of Technology to Kyiv National University in Ukraine, the University of Sydney in Australia, the University of Padua in Italy and Cambridge University in London.

Nahrmann and Goral’s work centered around faculty and student housing units in the industrial and commercial neighborhood of Pittsburgh’s Strip District. They said their work “reverse engineers” how wastewater and energy are

processed within a building by exposing the network of pipes and ducts and bringing the processing and mechanical systems in-house, literally.

“Every building needs potable water and sewage pipes, but rather than making them insular, underground or in the ceiling ducts, we decided to expose them to make a visual statement,” said Goral, who was born in Istanbul, Turkey, before his family moved to Minnesota.

While visually exposing waterlines and ductwork isn’t exactly new, their project did provide a new twist by bringing the mechanical equipment — typically stored in a basement or utility closet — front and center, integrating it into the landscaping or making it a part of the structure in an artful way.

“We’re taking something as grotesque as sewage treatment and figuring out a way to make it much, much more,” Goral said.

Nahrmann said the strong visual components also have subliminal benefits, building awareness of energy consumption and ways to conserve it.

“It makes a statement that people need to focus on the systems that they live with, interact with and take for granted,” she said. “It’s a design framework that restructures the way people think about everything that goes into their daily lives.

“If we make energy more visually compelling and integral to the space where you live, maybe it will start to refocus how people think about their impact,” said Nahrmann, who is from Billerica, Mass.

The competition, judged by a panel of three architects and two software gurus, was sponsored by FLUX, a California-based startup that creates architectural software.

“Wow! Fabulous project,” said judge Ken Sanders, managing director of Gensler, a global architecture, design planning and consulting firm with 46 offices in 16 countries.

“Exposing the infrastructure as a learning tool isn’t a new idea, but the idea is beautifully expressed on this project,” he said.

Dana Cupkova, an assistant professor of architecture and coordinator of the “Environment, Form and Feedback” design studio, in which Goral and Nahrmann’s project was developed, said their design work was “fantastic.”

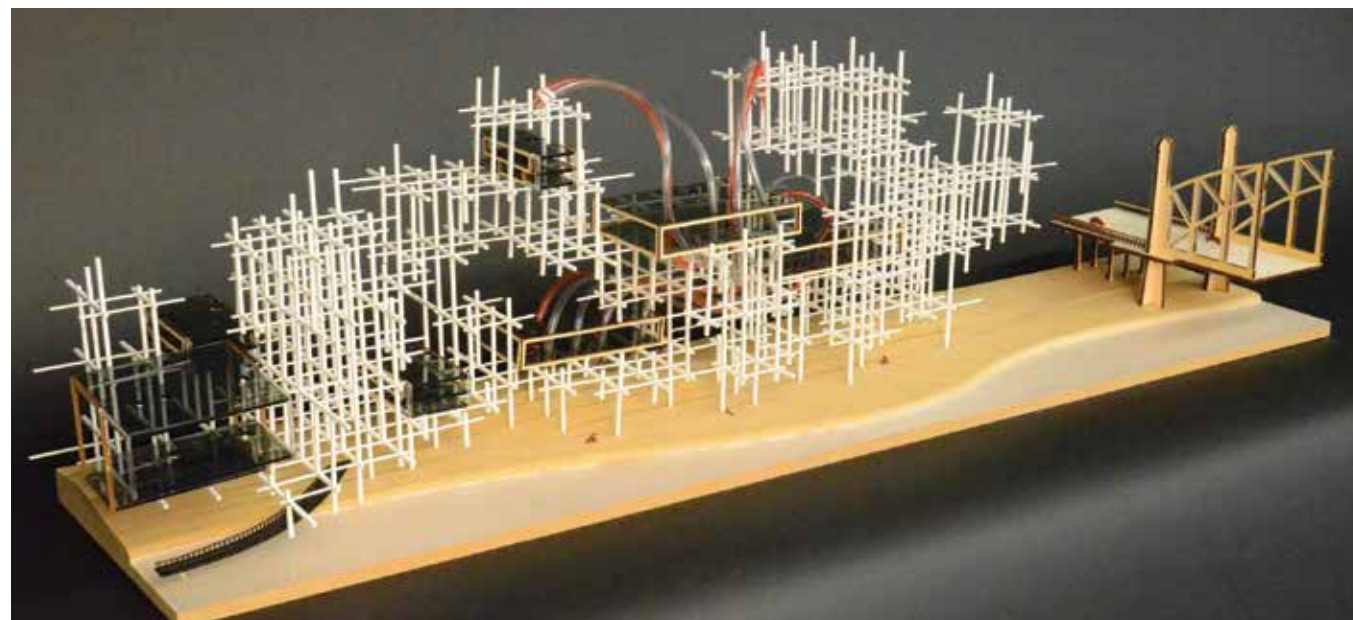
“They added a layer of computational design intelligence to their project after it was completed for the class that really made them succeed in the competition,” she said. “Our knowledge base and design tools are changing so rapidly that only a creative approach toward future problem-solving in the built environment will succeed.”

Cupkova said she likes to think of her class as a “design laboratory, where students discover new ways of thinking, designing and making, while immersed in a larger ecological framework of the project.” She said it’s hard for some students to embrace such a journey to the unknown.

But Goral and Nahrmann stood out. “They are creative, but inquisitive and curious, positioning their own work with great individuality, rather than just following directions. They fought with me — literally — for ideas in their project and put an enormous amount of time and energy into making it fantastic,” Cupkova said.

The studio class is a major component of the third-year curriculum in CMU’s renowned School of Architecture.

The School of Architecture ranked ninth in the nation in 2016 by Design-Intelligence, an online publication for professionals in architecture and construction exploring global trends, challenges and opportunities in the design industries. In specialty rankings, CMU was rated sixth in sustainable design and sixth in computational design. CMU ranked fifth overall in the eastern U.S.



The work of Sophie Nahrmann and Sinan Goral centered around sustainable and affordable housing units for faculty and staff in Pittsburgh’s Strip District.