



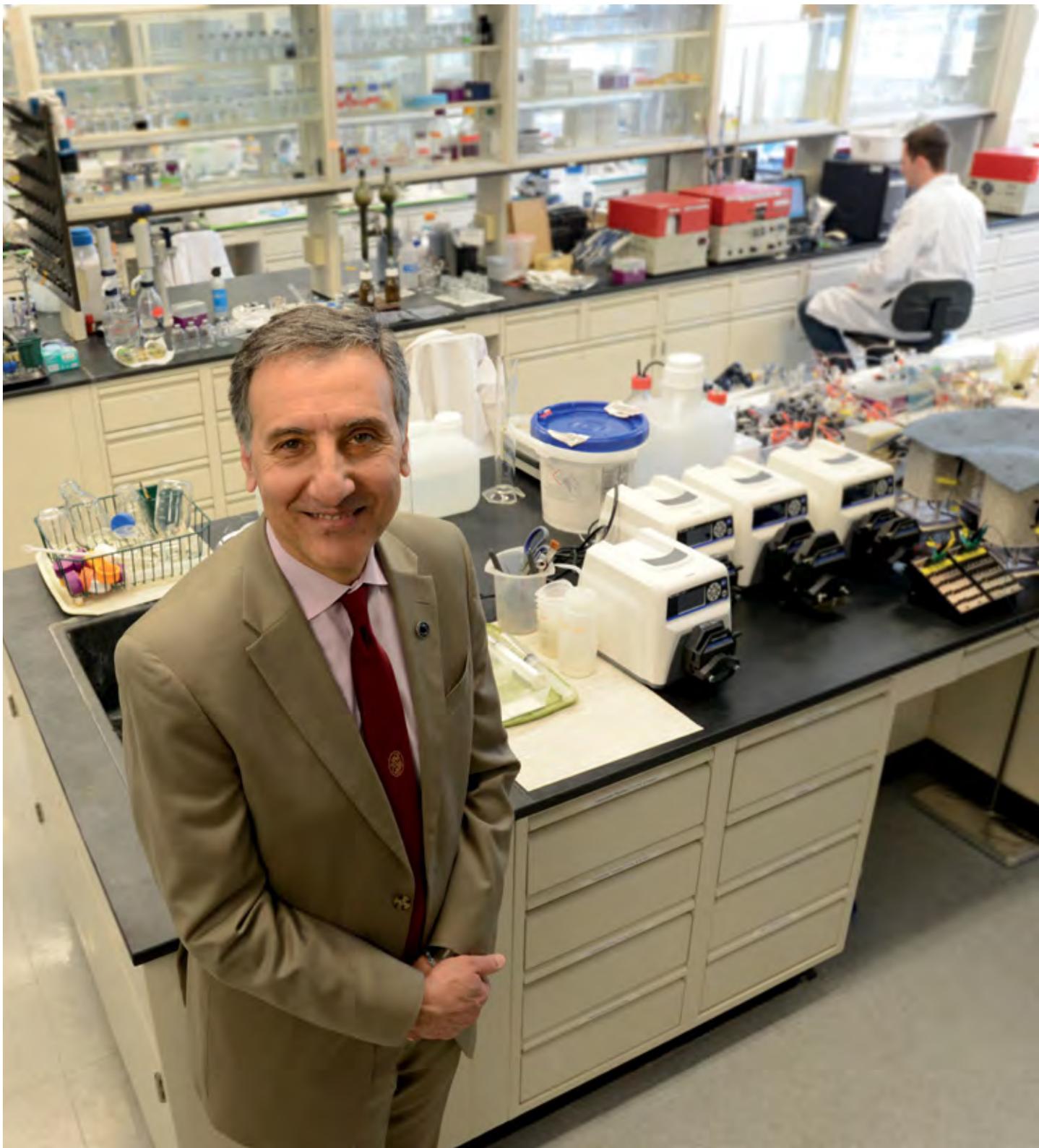
Impact

HOW PHILANTHROPY TRANSFORMS
PENN STATE ENGINEERING

PENNSTATE



College of Engineering



Dear Alumni and Friends OF PENN STATE ENGINEERING

Our students, faculty, and staff feel the impact of your tremendous support in everything they do, every day. Penn State Engineering has made mega-strides during the years of Dean David Wormley's leadership.

With support from you, the Penn State Engineering community, who has embraced and welcomed my family and me to State College, we will aim for the very top echelons of learning, discovery, and engagement. We celebrate the much enlarged undergraduate program, standing at just under 10,000 brilliant engineering minds, and appreciate the responsibility and logistical challenges of providing them with the world-class education that is the hallmark of Penn State Engineering.

Our research expenditures last year were a record \$145 million, the largest of any Penn State academic college. These expenditures make it possible for our students to pursue solutions to the world's greatest challenges and prove that our faculty members are among the world's best.

We have launched a number of ambitious initiatives to invigorate our education programs, our research portfolio, and our infrastructure. Your past contributions have been critical to our ability to resource these exciting developments. We strive to do even more to advance our college, and we need your support and investment in our future more than ever. We want to exceed our previous all-time high of \$23.6 million in gifts that was established

in 2012 as we renovate our teaching and research laboratories, as we expand our curricula, rendering them the most exciting interdisciplinary and society-centric educational programs in the nation, and as we attract and retain the best and brightest faculty and students.

The national and international recognition of, and the compendium of awards won by, Penn State Engineering faculty and students are heart-warming. We would not be such a flagship engineering academy without your contribution, and without the support of our dedicated staff, and the guidance and advice of the University leadership.

We appreciate your contributions, large and small. The 'number' of contributions is one measure of alumni satisfaction, which matters in our ranking. The 'size' of contributions enhances our endowment and secures our future as we move forward to a more competition-based and less entitlement-based national and state model. Penn State Engineering students, faculty, staff, and facilities are your blue-chip investment that continues to pay off at the individual, family, regional, state, national, and international levels. Our pledge is to renew and intensify our march of excellence towards being a top-ten engineering college. We look forward to our continued partnership.



Amr Elnashai

Harold and Inge Marcus Dean of Engineering

Andrew & Katherine Kartalis

ANDREW KARTALIS HANDS-ON LEARNING LABORATORY

Nothing is more impressive to **Andrew Kartalis** than the hands-on education that engineering students are getting through working on projects at the Bernard M. Gordon Learning Factory.

When he visited the Learning Factory, the civil engineering alumnus marveled at the excitement the students exhibited while working on their projects.

Andrew says, “The projects were all relevant because they are sponsored by corporations and are real-life problems to solve.”

He continues, “They knocked my socks off. They all loved and were excited by what they were doing in the Learning Factory. In fact, while we were there, two students came in and announced they had just gotten job offers that day.”

So when he decided to make a gift to Penn State, Andrew set his sights on the facility.

“It hit me as so ideal for an engineering graduate to transition from college into a job in the business world. I couldn’t have dreamed of a better gift to a graduating engineer,” he says. “I think it’s a wonderful plan.”

In May 2013, Andrew and his wife, Katherine, made a \$1.5 million estate commitment to the University. In addition to supporting the newly named **Andrew Kartalis Hands-On Learning Laboratory** in the Learning Factory, the endowment also provides scholarships for students and creates the **Kartalis Veteran Engineers and Top Scholars Program Endowment** for U.S. military veterans.

“It’s a great recognition for the Learning Factory,” **Mary Frecker**, director of the Learning Factory and professor of mechanical engineering, says of the gift.

THE ANDREW KARTALIS
HANDS-ON LEARNING LABORATORY



Andrew and Katherine Kartalis

ANDREW KARTALIS

1954 civil engineering alumnus



IT HIT ME AS SO IDEAL for an engineering graduate to transition from college into a job in the business world. I couldn't have dreamed of a better gift to a graduating engineer."

Naren & Judith Gursahaney

THE NAREN & JUDITH GURSAHANEY FUND FOR EXCELLENCE
IN MECHANICAL AND NUCLEAR ENGINEERING

For her honors thesis, mechanical engineering student **Elisa Paul** is designing tissue scaffolds with vasculature.

The idea, Elisa explains, is “to be able to print a tissue scaffold to hold cells with channels to feed the cells.”

Her adviser, Professor of Mechanical Engineering **Mary Frecker**, says Elisa’s work is part of an effort between the departments of Mechanical and Nuclear Engineering and Biomedical Engineering and the College of Medicine focused on 3-D printing of biomaterials.

“It could be pretty revolutionary in medicine,” Elisa says. “If you look at any of the transplant waiting lists, there are so many people who need organs.”

The Greensburg, PA, native adds her thesis wouldn’t be possible without the new Objet 260 Connex 3-D printer that was recently installed at the Bernard M. Gordon Learning Factory.

Mary says, “It’s a unique machine that can print multiple materials at once. It can create objects with different stiffnesses and properties.”

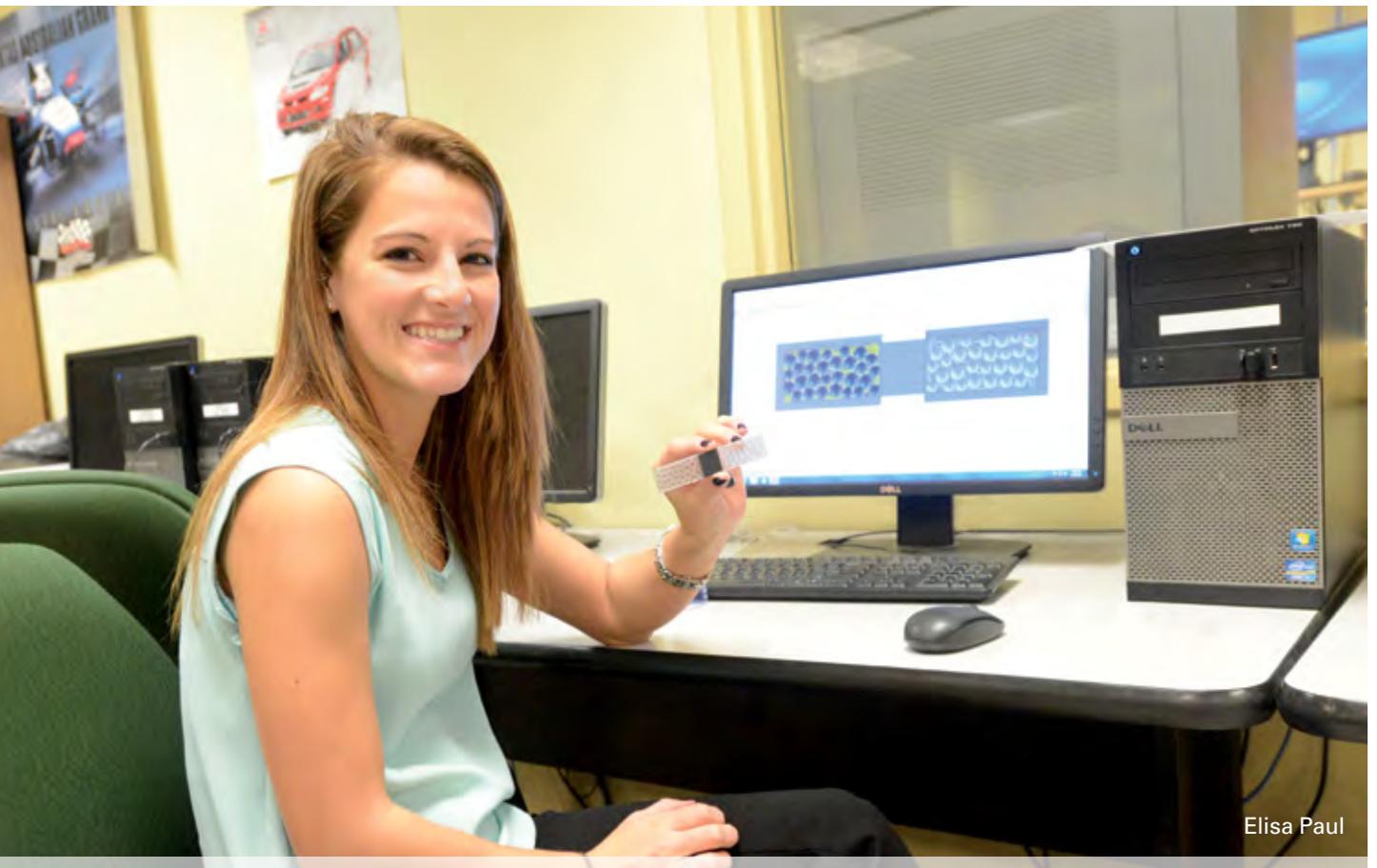
For Elisa’s work, Mary says the machine will print rigid sections for the cells and feeding channels while creating a black flexible section. “The black flexible section in the center acts like a hinge, allowing the device to open and close like a book.”

Part of the funding for the Objet came from a \$1 million gift, the **Naren and Judith Gursahaney Fund for Excellence in Mechanical and Nuclear Engineering**.

In creating the endowment, mechanical engineering alumnus **Naren Gursahaney** says, “I like the flexibility it gives the department.” The CEO and director of ADT Corporation says he wanted to give the department the tools to take advantage of new opportunities.

“What’s nice for me is hearing about the department’s priorities and seeing the funds contribute to those priorities.”

Karen Thole, head of the department, says, “We are fortunate to be able to provide this state-of-the-art equipment to our students through the generosity of flexible funds from the Gursahaney’s gift. Having used 3-D printing, our students are in a position to think about designs differently.”



Elisa Paul

**ELISA
PAUL** *2014, mechanical engineering*

“ **IT COULD BE PRETTY REVOLUTIONARY** in medicine. If you look at any of the transplant waiting lists, there are so many people who need organs.”

James Gould

JAMES & JANICE GOULD ENDOWED SCHOLARSHIP
IN THE COLLEGE OF ENGINEERING

Chemical engineering alumnus **James Gould** wants to help ensure more young women choose engineering as a profession. He notes, “When I was at Penn State in the 1960s, there were 149 men and one woman in the program.”

Jim remembers the challenges the female student faced. “She struggled to feel accepted in class, and it was very difficult for her to get a job in her field after she graduated.”

In 2012, Jim retired from a law career that spanned more than three decades. He says, “Over the years, more women were hired in the legal field—and the field became better because of it. Unfortunately, engineering is still lagging.”

Last year, Jim and his wife established the **James and Janice Gould Endowed**

Scholarship in the College of Engineering.

Their estate gift will provide financial support to female students who have achieved superior academic records or who manifest promise of outstanding academic success as they pursue their dreams of earning a Penn State engineering degree.

The couple observes that, even today, young girls are told boys are better at math and science. Jim explains, “Girls hear that, and they start to believe it. They shouldn’t limit themselves, because I don’t think there’s any evidence that girls aren’t just as knowledgeable in those subjects.”

Raising a daughter also inspired Jim and Janice to create the endowment. Jim says, “I always told her, ‘You can do whatever you want.’”



JAMES GOULD

1968 chemical engineering alumnus



OVER THE YEARS, more women were hired in the legal field—and the field became better because of it. Unfortunately, engineering is still lagging.”

Barry Isett

HARRY WEST TEACHING ENDOWMENT
FOR THE ADVANCEMENT OF CIVIL ENGINEERING EDUCATION

The **Harry West Teaching Endowment for the Advancement of Civil Engineering Education** was established to honor the civil engineering educator, who had a decades-long and distinguished career at Penn State.

Civil engineering professor **Jeff Laman** is the first recipient of the award. He used the endowment's funds to "flip" his CE 441: Structural Design of Foundations class. Jeff explains, "In many cases, a faculty member lectures to the class and essentially dispenses knowledge. The students have to apply what they learn in class to solve design problems on their own. This can lead to frustration, especially if a student has a hard time figuring out where to begin."

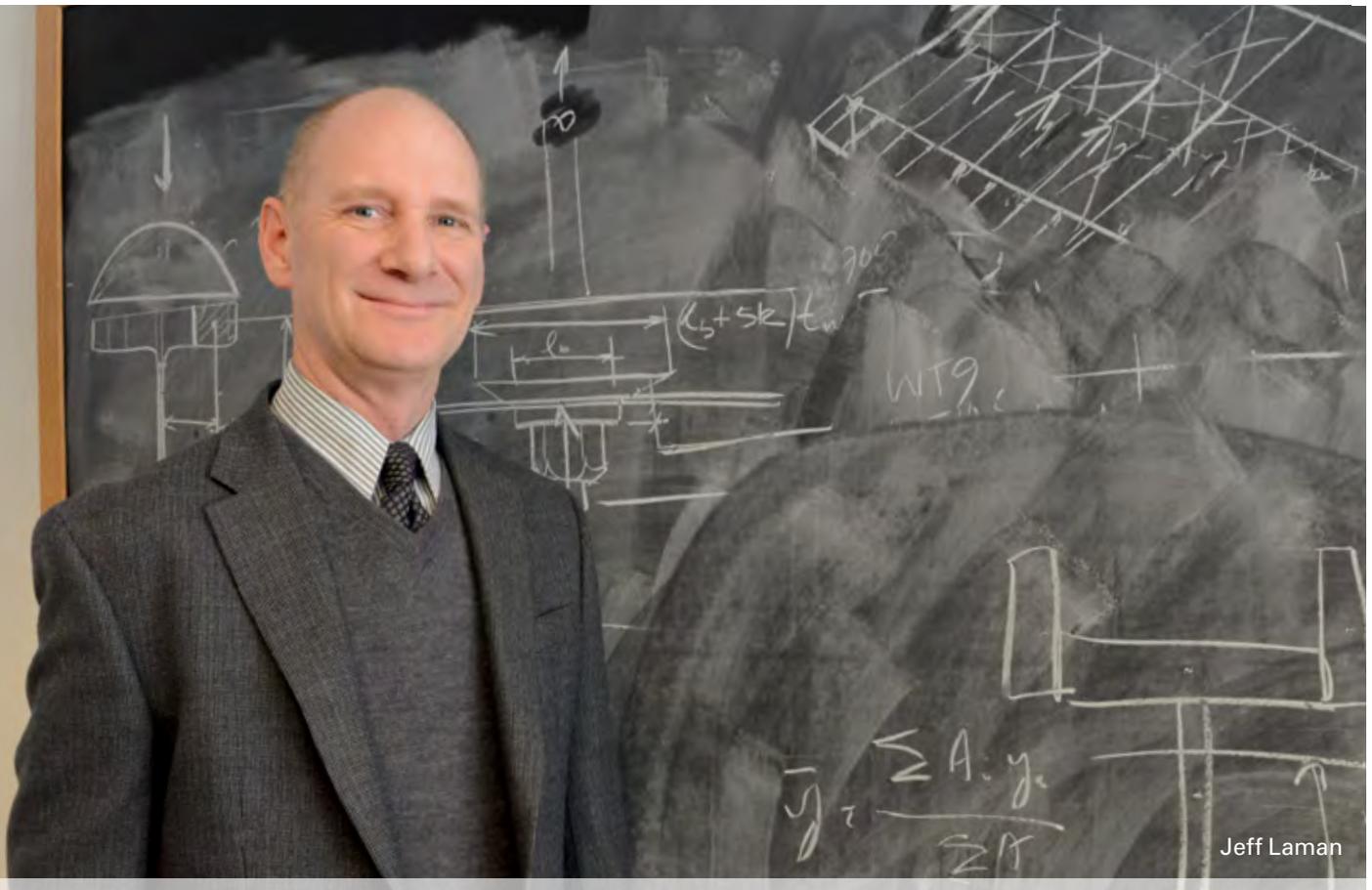
Under his new model, Jeff helps students work on problems during class. He says, "I facilitate a discussion about the problems

and how they might be solved. Students are completely engaged, and they interact regularly with other students."

Jeff feels his flipped design has been quite successful. "At the end of the semester, students are a lot more confident about their projects, and faculty have become more attentive to the scholarship of teaching."

Barry Isett, a 1958 civil engineering alumnus and president of Barry Isett and Associates in Allentown, hires many of West's former students. He says, "They respect Harry and talk a lot about what a great teacher he is. When I found out there is an endowment honoring him, I wanted to contribute because he deserves it."

Barry adds that he's always had a special connection to Harry West. "He was my roommate my freshman year. I am so proud of what he's done at Penn State."



JEFF LAMAN

Harry West Teaching Endowment for the Advancement of Civil Engineering Education



AT THE END OF THE SEMESTER, students are a lot more confident about their projects, and faculty have become more attentive to the scholarship of teaching.”

James Benedick

BENEDICK FAMILY SCHOLARSHIP IN THE COLLEGE OF ENGINEERING

According to industrial engineering alumnus **James (Jim) Benedick**, a college degree is a key factor in determining a person's success.

"If you have the aptitude, a college education puts you at the forefront of the game of life," the 1966 graduate explains.

Jim says that from experience: "I grew up in rural Pennsylvania. We didn't have a lot of money or material goods. It was important for me to get a scholarship in order to graduate from college and thus fulfill my career dreams."

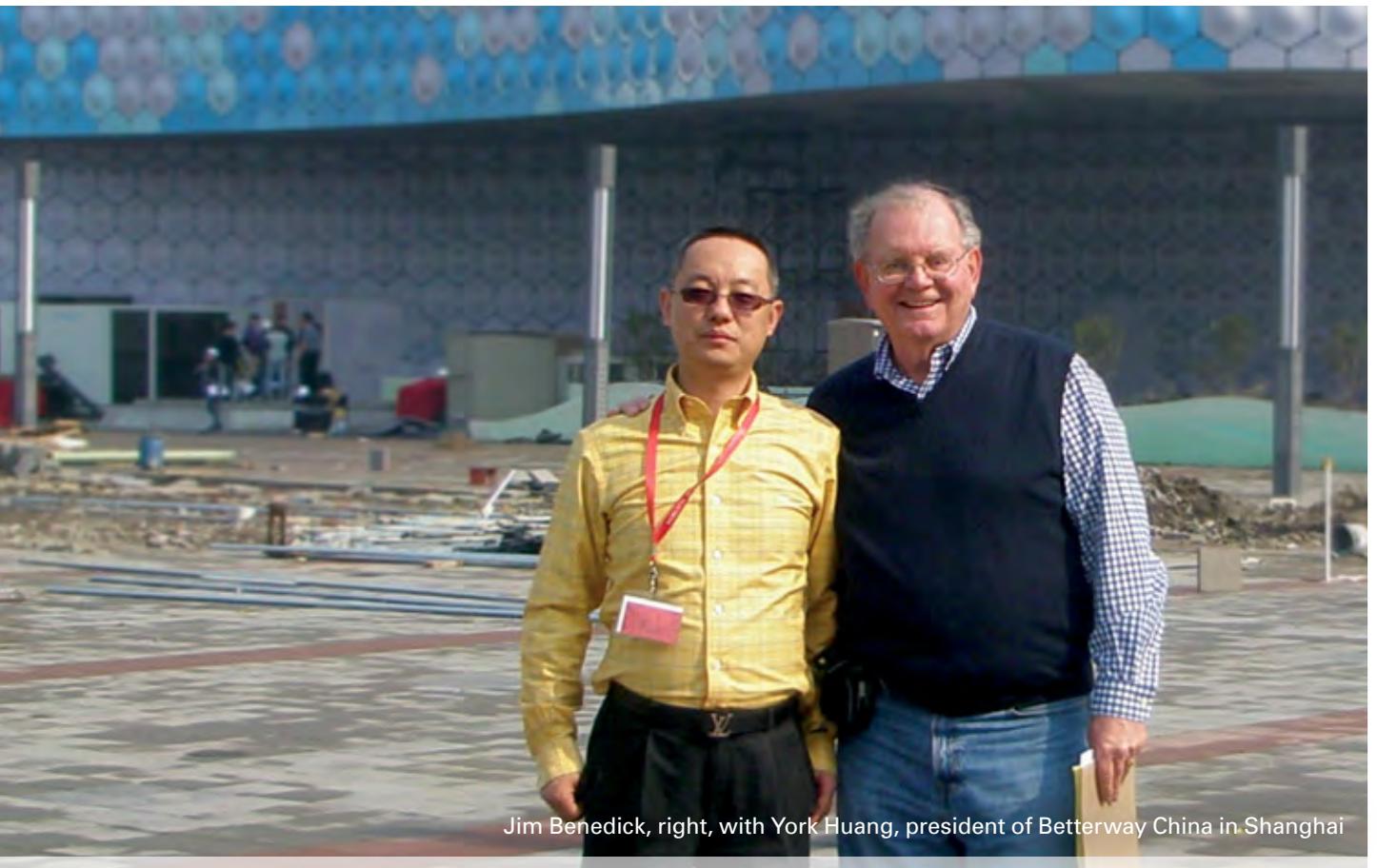
After a successful career that included work with NASA's Apollo moon effort; a stint as an industrial engineer and, later, area manager at Disneyland; vice president of operations at the 1982 World's Fair; and chief operating officer for ProFun Management Group, a firm specializing in managing and operating theme parks, entertainment centers, visitor centers, World Expos, and other leisure-time

projects, he set his sights on creating the same opportunities he received as a student.

Jim, along with his brother, Jeff ('72 H&HD) established a scholarship in each of the academic colleges they graduated from: the **Benedick Family Scholarship in the College of Engineering** and the Benedick Family Scholarship in the College of Health and Human Development.

"It's something we talked about for a long time," the York native says. "We had always supported the University with contributions but wanted to create an endowment so students will continue to be helped well into the future."

Jim continues, "Establishing this scholarship is one of the most important things I can do to assist deserving students to further their education. There is nothing more important to opening up your potential and the world than a good education."



Jim Benedick, right, with York Huang, president of Betterway China in Shanghai

JAMES BENEDICK

1966 industrial engineering alumnus



ESTABLISHING THIS SCHOLARSHIP is one of the most important things I can do to assist deserving students to further their education."

Al Murphy

MILLENNIUM SCHOLARS PROGRAM

The Penn State **Millennium Scholars Program** (MSP) addresses the challenge of science, technology, engineering, and mathematics field retention by placing select students in a tight-knit learning community, where they inspire and encourage one another to achieve their full potential. Established last year, the program provides financial, academic, and social support to students who intend to pursue a Ph.D. or combined M.D./Ph.D. in the sciences or engineering upon completion of their bachelor's degree.

Al Murphy, a 1971 architectural engineering alumnus, recently made a financial commitment to support MSP engineers. More importantly, as a trustee of the Community College of Philadelphia Foundation, he has been working with Philadelphia education and political leadership to place underrepresented students in Penn State's engineering program. Al says, "We haven't been successful keeping students at Penn State because they start at a Commonwealth Campus and never successfully make the transition to University

Park. In addition, many academically talented students lack the financial resources to attend Penn State."

First-year mechanical engineering students **Luke Gockowski** and **Victor Acero** are among the inaugural class of Millennium Scholars.

Luke says the MSP's six-week summer bridge program prepared him for the fall semester. "When classes started, I already knew students and faculty and where things were on campus." The Gettysburg, PA, native, who hopes to design greener transportation, says Millennium Scholars are given so many tools to succeed they feel like they *have* to succeed. "And that's a good thing!"

Victor agrees that participating in the MSP raised his personal academic expectations. The Dallas, TX, native, who plans to work at a federal space agency, also appreciates the financial support. "I'm from out of state, so coming to Penn State without the MSP scholarship probably wouldn't have been an option."

For more information about the Millennium Scholars Program, visit <http://millennium.psu.edu/>



Victor Acero (left) and Luke Gockowski

VICTOR ACERO & LUKE GOCKOWSKI

Millennium Scholars Program



I'M FROM OUT OF STATE, so coming to Penn State without the MSP scholarship probably wouldn't have been an option."

Julia and Brent Beabout

THE JULIA AND BRENT BEABOUT HONORS SCHOLARSHIP
IN INDUSTRIAL ENGINEERING

For **Allie McIlvaine**, receiving the **Julia and Brent Beabout Honors Scholarship in Industrial Engineering** is a validation of her efforts at Penn State.

“It’s nice to have my hard work appreciated and recognized,” the industrial engineering senior says.

“We’ve always been interested in the intersection of academia, technology, and culture,” explains **Brent Beabout** (’87 CE), who serves as senior vice president for Wal-Mart’s International eCommerce Fulfillment division. “We believe a thorough grounding in all three areas is vital to the success of any leader in the 21st century.”

In addition to recognizing Allie, the Beabout scholarship has allowed her to take full advantage of her Penn State experience.

The Washington, PA, native states that the financial help from the scholarship allowed her to explore a study abroad opportunity at the University of Sydney in Australia, where she also served as a manufacturing intern for the firm Pandrol Australia.

“I’ve always been curious about other cultures,” she says. “It was also interesting to see the difference in work cultures between the United States and Australia.”

On campus, Allie leads an active life. She’s worked as a research assistant for the Penn State Open Design Laboratory, serves as a fitness instructor for Penn State Strength and Fitness, and is in the Engineering Leadership Development Minor.

Allie says she chose to study industrial engineering because of the career flexibility the field affords.

“You can do so many things as an IE—you can get into processing, forecasting, consulting, etc. It just gives you the skills to choose from so many job options.”

In fact, Allie’s already accepted a position with General Electric’s leadership program and will start as soon as she receives her degree in May.

“We’re very pleased with the selection of Allie as this year’s scholarship recipient,” says **Julia Beabout** (’88 AE). “Her drive to expand her cultural horizons within the IE field coupled with her strong academic performance will reap dividends to Allie and the entire Penn State community in the future.”



Allie McIlvaine

ALLIE McILVAINE

The Julia and Brent Beabout Honors Scholarship in Industrial Engineering



IT'S NICE TO HAVE MY HARD WORK

appreciated and recognized."

Current Giving

GIVING TO THE COLLEGE OF ENGINEERING OVER THE PAST FISCAL YEAR
FROM JULY 1, 2012, TO JUNE 30, 2013

Philanthropy to the College of Engineering continued to be strong over the past fiscal year. For the second consecutive year, donations exceeded \$20 million.

Corporate donations led the way with nearly \$12.5 million and alumni and friends

contributed \$5.6 million to support Penn State Engineering. The overall value of the college's endowment rose over the past fiscal year from \$173 million to \$187 million.

WHO SUPPORTED THE COLLEGE

Corporations	\$12,488,735
Foundations and Organizations	\$2,320,919
Alumni and Friends	\$5,618,629
TOTAL	\$20,428,283

WHERE DONATIONS WERE DESIGNATED

Research.....	\$5,392,101
Scholarships	\$4,294,341
Faculty Support.....	\$6,044,484
Other	\$5,643,061
Fellowships.....	\$73,075
Equipment	\$7,381,007
TOTAL	\$28,828,069

For more information, contact:

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