FORWARD

IMPACT REPORT 2015-16

The Ohio State University
COLLEGE OF ENGINEERING

DEAR ALUMNI AND FRIENDS,

As Buckeyes, we are taught that you can never pay back, so you should always try to pay forward.

As I reflect on my last five years as dean of the College of Engineering and the closing of the ***But for Ohio State*** campaign, I am deeply moved by and grateful for the enthusiasm with which you continue to embrace Woody Hayes' belief in paying forward each and every year.

From generous monetary gifts to sharing invaluable insight with our students to investing precious time as a volunteer—your support makes it possible for us to be an innovative leader in engineering and architecture education, to create new discoveries across a broad range of applications and disciplines, and to make a difference at home and abroad.

Thanks to the generosity of the supporters whose stories are featured within—and countless others—the College of Engineering now offers more scholarships and fellowships than ever before, enabling more bright, young people to obtain a world-class Ohio State education. Our students excel in the classroom, workplace and in the world because of you.

I'm particularly proud of our college-wide dedication to service learning and the impact it's having both around the world and in our backyard. Whether they're building wheelchair ramps for the needy in Columbus or collaborating with a community organization in India to empower women, our students are finding ways to change the world. These activities are coordinated by our Humanitarian Engineering Center, which focuses on using engineering education and research, in partnership with local communities, to create solutions that empower sustainable development.

The stories included in these pages highlight just a few of the ways that you, our supporters, keep the College of Engineering moving ***FORWARD***. Thank you for your remarkable commitment to our students, faculty, research and community outreach. Your gifts inspire and empower us to make a difference today and every day.

Sincerely,

David B. Williams PhD, ScD

Monte Ahuja Endowed Dean's Chair
Dean of the College of Engineering
Executive Dean of the Professional Colleges

INVESTING IN STUDENT SUCCESS

When ms consultants' President and CEO discovered an opportunity to help young engineers gain the real-world experience needed to succeed in industry, he didn't hesitate to get involved.

Working on capstone projects, Tom Mosure explained, can help students learn how to engineer creative solutions. That's why he and ms consultants—the family-owned, multidiscipline engineering, architecture and planning firm he leads—established the Mosure Family / ms consultants Civil Engineering Support Fund.

The generous gift enhances Ohio State's Civil, Environmental and Geodetic Engineering (CEGE) Capstone Program, which enables students to complete a real civil engineering design project before graduation.

"ms consultants and I believe that there is nothing more important to individuals' career preparation than developing innovation, problem-solving and team-building skills as early as possible," he said. "The capstone program covers all of these aspects in an accessible way for students."

The fund provides annual support toward the cost of hiring eight lecturers who are experts in areas such as traffic engineering, structures and geotechnical engineering. These industry professionals attend weekly classes and help teach the approximately 170 students enrolled in the senior capstone course each year how to tackle real-world civil engineering problems.

> *Our partnership with Ohio State is a partnership for the future, continuing the growth and prosperity of the engineering industry and the central Ohio community.*

"This generous support has provided us with the opportunity to effectively bring industry into the classroom," said Associate Professor of Practice Michael Hagenberger, who co-leads the department's capstone program. "The practice students get in posing questions, presenting ideas and working with professionals prepares them for the next step in their career journey. It's a novel approach to the professional development of our students."

Students aren't the only beneficiaries. Companies and non-profit organizations that sponsor capstone projects gain value-added solutions to problems, while also interacting closely with students who could become future employees.

"For companies, it provides a vehicle to get their employees involved in career development and leadership skills," Mosure added. "It also provides a training ground for future employees of the companies and the engineering industry."

Though not an Ohio State alum, Mosure is a passionate Buckeye. His involvement with the university began at an early age through attending football games and other sporting events, and blossomed into his current role as an employer of graduates and active member of the CEGE department's campaign committee.

With a workforce of almost 400, ms consultants' employs 42 engineers, architects, marketing and business graduates from Ohio State. That's a trend that's likely to continue.

"Our partnership with Ohio State is a partnership for the future, continuing the growth and prosperity of the engineering industry and the central Ohio community," Mosure explained.

PHOTO: Monica Mosure, student Taylor Covault, Tom Mosure, student Amrian Johnson and Tommy Mosure at ms consultants' headquarters in Ohio.

ms consultants, inc.
engineers, architects, planners

HONORING A MENTOR BY SUPPORTING FUTURE ENGINEERS

Education is a lifelong investment, one that several students will be able to afford more easily thanks to the support of alumnus Roy Koch ’72, ’73 and his wife, Donna.

The civil engineering graduate donated a generous gift to the College of Engineering to establish the Vince T. Ricca Engineering Scholarship Fund. Named in honor of his mentor and former college professor, Koch’s scholarship will support undergraduate students studying civil engineering with a focus on water resources and environmental engineering, or those pursuing an environmental engineering degree.

“I believe that water will continue to be one of the most significant challenges to continued human development and quality of life,” explained Koch. “We need the best and brightest to address these issues and it is my hope that this scholarship will support that objective.”

As the first member of his family to pursue a higher education, Koch knows firsthand the financial struggles many college students face. He worked summers and throughout the academic year to earn just enough to cover his tuition and living expenses. With this scholarship, he hopes to provide support for the next generation of Buckeye engineers who may not otherwise be able to pursue a college degree.

“I attribute much of my personal and professional successes to the opportunities provided by Ohio State and the College of Engineering in particular,” said Koch. “The education I received at Ohio State prepared me very well for my careers in both the

civil engineering profession and academia. I hope to provide the same opportunity for students who may not otherwise be able to pursue their dreams."

Like many donors, Koch also wanted to use his gift to pay tribute to someone near and dear to his heart. He named his scholarship in honor of faculty emeritus Vince Ricca, whom he credits with laying the foundation for his career—first as a practicing engineer and later when he became an engineering professor himself.

"Dr. Ricca was one of the most influential mentors I've had during either my academic or professional careers. He has had a significant impact on both what I chose to do and how I approached it," Koch said.

Koch's endowment was part of the recent Ohio Scholarship Challenge in which the university will match distribution payments on any newly endowed scholarship of $100,000 or more. The first students to benefit from the gift will be awarded their scholarships during spring semester 2017.

PHOTO: Civil engineering students (from left) William Sumlin '17, Collin Paich '18 and Lauren Biales Wise '17 with faculty emeritus Vince Ricca, who mentored many Buckeye engineers during his 26 years at Ohio State.

DID YOU KNOW?

College-wide, **20 Ohio Scholarship Challenges** were completed, raising **$1,487,878** thanks to **289 donors**.

CROWDSOURCING A SCHOLARSHIP THE YOUNG ALUMNI WAY

It takes a village to raise a child, the saying goes. It can also take a village—or 120 dedicated Buckeyes—to create a scholarship.

When Liza Toher Reed ('06, '10, electrical engineering) first heard about the Ohio Scholarship Challenge—in which the university will match distribution payments on any newly endowed scholarship of $100,000 or more—she was inspired.

While she couldn't personally donate $100,000, Reed felt that she could reach that total with a little help from fellow Buckeye engineers. "I remember thinking that my husband and I could commit $10,000 over the next few years and if I could find a few fellow grads to join me, we could meet the challenge's initial $50,000 endowment requirement."

Choosing which worthy program to support was easy. As a freshman, Reed had changed her major from math to electrical engineering specifically to participate in the Fundamentals of Engineering for Honors (FEH) program. FEH provides an accelerated introduction to engineering and challenges students to work in teams on an advanced design-and-build project. She remained active in FEH throughout her academic career, serving as both an undergraduate and graduate teaching assistant.

"I forged lifelong bonds with other students and faculty and saw firsthand the impact the program had on the people involved," she explained. "The FEH experience stays with you as a student, and supporting fellow students by paying forward is the Buckeye way."

In order to generate that support, Reed partnered with three other passionate Buckeye engineers, Marc Meckler ('07, mechanical engineering), Mark Morscher ('89, electrical engineering) and Dan Trares ('06, computer science and engineering). Together they initiated the FEH Scholarship Challenge last April and matched every dollar donated.

"The idea of a multiplying impact for your gift seemed like something that could resonate with engineering alumni and help young alumni feel like their donation matters," said Reed.

The team tapped their personal networks and spread the word via emails, which FEH Director Rick Freuler sent to all FEH alumni, and lots of social media posts.

"We made daily social media posts, sent personal thank-yous to donors and shamelessly asked people to repost our messages," Reed said with a laugh. "But those shameless requests worked. It amazed me how many people said they heard about the challenge because someone they knew had re-posted it for us."

> *The FEH experience stays with you as a student, and supporting fellow students by paying forward is the Buckeye way.*

The challenge was an overwhelming success, raising nearly $25,000 from more than 120 supporters. As promised, the challengers matched that amount and established the FEH Scholarship Endowment, which will provide at least one scholarship each year.

"The FEH family's willingness to invest in helping sustain the program's life-changing impact will benefit Buckeye engineering students for generations to come," said Freuler.

The challengers and additional supporters will also ensure the endowment grows to $100,000 over the next few years, Reed explained, thus qualifying for the Ohio Scholarship Challenge match and ensuring exponential impact on future students.

PHOTO: Students in the Fundamentals of Engineering for Honors (FEH) program can choose from three design-build projects. More than 70 percent choose to build autonomous robots.

BY THE NUMBERS

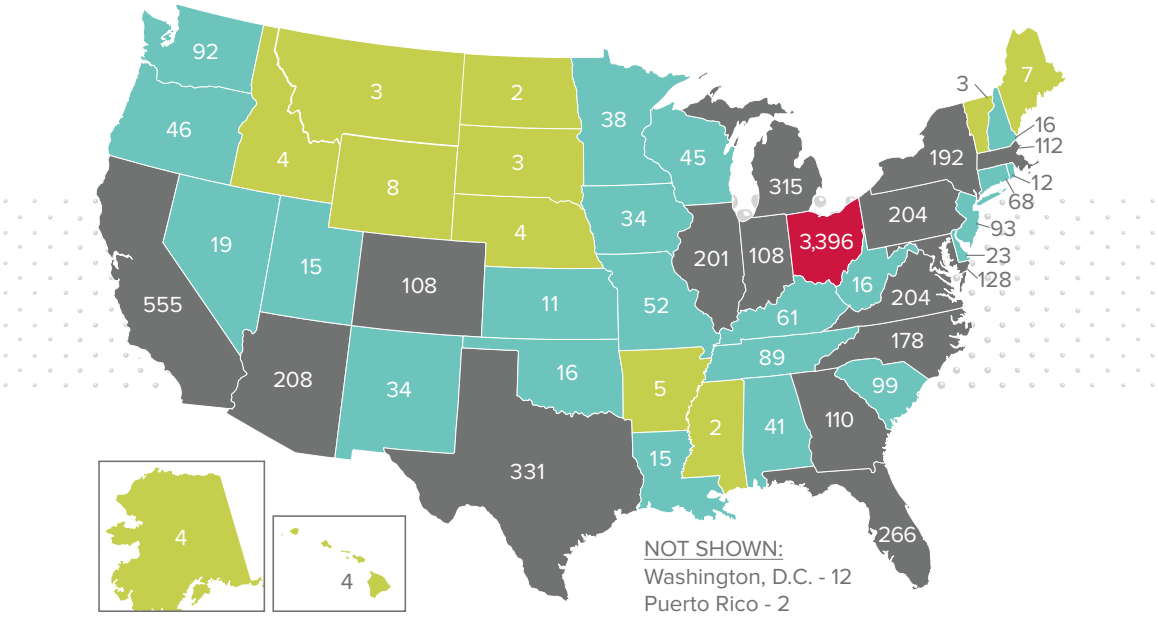
A closer look at gifts made to The Ohio State University College of Engineering in fiscal year 2016.

WHO GAVE?

	No. of Donors	Total Cash Gifts
College of Engineering alumni	3,688	$4,540,239
Other Ohio State alumni	1,003	$1,063,195
Ohio State faculty and staff	244	$203,384
Friends	2,480	$795,419
Foundations and corporations	636	$43,105,850
TOTAL	**8,051**	**$49,708,087**

WHERE ARE THE DONORS FROM?

95% of College of Engineering donors reside in the United States



WHERE WAS THE IMPACT?

	Total Cash Gifts
Research and innovation	$31,601,998
Student financial aid	$6,110,968
Facilities	$5,339,444
Program support	$3,014,035
Unrestricted	$1,784,982
Faculty and staff support	$1,723,444
Other	$192,217

2015-2016 SCHOLARSHIPS

$6,110,968
in scholarship support

1,402 students
in the College of Engineering

A RECORD 38 YEARS OF GIVING

Donors to the college for 38 consecutive years:

John ’66, ’68 and Connie Whalen
of Springtown, PA

David ’51, ’56 and Margaret Strang
of Mason, OH

BETTING ON BRIGHT FUTURES

"There's a kid out there, going to an inner city high school, who's smart and willing to work really hard. I want to give him or her a chance," said Doug Fairchild ('80, '82, '95, welding engineering), who believes in paying forward.

Yet when his wife, Jamie ('81, mechanical engineering), first brought up the idea of establishing a scholarship endowment, Doug was skeptical. "My limited understanding of the world was that someone establishes a scholarship by writing a check for a million dollars and that's not me. I can't do that."

But Doug agreed to look into it and together the two Buckeye engineers made a generous gift to endow the Douglas and Jamie Fairchild Scholarship Fund. It will enable more undergraduates to earn welding engineering degrees.

"We figured out a way to make it a reality. Doing it over time with a payment plan and taking advantage of the ExxonMobil match were the key steps," Doug said. "And after some reflection, I realized it's the right thing to do. I have to create an opportunity just like the one I received."

The fact that ExxonMobil, the company Doug has worked for since 1982, gives three dollars for every dollar donated by their employees was instrumental in helping the Fairchilds achieve their giving goal.

"ExxonMobil is very proud of their support to academic institutions," he explained. "They call themselves a technology-driven company and demonstrate it various ways. It's a great service to higher education."

For Doug, who grew up one mile north of The Ohio State University campus and could hear the marching band practice from his neighborhood, deciding to give back to his alma mater was as easy as making the decision to attend it.

"So many people in my family attended Ohio State," he explained. "I always knew that's where I should go to school, but I didn't have the means to pay for it. At the time I finished high school, neither I nor my family could afford to pay for my college."

Receiving scholarship support enabled Doug to become a Buckeye.

"Ohio State bet on me. They gave me a chance and I took that chance and ran with it. I've done very well with my career, and when I look back at my academic training, I see what a key component it was to my success," he said. "I'll always be appreciative of Ohio State for giving me the opportunity."

Now, as ExxonMobil's campus ambassador for Ohio State, the three-time alum returns to campus each year to share his professional experiences with materials science and welding engineering students.

> *Ohio State bet on me. They gave me a chance and I took that chance and ran with it.*

"I'm talking in some of the same rooms that I took classes in," he said. "It's great to be able to say, 'I sat in that chair 35 years ago. Let me tell you about what my career has been like, what I've been able to work on.'"

Doug is thrilled that he can now pay forward and give other hardworking kids the opportunity to learn in that same chair.

PHOTO: Doug Fairchild '80, '82, '95 talks to welding engineering students during a recent trip to campus.


AUTO-MATE
10
STATE U
TY
ENGINEERING

ENGINEERING A BETTER LIFE FOR THOSE IN NEED

Scholarships empower students to take their skills from the classroom to the community through the Humanitarian Engineering Center.

Engineers are known for creating solutions to society's challenges. But what about when those challenges are basic human needs, like access to clean water, sanitation and electricity? That's where humanitarian engineering comes in.

Established in 2014, the Humanitarian Engineering Center (HEC) is an interdisciplinary effort that partners with various colleges and organizations across campus and around the globe. Whether it's a service learning project in Columbus or fieldwork abroad, Buckeyes are engineering a better life for those in need.

FROM THE CLASSROOM TO THE COMMUNITY

For Mary Scherer, a senior electrical and computer engineering major, the call to service came fairly early in life. "My father always told me, ... 'if you want to save the world, become an engineer.'"

Once she got involved with the HEC, she quickly realized just how much of an impact she could make. She joined Engineers for Community Service (ECOS) and the Tech4Community project (T4C), giving her valuable hands-on experience and the opportunity to take her engineering knowledge beyond the classroom. Now president of ECOS, Scherer and her peers have initiated several community service projects, from building wheelchair ramps for those in need to offering free technical support to local retirees.

"Our program is an exchange with the community. We provide them with designs, devices and information, and they provide us with real-world learning experiences that will make us better engineers," she said.

Scherer is grateful for the positive impact she can make on the community, but she's also appreciative of what others have done to help her pursue her dreams. When she was 15, her father passed away after a four-year battle with brain cancer. Her mother returned to work, but having two children in college at the time soon became a heavy financial burden.

"Merit-based and need-based scholarships through the College of Engineering allowed both my sister and brother to graduate from Ohio State with their electrical engineering degrees without a crippling amount of debt," explained Scherer. "I have one year remaining before graduating college debt-free. Scholarships have meant an enormous amount to my family."

> *My father always told me, ... 'If you want to save the world, become an engineer.'*

Scherer's experience with HEC has helped her discover her passion within engineering. She plans to remain involved with the center after graduation and hopes to give back to the programs that have taught her so much.

"ECOS and T4C are always in need of donations of funds or materials for projects such as wheelchair ramps, bike design and many more," she said. "When I donate, I'll know exactly where my donation is going and how it's directly helping my local or international community."

A GLOBAL ENGINEERING EXPERIENCE

In May 2016, Jessica Shuman and 14 fellow Buckeye engineers took their passion for humanitarian engineering global as part of the

Mary Scherer '17 and Andy Koch '18

Two of the Engineers for Community Service (ECOS) members who help build wheelchair ramps for needy residents, including this one in south Columbus.

Engineering and Culture in India program. Partially funded by donor support, the trip is one of approximately 10 international outreach projects the HEC coordinates each year.

During spring break, the students traveled to the northern cities of Agra, Jaipur and Delhi where they were exposed to the country's rich history, culture and engineering concepts.

For Shuman, a junior mechanical engineering student, the main draw was seeing Indian engineering in action, which was on full display during a tour of the hospital and fabrication facility of the Jaipur Foot—a low-cost, simple prosthetic.

"I was really interested in the prosthetic feet because I'm thinking about a career in prosthetics," Shuman said. "They differ from American prosthetics, so it was really cool to see how they made it workable for their culture." She noted that the waterproof prosthetic supports key daily activities like squatting and bicycling. And because it looks like an actual foot and can be worn without shoes, amputees can wear the device into temples of worship without scrutiny.

Structured as a one-credit hour class, the trip also exposed students to a service learning project with Barefoot College. Located in the rural village of Tilonia, Barefoot works to empower women in impoverished rural communities through training and sustainable solutions, such as solar power and clean water.

Without the financial assistance she received from the Peter L. and Clara M. Scott Scholarship, which provides full tuition, Shuman said the awesome experience likely wouldn't have been possible.

"Having the opportunity [to go to India] because someone wants to support you—it's awesome. I'm just really grateful to be able to do all these things," she said. "It's not an experience everyone gets to have."

Through donor support, the Humanitarian Engineering Center can provide global learning opportunities to more students and accelerate its impact at home and abroad.

PHILANTHROPIC PARTNERSHIP BENEFITS STUDENTS AND COMPANIES

It was between two excellent architecture programs—Yale and Ohio State—for Ali Sandhu. She needed something to tip the scales.

Receiving an associateship position was a major factor in Sandhu's decision to further her education at Ohio State. The tuition coverage and stipend it provides will enable her to graduate with a master's in architecture debt-free, plus gain teaching experience.

"I was admitted to the Yale University School of Architecture, where I received considerable financial aid, but not the promise of a teaching position," she explained. "The associateship from Meyers + Associates was a real factor in my choosing the Knowlton School."

Two-time Ohio State architecture alumnus Christopher Meyers '94, '96, principal architect and founder of Meyers + Associates Architecture, knows firsthand how difficult it is to pay for an architecture master's degree out-of-pocket. "When I was a student, coming up with the money to study architecture was tough. Plus, the architecture program is so demanding that it's very difficult to work when you're in school."

That understanding, coupled with his desire to stay connected to the Austin E. Knowlton School of Architecture, is why Meyers is both a supporter and a champion of the school's Office Associateship Program.

An innovative partnership between the Knowlton School and a variety of companies in the design and construction industries, the program helps attract and retain top graduate students in architecture and landscape architecture by providing funding for their education expenses. Students are matched to one of 35 sponsoring companies, but instead of working for their sponsor, they dedicate 10 or 20 hours a week to a research or teaching assistant position at the Knowlton School.

The opportunity to have a direct impact on an individual student is what Meyers finds most rewarding.

"The unique thing about this is it allows you to specifically work closely with that individual and become a participant in their education and career development," he explained. "It really gives you a personal connection to giving at Ohio State."

Students meet their sponsors at a reception held at the beginning of the academic year and again at a dinner in the spring where each student presents what they have worked on throughout the year. Many sponsors become even more involved.

"We take it upon ourselves to really interact with the students. For instance, if they're having a final review on a project, we'll come watch. We invite them to different events at the office or we'll meet up and go tour buildings we're working on," Meyers explained. "It's not just a financial transaction, it's an opportunity for mentoring."

As a result, the experience often becomes an extended job interview. Four previous office associates have ended up working at Meyers' firm after graduation.

The Office Associateship Program also benefits the Knowlton School as a whole, explained Professor and Architecture Section Head Robert Livesey.

"Because of this support, we can afford to have more graduate assistants and teaching assistants, and that helps us with our student-to-faculty ratio in our large lecture courses," he said. "The program is hugely important to us in terms of maintaining the idea of education by discourse."

PHOTO: Ali Sandhu '16, '18 gives Bryant Phares II '19 advice on a class project.

In FY 2016, **35 companies** contributed **$361,119** towards the Office Associateship Program.

MAKING A LASTING IMPACT

FY2016 PLANNED GIVING

$1,997,278 received from 14 estate gifts

$3,369,650 committed from 15 new planned giving donors

For Jim '71 and Anita Balthaser, there was never a question of if they planned to give back to the College of Engineering, only when and how.

A graduate with bachelor's and master's degrees in industrial engineering, Jim credits much of his personal success to the quality engineering and liberal arts education he received at The Ohio State University.

"Ohio State is where I learned critical thinking and the university contributed immensely to any success I have had in life," he said.

Jim and Anita demonstrated their extraordinary commitment to the university in 2002 when they established the James and Anita Balthaser Memorial Professorship in Industrial and Systems Engineering with a gift from their estate. It will create a position in the Department of Integrated Systems Engineering to honor a distinguished faculty member and provide additional resources to fund his or her research.

"I felt strongly about what Ohio State, the College of Engineering and, especially, the ISE department had done for me and what I wanted to do in return," said Jim. "I chose the professorship to express my commitment to Ohio State."

In the years that followed, Jim and Anita's desire to give back to the college that gave him so much only increased. As a student, Jim had received an assistantship appointment and managed to graduate debt-free. He was concerned about the burden college loans can create for students and wanted to help future Buckeye engineers experience the same high-quality industrial engineering education at Ohio State that he had.

Jim '71 and Anita Balthaser

"I was a 'townie' and 45 years ago tuition was a lot less in current dollars than it is today. I graduated debt free. That is something that is very difficult to do today," Jim explained. "So when an opportunity arose to fund a charitable gift annuity, it seemed natural to establish a scholarship endowment."

Their generous gift will provide significant, multiple-year scholarships to industrial and systems engineering students with financial need.

Through planned giving, the Balthasers are able to make a sustained investment in Ohio State and future students alike.

"Something that can perpetuate itself, hopefully forever, can obviously make a lasting impact on the quality of industrial engineering education that Ohio State can provide," Jim said. "It also impacts the ability of smart, future engineers and leaders to get the education they are going to need to make the most of their talents."

YOUNG ALUMNI PAY FORWARD

445 YOUNG ALUMNI DONORS DONATED $76,501 IN FY 2016.

By investing in our students, faculty and life-changing research, young alumni donors are investing in the future and helping ensure the college continues moving forward in the years to come. Several Buckeyes shared their reasons for paying forward.

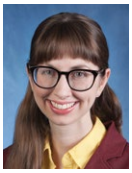
CLINTON BUIE '06
Electrical and computer engineering

"When I was at Ohio State, I received an abundance of support from the College of Engineering. I honestly wouldn't be where I am today had it not of been for the Minority Engineering Program, and the faculty and staff of the university. I give to the Minority Engineering Program to help other rising students the same way I've been helped."

JORDAN BOON '15
Chemical engineering

"It's important to give back because, as someone who has benefited immensely from scholarship support and seen firsthand how great the Ohio State experience is, I want to ensure everyone has the same opportunity I did. I know that my donation will go towards furthering the great programming in the College of Engineering and help continue to build upon a great institution."

KATE SCHERER DOMINGUEZ '12
Electrical and computer engineering



"The scholarships I received were both a financial help and emotional encouragement. Someone had given this scholarship because they wanted me to succeed. I donate to the Women in Engineering program so that other women studying engineering hear the message, 'You can do this!'"

CHRIS WALLACE '15
Computer science and engineering

"Ohio State was an incredible, eye-opening experience, which led me to an incredible job at Amazon in Seattle. Giving back to the scholarship fund in particular—which helped me in critical moments—was extremely important to me."

JEAN WHEASLER '09
Chemical engineering

"My experiences at Ohio State shaped my career and who I am as an adult. I think it is important for young engineers to have access to the same opportunities that I had. I wanted to contribute to the Fundamentals of Engineering for Honors (FEH) Scholarship Fund because the FEH program is an innovative and impactful curriculum that really benefits the students who go through it."

THANK YOU! This report includes just a few of the many transformational stories and experiences made possible by you, our loyal supporters. We appreciate all you do for the college. Read more stories and learn how you can continue to make an impact at **go.osu.edu/coeimpactreport**.

THE OHIO STATE UNIVERSITY

COLLEGE OF ENGINEERING

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