FORWARD

IMPACT REPORT 2017-18

Dear Alumni and Friends,

Thank you for your commitment to and support of the College of Engineering! No doubt you've heard it before—when Buckeyes work together, great things are accomplished. This is especially evident when looking at the impact of your gifts to the college.

Simply put, we could not do what we do without you. Your gifts allow us to attract, educate and graduate the best and brightest students. This fall we welcomed, yet again, the smartest freshman class in our history—all 1,688 of them. You not only help these promising young people achieve their dreams and become engineers, aviators, architects and planners, but also enable them to pursue experiential learning opportunities.

Philanthropy fuels the efforts of our student project teams and organizations, with stupendous results. This year the Ohio State EcoCAR team won its fifth consecutive national automotive championship, the Buckeye Space Launch Initiative soared to first place in the Spaceport America Cup for the second straight year, and our students designed and built the world's fastest autonomous unmanned aerial vehicle. Hands-on education is the hallmark of our teaching. These examples offer a glimpse of how we combine learning, problem-solving and teamwork to propel students to success in competitions versus peers far and wide.

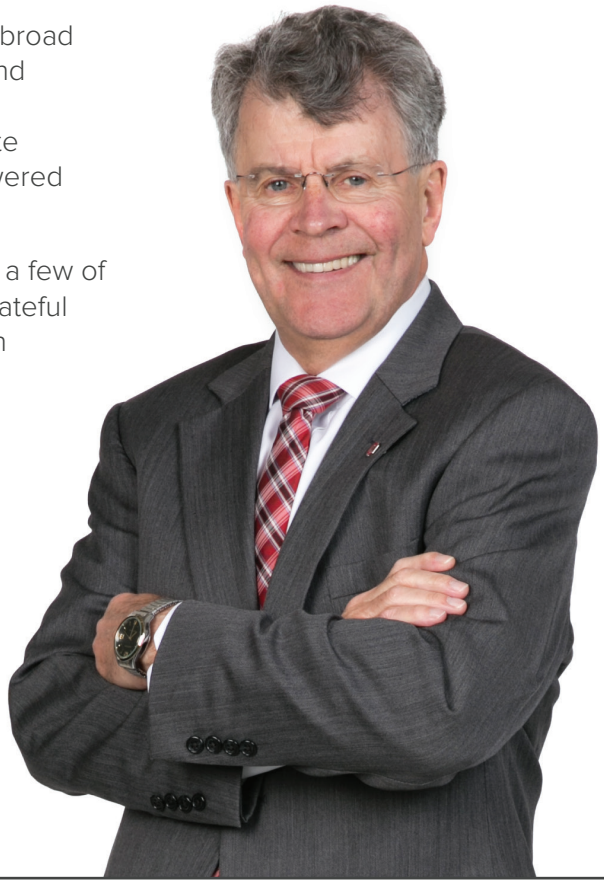
Your support also amplifies the college's world-class research. Our faculty are not only researching solutions to the world's biggest problems, they're taking their discoveries to market. Since 2013, 22 companies with Buckeye engineering roots have been launched, bringing new jobs and innovations to fruition.

Many of the college's outreach initiatives at home and abroad wouldn't be possible without the generosity of alumni and friends who share our belief that Buckeyes can improve the world. For instance, your gifts launched an Ohio State Engineers Without Borders' project to install a solar-powered irrigation system for the village of Njau, Gambia.

The stories inside this issue of **FORWARD** highlight just a few of the ways philanthropy makes a difference. We are so grateful for each and every one of you who believe and invest in the College of Engineering. Your generosity inspires us, empowers our work and truly makes an impact.

FORWARD together,

David B. Williams PhD, ScD
Monte Ahuja Endowed Dean's Chair
Dean of the College of Engineering
Executive Dean of the Professional Colleges



MISSION POSSIBLE

Welding engineering major Josh Burton is the inaugural recipient of the Gregory N. Geaman Family Scholarship.

A new scholarship is helping student-veterans studying engineering at Ohio State succeed in their next mission—earning their degree.

"They had a mission in the military, now their mission is to be a student, succeed and graduate," said Michael Carrell, assistant vice provost and director of the Office of Military & Veterans Services.

As a veteran of the Vietnam War, welding engineering alumnus Greg Geaman '70 understands the sacrifices America's soldiers make for our country. In recognition of those who have given so much, he donated $250,000 to fund scholarships for student-veterans studying engineering at Ohio State, as well as a $1.1 million estate gift that will endow the scholarships, enabling them to support student-veterans in perpetuity.

"I want to recognize people who have made a contribution to their country and help them start their lives without a lot of debt so they can focus on their careers and families," Geaman said.

The Gregory N. Geaman Family Scholarship Fund supports undergraduate students who served on active duty or were mobilized or deployed and are pursuing an engineering degree. It also provides a $2,000 annual scholarship to a student in the Veteran Community Advocate Program, which places student-veterans in university offices to serve as liaisons.

The fund aims to help students whose GI benefits have been exhausted, something that approximately one-third of the veterans enrolled at Ohio State experience. While the full GI bill covers four years of tuition, 43 percent of engineering students take five years to complete their degree programs, making scholarships even more critical.

"This is going to make a huge impact," Carrell said. "It will really change people's lives and help them get to the finish line and get that degree."

The scholarship is a big financial boost for inaugural recipient Josh Burton, one of 64 veterans currently enrolled in the college. "It's definitely hard trying to afford to go to school while you're supporting yourself. This substantial scholarship is a huge help."

Josh Burton (center)

Burton completed one semester at Ohio State before joining the Marine Corps where he served for eight years, including two years on active duty, and was deployed to Afghanistan.

"I wanted to do a combat deployment, because I wanted to serve my country the fullest possible way," he said.

While in the Marines, Burton discovered he had a passion for science and metallurgy. After being honorably discharged, he returned to Ohio State to study welding engineering. Now thanks to the Geaman Family Scholarship, the rising junior can focus on finishing his studies.

I am extremely appreciative of this scholarship and opportunity," Burton explained. "I'm going to learn as much as I can in school so that when I graduate, I will be in a better financial situation. This support will help me be a more productive member of society and have a better capability of giving back to my community as well.

Helping those who have served is a win-win for recipients and society, Geaman said, because of the unique qualifications veterans can contribute. He hopes the scholarships also might inspire recipients to pay forward and extend the impact.

"It's a way to help a few people, and hopefully some of them will become very successful and give back to somebody else someday," he said.

Lady Buckeyes Josie Cotugno, Aly Bond and Yasmine Abu Arab finished second among collegiate teams in the 2,656-mile Air Race Classic.

STUDENT DREAMS SOAR

with support from alumni & friends

Aspiring pilot Yasmine Abu Arab knew she wanted to study aviation at a big school with big opportunities and in June 2018, she got the chance of a lifetime: flying in a cross-country competition just for women aviators. Thanks to the gifts of many Buckeyes, her flight was cleared for takeoff.

Abu Arab and her teammates from Ohio State's Women in Aviation chapter competed in the Air Race Classic, the nation's oldest and only airplane race for women pilots. The unique competition—which tests piloting skills and aviation decision-making—spanned four days and 2,656 miles, beginning in Sweetwater, Texas, and ending in Fryeburg, Maine. More of a rally than an actual race, teams battle against their own predictions of time, weather, gas mileage and performance. Out of 55 teams, the Lady Buckeyes finished seventh overall and second among collegiate teams—soaring above their goal of placing in the top 10.

"When you see the pictures of our three women who participated, there's no mistaking the joy, the pride and the competency on their faces," said Center for Aviation Studies Interim Director John Horack. "They are the incarnation of the quality experience that students are getting here at Ohio State."

It's an experience that might never have left the ground had it not been for the support of alumni and donors. Although the team did fundraising of their own, they received $5,000 from the College of Engineering Priority Fund to help cover the costs of gas, oil, plane maintenance, hotels,

food and equipment. More than 1,400 alumni supported the fund, demonstrating that small gifts can add up to make a big difference.

"A lot of the resources from our priority fund come from people who give $25, $50, $75 or $100—whatever they can. The power of even a small gift is that they're connected and leveraged with other gifts to directly create this kind of positive outcome for our students," said Horack.

And while the Lady Buckeyes did earn medals for their achievement, perhaps the biggest reward is being able to inspire others.

"One of the most important parts to me about the race is representing women in the field and hopefully encouraging young girls to join as well," said Abu Arab, who graduated in May 2018. "I really love this industry and I really love flying, and I know a lot of people are discouraged at the start because of the demographics of the field. I would love to see it grow during my time in the industry and I think this air race is a really great way of doing that."

Horack agrees, noting that seeing female pilots compete on a national level can serve as an aspirational tool for younger college students and high schoolers who are considering a similar career path.

"Aviation is for everybody, whether you're a man or a woman or what your background is or where you come from," he said. "Ohio State is a place where you can dive in, engage, be productive and contribute."

The Lady Buckeyes prepare to depart for the Air Race Classic.

Professor Walter Hood gathers with Knowlton School students in Columbus' Camp Chase Confederate Cemetery.

Professorship brings **RENOWNED EXPERTS** to campus

Ohio State students are learning about some of the most prestigious work in the field of landscape architecture thanks to a donor's vision of bringing internationally acclaimed practitioners to teach at the Knowlton School of Architecture.

The Glimcher Distinguished Visiting Professorship is held annually by a leading landscape architect who teaches, lectures

Part of the *Confronting Landscapes of Conflict* exhibition at the Knowlton School.

and presents an exhibition at the school. Previous visiting professors include Michel Desvigne, Adriaan Geuze, Jennifer Guthrie, Shannon Nichol, João Nunes, Michael Van Valkenburgh and Peter Walker.

"These are the names that we're looking at in books and the projects that we're visiting on study abroad trips," said Associate Professor Kristi Cheramie, undergraduate chair of landscape architecture. "For students to have the opportunity to meet these practitioners and speak with them exposes them to the world of global practice. It also helps to situate what they're learning within a much bigger context."

Focused on the intersection of conflict, memory and the landscape, the fall 2017 Glimcher Seminar began a week after vandals toppled a Confederate soldier statue in Columbus' Camp Chase Confederate cemetery. Surrounded by soldier graves, the group of landscape architecture and city and regional planning students discussed the nationwide debate on the removal of Confederate symbols from public spaces.

The seminar was led by Glimcher Distinguished Visiting Professor Walter Hood, who has confronted issues of social justice and identity-related conflict. A University of California, Berkeley professor and founder of Hood Design Studio, his projects include a public art piece commemorating Nashville's role in the civil rights movement and the landscape design concept for the International African American Museum.

Guided by Hood through a series of discussions held throughout the semester, the students worked in teams to develop their research into a gallery exhibition. The monthlong exhibit explored the symbolic messages held by Confederate memorials, statues and cemeteries in communities across the country.

Confronting themes of racism and identity made the course challenging, shared Alexandra Lemke '18, but also one of her favorites because of how much she learned.

"Having someone who is the expert really pushed us," she said. "Walter has three degrees—landscape, architecture and art. He works internationally and has this great depth of experience that was great to get exposed to."

Hood also presented the Glimcher Lecture, part of a treasured tradition of sharing discourse across all three Knowlton School disciplines—architecture, landscape architecture and city and regional planning—as well as with the public.

Launched more than a decade ago, the professorship has fulfilled the goal of donors Herb and DeeDee ’88 (landscape architecture) Glimcher to bring more outside enrichment to the Knowlton School to benefit generations of students.

Their support also helps set apart Ohio State’s landscape architecture program—one of the oldest and most prestigious in the nation—by adding unique opportunities not commonly found at land-grant institutions.

“As a state program, we are constantly trying to find ways to ensure that the education is as affordable and accessible as possible,” said Cheramie. “The Glimcher Distinguished Visiting Professorship helps us go not just one step beyond what we can provide to the student, but many, many steps beyond.”

The Glimcher Seminar meets in Camp Chase Confederate Cemetery.

Building Blocks to SUCCESS

A generous gift is helping Buckeye civil engineering students construct strong foundations—for structures they may someday create as well as for their future careers.

After a 15-year hiatus due to staffing constraints and the poor condition of lab space, hands-on geotechnical engineering curriculum has returned to Ohio State.

"Before you can build a building you need to have stable ground," said Professor of Practice Daniel Pradel. "Students need to know about the capacity of the soils to carry weight, which soils are going to settle and which provide good, stable conditions."

Thanks to a $200,000 gift from CTL Engineering and its President and CEO C.K. Satyapriya, the Department of Civil, Environmental and Geodetic Engineering (CEGE) reinstated the Geotechnical Engineering Laboratory in 2017. Complementing a lecture course on the same topic, the lab teaches students how to conduct tests to identify different types of soils and their properties, and determine if they're suitable as construction materials.

The donation is part of the Columbus-based company's commitment to support STEM outreach and education.

"We are very interested in having people go into the STEM fields, particularly civil and environmental engineering, because that's a major part of our business," Satyapriya said. "The lack of students coming into this field is of concern. We think this is a way for us to bring more people into the field and have them trained so they will be available for industry to hire."

As someone who took graduate courses in geotechnical engineering at Ohio State in the 1970s and now serves on the CEGE External Advisory Board, Satyapriya also had a personal interest in seeing the lab space restored.

The gift supported the purchase of testing equipment, computers and instruments necessary for students to run tests in the completely renovated CTL Engineering Lab in Hitchcock Hall. Now they can conduct experiments and see firsthand, for example, how clay soils compress significantly under even a moderate load.

"When you do the tests, it's very different from learning it from books," explained Pradel, who teaches the lab and lecture courses, "You're able to see it and measure it."

Connecting theory and practice, those hands-on experiences improve student learning. Scores on midterm exams jumped 10 percent thanks to the lab, Pradel said.

PHOTOS: Students conduct soil measurement tests in the CTL Engineering Lab.

The lessons taught also give students a better understanding of real-world safety and disaster prevention. During a quicksand experiment they make water flow through soil and can see the exact moment it becomes unstable.

"The next time students are designing, for example, an excavation for a parking lot, they'll know what can happen if seepage comes to the bottom of an excavation," Pradel explained. "This ability to visualize things is really important."

CEGE Associate Chair Michael Hagenberger thinks the gift is a great example of how corporate donors can partner with the college to support students and enrich their learning experiences.

"Many companies underestimate the extent of the impact their philanthropy can have on students, who are potential employees and the next generation of engineers."

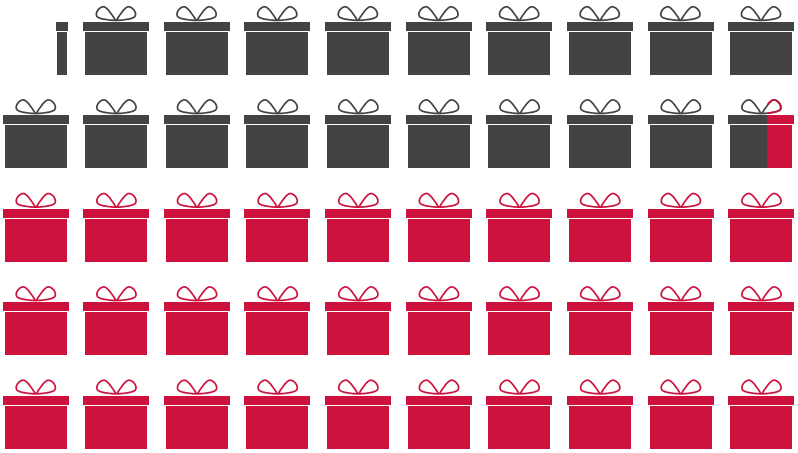
"When you do the tests, it's very different from learning it from books."

BY THE NUMBERS

A closer look at gifts made to the College of Engineering, including the Knowlton School of Architecture, in academic year 2017-2018.

$49.2 million
total private gifts and commitments

$31.4 million
private research grants



College of Engineering

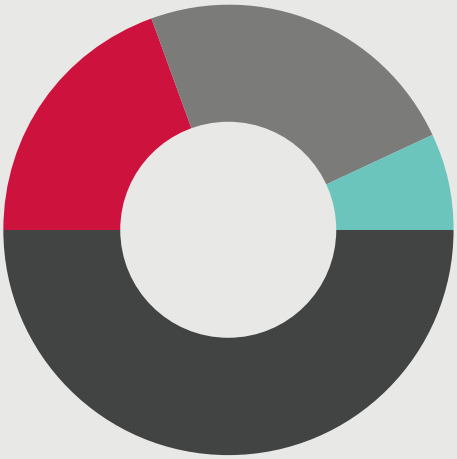
Sources of Funding

50.2%
university general funds allocation

23.6%
government grants and research contracts

19.3%
gifts, private grants and endowment income

6.9%
other



602 total scholarship funds of which 36 were newly created

1,405 students received scholarships from the college

1 in 5 engineering undergraduates received a donor-supported scholarship from Ohio State

3,436 alumni made a gift to the college

$100 median household gift

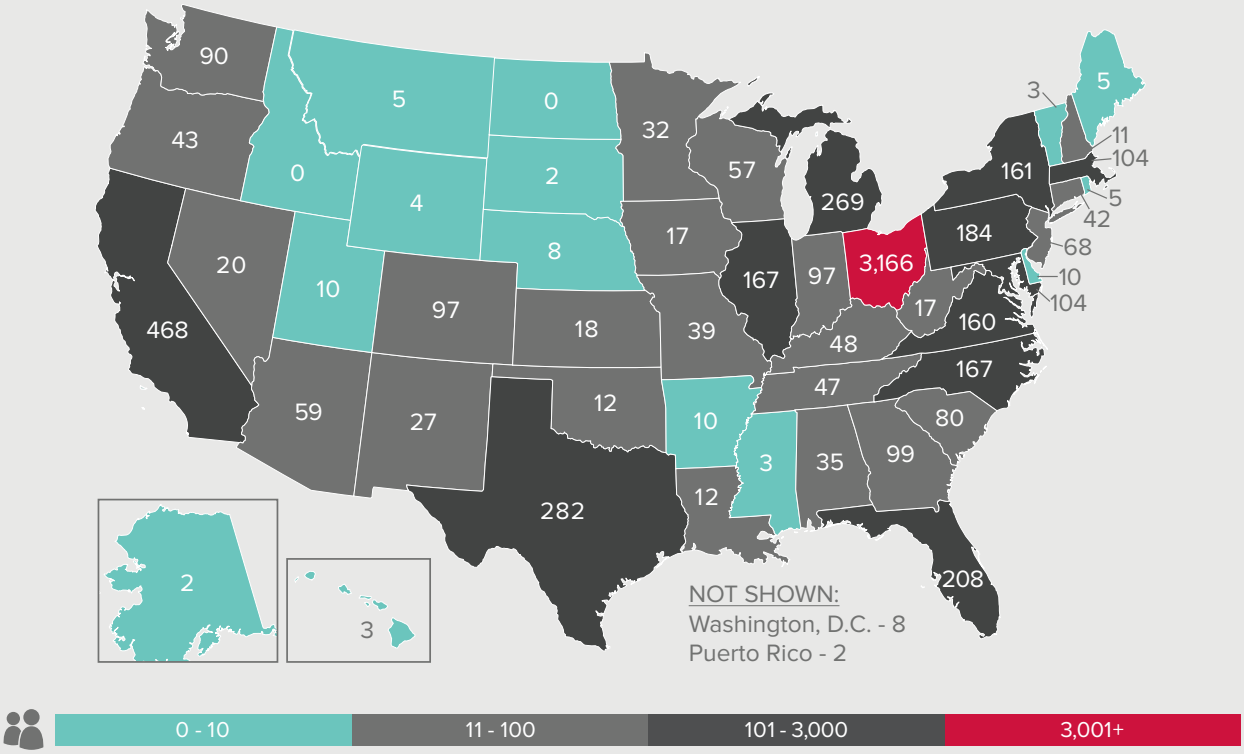
40% of college faculty and staff gave back to Ohio State

Bequest donors

$6.8 million
new planned gift commitments from
14 families

$1.2 million
planned gifts received from
17 estates

Coast-to-coast donors



STEADFAST SUPPORTERS

Recurring monthly gifts add up to make a big difference for students and faculty. Last year 132 College of Engineering funds—representing every department and section—had at least one recurring supporter. These gifts, with a median monthly contribution of $10, totaled more than $113,000 in 2017. Recently we asked two alumni what inspires their more than two decades of continuous support.

Jennifer Bailey '93

- Civil engineering
- Monthly donor since January 1994

What inspired you to give back to the College of Engineering?

My inspiration stemmed from working as a student caller for Ohio State's Development Office. I learned about the different colleges and how alumni donations support students. The work was especially meaningful during the College of Engineering campaigns since that was my field of study. I raised around $150,000 for Ohio State by the time I graduated in June 1993.

Which fund/area do you donate to and why?

I donate to the Department of Civil, Environmental and Geodetic Engineering. I wanted my donation to benefit other civil engineering students since past alumni had supported me, even though I didn't realize it until I started calling alumni for donations. Also, my BSCE degree was key to becoming a licensed professional engineer and my career in the water/wastewater industry.

What motivated you to start giving every month?

While working for the Development Office, we did not contact alumni with monthly gifts. I knew I wanted to donate, and giving monthly allowed callers to reach out to other alumni. Essentially, I viewed it as one less call to make. Also, monthly donating is easy for me while benefiting Ohio State.

Jay Varhola '91

- Metallurgical engineering
- Monthly donor since February 1993

What inspired you to give back to the College of Engineering?

It seemed logical because I was thankful for opportunities my engineering degree created for me. I've had interesting challenges, involvement with great people and teams, and have been able to continue to learn new things as an engineer.

Which fund/area do you donate to and why?

I give to the Materials Science and Engineering Priority Fund. My degree is in metallurgical engineering, so I wanted to support my department.

What motivated you to start giving every month?

Finances were typically handled on a month-to-month basis. All bills were monthly, so it seemed easier for me to see what I did or didn't have on that basis. I'm sure I was also influenced in some way by my wife who was working in Annual Giving at the time. It made me aware of how dependent the university was on donations. But largely, I was thankful for what the university provided to me and I felt this was a good way to show it.

A Perfect MATCH

What happens when Buckeye engineering alumni are presented with an opportunity to give back and quadruple their impact? Their generosity surpasses all expectations.

During a 21-day campaign in November 2017, 275 young alumni donated $26,540 to support 65 different initiatives across the College of Engineering, including scholarships, department priority funds and student organizations.

Part of a special matching gift opportunity for recent College of Engineering graduates, those funds were matched three-to-one by alumnus Jim Dietz '69, '70 and his wife Pat, resulting in $106,158 in total support. Response from young alumni was strong, with more than half of participants making their first gift to the college and 39 percent making their first gift to Ohio State.

"A quarter of all living engineering alumni have graduated since 2009. Their unprecedented number gives them the opportunity to use philanthropy to enhance and strengthen the college in ways that previous generations could only imagine," said Matt LaBarbera, director of donor relations. "Their support is crucial to the future of the college."

Knowing the impact receiving a scholarship had on their lives, Jim and Pat have prioritized giving back to Ohio State. The sense of pride gained from contributing to future students and the university is a feeling like no other, Jim explained, and he wanted other alumni to experience it.

Their one regret is that they didn't start giving to Ohio State sooner.

"We had four children very close in age, so we never felt like we had the financial wherewithal. But you know what? We did," Jim recalled. "I wish we had done it, because making a contribution to Ohio State, either to scholarships or other means, is just so satisfying."

One of the groups benefitting from Jim and Pat's Triple Match campaign is the Formula Buckeyes. The student-led motorsport project team received $13,100.

Project manager Jakob Madgar, a mechanical engineering major, said those dollars will help the team succeed in their goal of building the fastest single-seat racecar in North America.

"It had a very tremendous effect, not only on this past year, but into the future as well," Madgar said. "This donation helped improve the team and is giving us more opportunities to grow."

Donor support enables the Formula Buckeyes to gain hands-on experience building a new vehicle annually as required by competition rules. It also helps them become better engineers.

"Donors give the team the opportunity to build the car and compete at a high level. What's more, they're supporting the creation of some of the best engineers to come out of the university," Madgar said. "Our engineers are able to take the skills they have acquired on the team and apply them directly out of graduation."

Thanks to matchmakers Jim and Pat, and the donors they inspired, even more students and initiatives will benefit from the generosity of Buckeyes.

Jim and Pat Dietz at an alumni gathering.

Buckeye gifts help

STUDENTS EXPLORE WEST COAST TECH

A trip to California's Bay Area gave senior Stephen Wu the compass he needed to follow his dream of working in the West Coast's vibrant tech industry. Had it not been for the generosity of other Buckeyes, his dream might never have taken flight.

Wu was one of eight students chosen to participate in the college's second Buckeye Trek in the fall of 2017. Open to computer science and engineering undergraduates, students were competitively selected to spend two days soaking up Silicon Valley's thriving tech culture. Coordinated by Engineering Career Services, students visited a total of nine companies, giving them an inside look at everything from small startups to larger established companies like Facebook.

The program offers a unique learning experience for Ohio State students, said Olivia Cotton, assistant director of young alumni and student engagement, who accompanied the group on the trip. Often the connections

made turn into an internship or mentor-mentee relationship.

"It also fosters career exploration," added Cotton. "A few students came into the experience with interest in one specific company or area of engineering, but left falling in love with a completely different one. Most importantly, it gives them an idea of what the tech culture is like in the Bay Area. Could they see themselves there?"

For Wu, that answer was a resounding "yes." The trip opened his eyes to opportunities he didn't know existed.

"The trip helped me realize the diversity of opportunities in the tech field. You'll drive down a street in Silicon Valley and see dozens of billboards advertising tech companies that focus on cloud computing or data warehousing or stuff that the average person might never think about," he said. "And you'll see that entrepreneurs, engineers and designers are tackling every problem you could think of—addressing big problems like education disparity or maximizing work productivity or even ideas like on-demand ice cream delivery."

Organizers say an experience like this would be impossible without alumni and donor support. This installment of Buckeye Trek featured several companies with Scarlet and Gray connections—with alumni hosts at Facebook, Chegg, Clockwise and Riviera Partners. Contributions to the College of Engineering's Priority Fund covered expenses, allowing students to participate regardless of finances and make industry connections that will benefit their future careers.

"I think the trip helped me be more ambitious and push harder for a West Coast tech internship," said Wu. "The company

representatives gave great advice about preparing for tech careers. They prioritized making the trip valuable and informative rather than just discussing the company and trying to recruit us."

Plans to expand the trip's impact are underway. Goals include increasing the diversity of companies represented and the pool of student recruits. Organizers also hope to increase alumni involvement by adding more alumni-affiliated companies to the itinerary and hosting a networking event during the trip.

Wu is now well on his way to landing the tech career of his dreams. Following an internship with Amazon in Seattle, he'll spend fall semester on a co-op at Facebook. After he graduates in 2019, Wu plans to head west where many fellow Buckeye engineers have also flocked.

"It would be fantastic to see more Buckeyes breaking out into West Coast tech careers and I think programs like the Buckeye Trek help accomplish that," he said.

For more information about Buckeye Trek, contact Olivia Cotton, assistant director of young alumni and student engagement, at 614-292-4083 or cotton.1096@osu.edu.

FORGING A STRONG COMMUNITY *for women engineers*

Carrie (left) and Skip (right) Gordon enjoy connecting with their scholarship recipients at the college's annual Scholarship Luncheon.

As one of only 12 women students in the entire College of Engineering when she began her metallurgy studies at Ohio State in 1969, there simply wasn't a community of female peers for Carrie Gordon '74, '79 to turn to for support.

"When I think back to those times, there was definitely a different dynamic when there was more than one woman in a class versus me being the only one," she said. "If you increase the number of women—and I'm so amazed at the number there now—it's better for everybody."

Inspired by how the female engineering community has since flourished across the college, Carrie and her husband Skip vowed to do whatever they could to support it and enable women to pursue their academic dreams.

The Gordons established the Carrie Maykuth Gordon Scholarship in 2006 to support diversity and women studying materials science and engineering. By creating an endowed fund, Carrie and Skip ensured their gift keeps on giving as the principal is invested and only a percentage of the investment income is spent annually. Establishing it was much easier than expected, they said, thanks to matching funds

from Carrie's employer and the ability to spread payments over several years.

"What we love about the Ohio State giving process is that you don't have to be a rock star or a billionaire to make a difference," Carrie explained. She and Skip also made an estate gift to support the endowment, maximizing their investment in future generations of students.

Still, the Gordons wanted to do more to help students now while their endowment continues to grow. In 2014, they created a current use scholarship fund—where all dollars are spent directly on student aid within an academic year.

Carrie and Skip enjoy the opportunity to witness the impact of their giving.

"Knowing your money goes to a specific student is important," Skip said. "This way we actually get to meet the students and understand what great students they are and what they're doing."

Nicolette Voltaggio '17 is one of 33 recipients of the Gordon scholarship funds since 2006. The scholarship enabled her to meet her goal of graduating in four years, even while financing her education herself.

"That extra support meant I was able to dedicate more time to my volunteer work and studies," Nicolette said. "Having that financial burden lifted off was just such a gift."

Nicolette was even more touched to receive the scholarship from someone she considers a role model. After hearing Carrie speak at a department brunch in 2015, Nicolette was so inspired by Carrie's passion for supporting female engineers that she began volunteering with the Society for Women Engineers and Women in Engineering. She hopes to continue to follow Carrie's footsteps in the future.

"I hope that as I go on in my career I can give back to the department and people that really shaped who I am as a person and as an engineer," Nicolette said.

Carrie and Skip treasure their connection to recipients like Nicolette, who they call a "window into the future." Their generosity is no less illuminating, providing windows of opportunity for women engineering students of today and tomorrow.

3 Ways to Turn Your Passion Into Impact

like the Gordons did

1

CURRENT USE GIFTS

Immediate impact. All dollars used to support your passion.

2

ENDOWMENT GIFTS

Impact in perpetuity. Dollars are invested and a percentage of the returns supports your passion each year.

3

ESTATE GIFTS

A gift in your estate plan can often provide a larger impact than what is possible during your lifetime.

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Office of Donor Relations and Stewardship
engineering@osu.edu | 614-292-1044 | go.osu.edu/coeimpactreport