

LYLES SCHOOL OF CIVIL ENGINEERING
TRANSITIONS

PURDUE UNIVERSITY JANUARY 2019



COUPLE'S ENDOWMENT
BUILDS OPPORTUNITIES
FOR **FEMALE
FACULTY**

WABASH NATIONAL
HELPS 
PRESERVE STEEL
INFRASTRUCTURE

**ALUMNUS
RODOLFO GEDEON:
CIVIC LEADER
IN COLOMBIA**

Frank Bossu and Nancy Uridil



MESSAGE FROM SCHOOL HEAD “G.S.” GOVINDARAJU



In civil engineering, numbers are at the heart of our calculations, measurements and formulas.

Equally, historical numbers are integral to detailing time, scope and magnitude of events — including Purdue's 150th year, a truly significant milestone that we are celebrating now.

By the time the 2019 Homecoming weekend rolls around, Purdue will be officially 150 years old. However, we have no intention of waiting until the day-of to celebrate our sesquicentennial.

For the entire year leading up to next fall, everyone here at Purdue is celebrating our "Giant Leaps." The commemoration is to recognize our many past achievements and to look forward and ensure we remain at the forefront of research and education for another 150 years.

Of those soon-to-be 150 years, Purdue's Lyles School of Civil Engineering has been around for 131 of them — and we have made many giant leaps of our own — both culturally and academically. In addition to Purdue's first black and female engineering graduates coming from our school, our alumni, staff and faculty have worked on landmark projects around the globe, taking giant leaps on projects such as the Panama Canal, the Leaning Tower of Pisa, the Hoover Dam and the Golden Gate Bridge.

These giant leaps could not have been possible without the incredible work, innovation and foresight of our amazing alumni. It is through your dedication, mentorship and research that the Lyles School of Civil Engineering remains an international pillar for world-changing academic pursuits.

In our third edition of the revamped Transitions magazine, you have another chance to see what some of our aspirational alumni have been doing. We highlight in this issue more than a dozen alumni who have led influential careers. One story highlights Rodolfo Gedeon, an alumnus who started a multi-generational family tradition of Boilermakers. Another article profiles alumnus Shahin Ariaey-Nejad, telling how opportunities gained as a student translated to a tremendous achievement in engineering practice and research. You will also learn much more about our cover couple, Nancy Uridil and Frank Bossu, and their continued dedication to Purdue and each other.

I invite everyone to stop by my office when visiting campus. I will be more than happy to share with you all the exciting research and incredible work we are doing — and the many accomplishments of our alumni.

All the best,

A handwritten signature in black ink, appearing to read "G. Govindaraju". The signature is fluid and cursive, written in a professional style.

RAO S. GOVINDARAJU

*Bowen Engineering Head of Civil Engineering
and Christopher B. and Susan S. Burke Professor of Civil Engineering*

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COVER: Frank Bossu (PhD Chemistry '76) and Nancy Uridil (BSCE '74) recently established a named professorship in the Lyles School of Civil Engineering.

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MEET THE DEVELOPMENT TEAM FOR PURDUE'S LYLES SCHOOL OF CIVIL ENGINEERING



Don Fry
Chief Development Officer
765-494-2236
drfry@prf.org



Scott Hinkel
Director of Development
765-496-0158
lshinkel@prf.org



Courtney Schmidt
Director of Development Operations
and Donor Stewardship
765-496-0116
caschmidt@prf.org



Heidi Faith
Administrative Assistant,
CE Development Office
765-494-1437
hmfaith@prf.org

LYLES SCHOOL OF CIVIL ENGINEERING

Rao S. Govindaraju
Head

Garrett D. Jeong
Associate Head

Don Fry
Chief Development Officer

Drew A. Stone
Director of Marketing and
Communications

Sue M. Khalifah
Director of Student Experience

L. Scott Hinkel
Director of Development

Kathy M. Heath
Program Administration
Manager

Moving?
Send change of address to:

Lyles School of Civil Engineering
Delon and Elizabeth Hampton
Hall of Civil Engineering
550 Stadium Mall Drive,
West Lafayette, IN 47907-2051

Or email: heathk@purdue.edu
Or call: 765-494-2166



Couple builds [opportunities] for female faculty

ENDOWED GIFT BOOSTS PURDUE'S PROGRAM, NUMBER OF NAMED PROFESSORSHIPS FOR THE LYLES SCHOOL

Two important elements of the Lyles School of Civil Engineering's vision are "amplifying our impact on society" and underpinning all our endeavors with an "unwavering commitment to ethics and diversity."

Nancy Uridil (BSCE '74) and Francis (Frank) Bossu (PhD Chemistry '76) are supporting this vision by endowing a named professorship in the school, with a preference for using it to recruit or retain a female faculty member.

It is a significant gift. Named professorships are prestigious and bring recognition to the program, says Rao "G.S." Govindaraju, the Bowen Engineering Head of Civil Engineering and Christopher B. and Susan S. Burke Professor of Civil Engineering.

"Nancy is a pleasure to work with. She understands our program and saw how we could work together for a win-win situation," he says. "If we are able to add to the number of women in Civil Engineering, while also getting a talented and well-respected researcher in the field, that's a double advantage."

IMPORTANCE OF ROLE MODELS

"It is important for women engineers to have female professors as role models," Uridil says. "Female role models were so important to me throughout my career." She recalls that it was a female physics teacher in high school who encouraged her to consider engineering in the first place. And it was after listening to some young female civil engineers in Los Angeles that she decided to pursue civil engineering. At Purdue, it was the Society of Women Engineers that helped Nancy land her summer intern job with Procter & Gamble Corp.

Unfortunately, when Uridil was earning her civil engineering degree in the '70s, she didn't have

a single female professor in her engineering courses. Her wish for this endowment is to provide female role models for generations of aspiring engineers to come.

Today at Purdue, in both the College of Engineering and the Lyles School of Civil Engineering, women represent about 18 percent of the faculty.

DEEP ROOTS AT PURDUE

Uridil has deep roots at Purdue. Her father earned his PhD at Purdue. Her husband, Frank Bossu, earned his doctorate in chemistry at Purdue. Early in her career with P&G, she regularly returned to Purdue to recruit other young engineers. She and a good friend, Margo Hammell Tschirky (BSIE '75), would speak to young female engineers as part of the Women in Engineering Program. And visiting Purdue as a parent was just as fulfilling while her daughter was earning her bachelor's degree at Purdue in evolutionary biology.

PREPPING WOMEN FOR LEADERSHIP AND SUCCESS

While a student, Uridil leveraged the leadership offerings. She was active in dorm government and involved in Chi Epsilon, the Civil Engineering honor society. And she usually had at least two jobs, one of which was staff resident in a dorm. "I had to uphold standards. You know, back then women still had curfews in dorms. We had to work the front desk. We rented out guest rooms. In short, we had quite a breadth of responsibilities," she says. "It taught me everything from conflict management to customer service."

She had excellent role models in Civil Engineering, including Professor Bob Lee in structural engineering and Professor Bill Dolch in materials engineering. "Working for Professor Dolch was one of the first times I could see the relevance of my work in

the real world," she says. "The lab analyses we were doing had to be accurate since they were being used as expert testimony in a trial."

Having been a corporate executive at Procter & Gamble for 20 years and now serving on corporate boards, Uridil firmly believes that engineers, with their problem-solving abilities, have what it takes to lead companies. In a recent list of the top 13 Fortune 500 companies, six of them have leaders with engineering degrees — including Mary Barra of General Motors and Tim Cook of Apple Inc.

LIKE MOTHER, LIKE SON

Like other intellectual interests, engineering talent often runs in families. So Uridil was not surprised that her son, who learned to play SimCity on the family's first computer, chose civil engineering as a profession. "In SimCity, he learned everything from zoning to developing a city's infrastructure," she says. "With that game, you're creating a whole city." Now, he is a multifaceted engineer.

BUILDING THE FUTURE

Today, Nancy and Frank are giving back. Philanthropy has been part of their lives since childhood. "We've been blessed," she says. "My husband and I are a couple of middle-class kids who worked hard. Our parents valued education and took great effort to ensure we got good educations." As a result, the majority of the couple's philanthropy goes to educational institutions.

"A love of building is ultimately what led me into civil engineering," Uridil says. "I went from building bridges and roads to building products, organizations, brands and global businesses. As long as I'm building, I'm happy. Our gift to Purdue is building the future." ■

WABASH NATIONAL HELPS PRESERVE STEEL INFRASTRUCTURE

As the civil engineers who've designed our current infrastructure begin to retire from the workforce, the next generation of professionals faces a challenge: a knowledge gap.

Purdue provides an answer to this problem with the Center for Aging Infrastructure (CAI). Robert Connor, professor of civil engineering, directs the 22-acre center and its current tenant, the Steel Bridge Research Inspection Training and Engineering Center (S-BRITE). The CAI is home to infrastructure components from all over the country that have been removed and replaced — including three full-scale bridges.

"No one else has done this in the world," Connor says. "Structural and civil engineers are very tactile, and they want to see and touch things. I could lecture all day, but when you walk up to it and see it — wow — it makes sense." The parts collection is instrumental to his teaching about failures and helps him demonstrate to new engineers the functionality of infrastructure designed with older technology.

Now, the CAI is advancing its capabilities. Thanks to generous support from Wabash National Corp., the CAI has a structure to house its unique specimens.

The 60-by-40 foot building — a forensic specimen observation gallery — opened in 2018 and holds special bridge components that have been extracted from failures or damage. The enclosed space protects the components from the weather and further degradation, giving them a longer life span as teaching and research tools.

"Wabash is glad to partner with the Lyles School to develop the Center for Aging Infrastructure," says Robert Lane, vice president for product engineering for Lafayette, Ind.-based Wabash National Corp. "We believe it's crucial that student engineers learn not only from experienced engineers, but also from



the infrastructure itself. As a transportation company, Wabash National depends on safe roads."

The first component to reside in the new building is one of the joints that caused the 2007 failure of the I-35W Mississippi River bridge in Minneapolis. Because Connor was involved in the inspection of the bridge following its collapse, he obtained this key specimen, making S-BRITE the only organization with those bridge pieces on display.

Hanging from steel beams, the torn and bent parts on display reveal the joint failure. The bridge, which was built in 1967, was under-designed, Connor explains. He points to the 1/2-inch gusset plate, which should have been a full inch thick.

Connor says the center is grateful for Wabash National's support. "It's been fantastic," he says. "It's unique because they're a transportation company. But I believe they recognize that they're players in this, too. They want to make sure the nation's infrastructure is safe."

Wabash National's Lane says, "We can't take safe roads for granted. Supporting the Lyles School and the CAI is our way of helping ensure the future health of our transportation system."

The CAI holds tremendous possibilities. And though S-BRITE is the primary user of the facility, other groups intend to make use of it, too, such as the Indiana Local Technical Assistance Program, faculty from the Purdue Geomatics group and individuals from other universities. In addition, Connor has received numerous inquiries from other researchers and entities who plan to use this unique facility, such as members of the railroad industry.

"It's a neat sandbox," Connor says. "The ability to use the same specimens, like an entire bridge for example, for completely different purposes by different groups of people with different objectives is going to lead to some really innovative collaborative efforts. In fact, it already is." ■

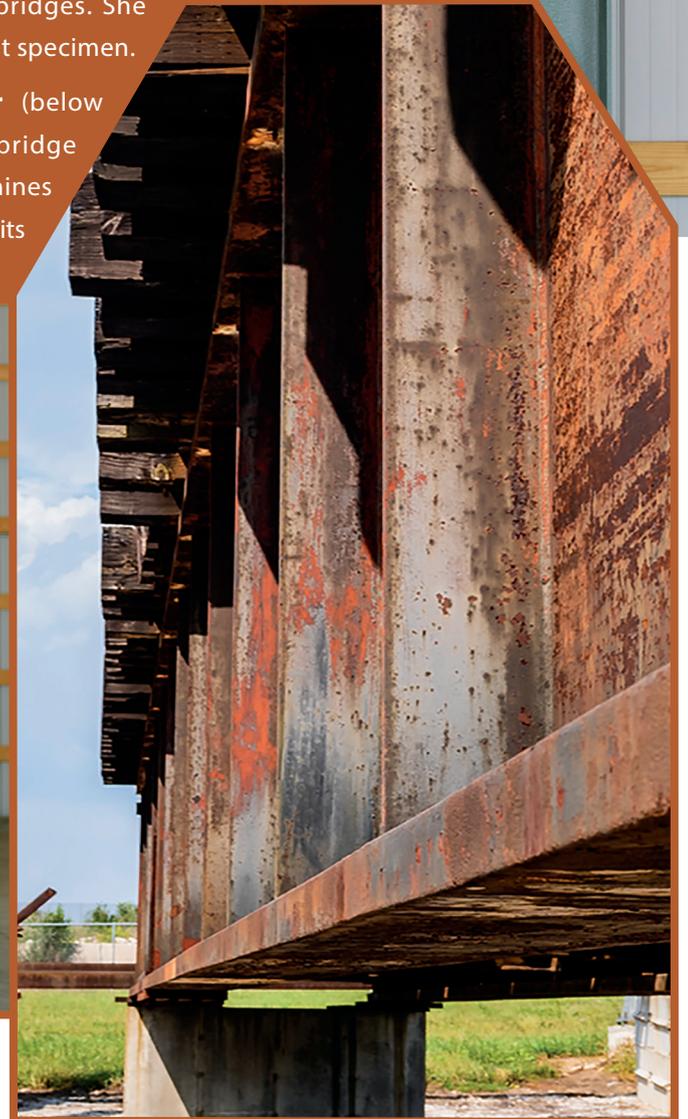
LEARNING FROM FAILURE

Civil engineering PhD student **Leslie Campbell** (below right) studies ultrasonic weld-inspection techniques in steel bridges, in particular UAV-assisted inspection of bridges. She uses the 90-foot span at the CAI as a test specimen.

CE PhD student **Curtis Schroeder** (below left) is interested in ultrasonic bridge inspection. At the CAI, he examines historical steel construction for its acoustical properties.



Graduate student Curtis Schroeder, Professor Robert Connor and graduate student Leslie Campbell in the Center for Aging Infrastructure's forensic specimen observation gallery, a structure made possible by a gift from Wabash National Corp.





LYLES SCHOOL OF CIVIL ENGINEERING

WE MADE **OUR** MARK!

A BIG THANK YOU to everyone who participated in the 2018 Purdue Day of Giving!

In just 24 hours, the Lyles School of Civil Engineering received 325 gifts totaling nearly \$690,000. Overall, Purdue University raised more than \$37.6 million — a record for the daylong fundraising event.

Giving to Purdue Civil Engineering directly influences and improves the experience and quality of education for our students. We deeply respect those who give to the school. We ensure that gifts are used in the best possible ways to prepare the Purdue civil engineers of tomorrow.

We would also like to thank all the students, faculty and staff who helped make the day even more special with their on-campus participation. We held events in Hampton Hall and on the front lawn, where hundreds of guests stopped by, joined in our games, and learned about our school and student activities.

Be sure to catch our Facebook video, shot on the lawn in front of Hampton Hall: [facebook.com/PurdueCE/videos](https://www.facebook.com/PurdueCE/videos). And mark your calendars for Purdue Day of Giving 2019 on April 24! ■

Trompe l'oeil chalk art. Photo by Julie Hendon

Q&A WITH PURDUE GOLFER FILIPPO MASSOBRIO



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Major: Civil engineering **Year:** Junior
Hometown: San Damiano D'Asti, Italy
Significant accomplishment: Finished fourth in Belgium Golf Championship at age 14

Purdue men's golf headed into the offseason after a spring with several strong showings: one tie for first place in the 2018 Big Ten Match Play Championship and a first-place finish in the Robert Kepler Intercollegiate outing in April.

On the nine-man roster is Filippo Massobrio, a junior in the Lyles School of Civil Engineering. Just before he left for his summer internship at the geotechnical firm Hayward Baker Inc. in Chicago, he sat down with us for a Q&A.

Little-known fact: Speaks fluent Italian, English, Spanish and French

Why did you choose civil engineering as your major?

My dad is a civil engineer with an emphasis in geotechnical work. When I was a boy, he would take me out on jobs with him, and that's when I knew I wanted to become a civil engineer and focus on geotechnics as well.

Besides following in your father's footsteps, what else interested you about civil engineering?

I just feel like everything about society is rooted in civil engineering — and that really appeals to me. It's interesting to me to be part of something that is so important to the rest of the world.

Where did your passion for golf come from?

Also my dad [laughs]. We used to play a lot together, ever since I was around 5 years old. I was pretty good in other sports, too, especially skiing, but I decided to pursue golf.

You went from playing golf and learning about civil engineering in Italy to studying and playing in Indiana — how did you decide to come to Purdue?

At 16, I joined a golf academy in Florida, where I also went to high school for my last two years. I knew my future was in civil engineering, and I knew Purdue had one of the best civil engineering schools in the world, so I applied to go there.

Are you happy with your decision to come here?

Very much so. I remember being a bit nervous, at first, about deciding to come here because of the colder weather and that it was so far away from home, but it has been a great experience for me. The professors are always willing to work after-hours with you to make sure you understand the lessons and I've made quite a few friends. The CESAC (Civil Engineering Student Advisory Council) Career Fair also helped me find my summer internship. I'm confident I made the right choice to become a Purdue Boilermaker. ■

AWARDS AND HONORS

In the past two years, the Lyles School of Civil Engineering has seen more than a dozen of its alumni earn awards from Purdue. Honors from the College of Engineering and our school show tremendous Boilermaker pride in our alumni for their impressive careers and accomplishments.

DISTINGUISHED ENGINEERING ALUMNI AWARDS

The College of Engineering's Distinguished Engineering Alumni/ Alumnae Award is presented to men and women who have distinguished themselves in any field in ways that reflect favorably on Purdue University, the engineering profession or society in general. These alumni are engaged in engineering work, and their record of accomplishments is indicated by their growth into positions of increasing responsibility.

IN THE PAST TWO YEARS, FIVE PURDUE CIVIL ENGINEERING ALUMNI HAVE EARNED THIS RECOGNITION.

Stacy Bartoletti (BSCE '91) says he likely learned much about hard work and overcoming obstacles from the words of Vince Lombardi, the legendary coach of the Green Bay Packers. Yet his career as a successful structural engineer started simply enough, working on building projects with his father.

"I was interested in construction and seeing things built," Bartoletti says. "I and my father, who worked for a public utility, built a little cabin, and I think the hands-on aspect of that project drove me to civil engineering."



Stacy Bartoletti

Throughout his nearly 25 years at Degenkolb, Bartoletti has led teams studying, designing and constructing hundreds of millions of dollars' worth of seismic upgrades and new critical facilities for major clients on the West Coast. As an industry expert in seismic engineering, he has also worked extensively on seismic upgrades for historic buildings, including Architecture Hall at the University of Washington and several facilities for the U.S. Department of Veterans Affairs in Seattle and Tacoma, Washington.

Bartoletti has testified before Congress on seismic safety, and he continues to build upon Degenkolb's world-class reputation as an industry leader. The company has won more than 100 national and local awards for engineering excellence. In 2012, it also was named Best Structural Engineering Firm to Work For by Civil + Structural Engineer magazine, which regularly includes Degenkolb in its top-10 list.

Gerald Lyles (BSCE '64, MSIA '71), whose grandfather was a Purdue mechanical engineering professor and whose parents were Purdue

graduates, says it seemed natural that he would become a Boilermaker. He says Purdue prepared him well for his career in pipeline, utility, concrete and mechanical construction in the firm that was started



Gerald Lyles

in 1945 by his parents, William Jr. and Elizabeth Lyles.

He points particularly to one overarching lesson as most valuable: "Time management, especially since I was in a curriculum requiring a minimum of 153 semester units to graduate in eight

semesters," he says. "I graduated with 163 units in eight semesters without summer sessions — while still enjoying sporting events, concerts, convocations, student activities and fraternity life."

Lyles served in the U.S. Navy Civil Engineer Corps, worked as a project engineer for one of the family companies, then returned to Purdue for a master's degree. "The blend of these two avenues of education has provided me with a great career," he says.

In 1973, he rejoined the Lyles family companies as they expanded beyond construction. He headed several undertakings, including the transformation of what is now 4,000 acres of agricultural orchards and 580 acres of industrial parks, shopping centers and housing.

He oversaw manufacturing of irrigation products. He served as corporate liaison for the family's interests in rental property and with Pelco, a manufacturer of closed-circuit surveillance equipment.

Lyles still credits Purdue for much of his success, which helps explain why, in 2014, the Lyles' family foundation made a gift to rename Purdue's civil engineering school the Lyles School of Civil Engineering.

Doreen Mitchell (BSCE '81) says she dreamed of building skyscrapers in downtown Chicago. The thrill of watching construction take shape and the building rise skyward steered her unquestionably to civil engineering. Not in her wildest dreams, however, did she imagine she would become a working engineer at Walt Disney World.



Doreen Mitchell

Close to home, Purdue offered a promising engineering program. Hearing from the Society of Women

Engineers sealed the deal. "For a female in the late 1970s, it felt great knowing that you were not the only one," says Mitchell, who at that time was usually one of only two or three women in her construction classes.

Mitchell proved herself to Disney when the Chicago firm she worked for built the Imagination Pavilion during construction of Epcot Center. That contract work exposed her to Disney's high expectations. "I'm always looking for that challenge," she says. "Disney's expectations for quality drove my desire to problem-solve, stay engaged and learn something new."

After 30 years of leading traditional engineering projects at Disney, Mitchell says, she found her most fulfilling role to be that of improving the guest experience through technology-based projects. From 2010 to 2014 she led Disney's project management organization in the sitewide launch of MyMagic+, an interactive digital technology that allows Disney visitors to customize their experiences.

Carlos Odio (BSCE '65, BSIE '65) has enhanced the University's global reputation with solutions that have improved thousands of lives in his home country of Costa Rica. Odio says problem-solving was among the most worthwhile skills he gained as a Purdue student, by "starting with a clear identification of the problem, followed by an analysis of the possible solutions and their impact on the overall picture."

In the 1980s, Odio was keenly aware that coffee production had yielded economic, social and political stability to his home country. At the time, he asked himself what he could do for the areas

of Costa Rica at lower altitudes where coffee would not grow. His problem-solving answer was citrus, which he dubbed "lowland coffee." In 1987, he and a partner established a TicoFruit in San



Carlos Odio

Jose, Costa Rica. Today, with Odio serving as a partner and board member, TicoFruit produces both frozen concentrated orange juice and pineapple juice as well as juices not from concentrate. It also produces at least 12 other extracts and byproducts of the two fruits.

After achieving great success that has benefited so many, Odio says the creativity of his engineering education prepared him best to compete and to lead in his professional life. He would advise today's students not to be overly concerned about which engineering discipline to study. Odio was named Outstanding Industrial Engineer at Purdue in 2010.

Milo Rivero (MSCE '82, PhD CE '84) says he knows the importance of building on a strong foundation. "I like to think of career development as a pyramid, as opposed to a tree. The key is to build up a strong knowledge base and gain experience.



Milo Rivero

From there, you can grow your career, find your area of expertise and move up the ladder," he says. "A pyramid will withstand the winds of change and uncertainty. By comparison, a tree might grow more quickly in the beginning, but it

branches out in multiple directions without a focus and without as strong a foundation."

From his time as a Purdue graduate student to his current position as president and CEO of STV Group Inc. in New York City, Rivero has left fingerprints on landmarks from coast to coast, including the One World Trade Center in Manhattan and the Anaheim Convention Center expansion in California. Rivero was inducted recently into the National

Academy of Construction and is a fellow of the Construction Management Association of America. He also serves as vice chairman of the New York Building Congress. His accolades include the Michael Mazzucca Lifetime Achievement Award from the Subcontractors Trade Association, as well as the New York Landmarks Conservancy 2012 Man of the Year. ■

CIVIL ENGINEERING ALUMNI ACHIEVEMENT AWARDS

The Lyles School of Civil Engineering at Purdue has a long history of educating outstanding engineers — and the Civil Engineering Alumni Achievement Awards (CEAAA) give the school the opportunity to recognize the career accomplishments of some of its most influential graduates. Over the past two years, the Lyles School of Civil Engineering has recognized 11 of its alumni with this prestigious award.

THE 2016-17 CEAAA AWARDEES

Al Dausman (MSCE '78) had a 38-plus-year career at Bechtel Corp., where he worked on various project assignments such as nuclear power and nuclear waste projects, chemical plants and demilitarization plants. He progressed through various position responsibilities, including structural engineer, resident engineer and project engineer; now retired, Dausman served as the Bechtel management representative to Purdue University.

Erin Flanigan (BSCE '87) is a national expert in the field of management and operations of transportation systems. She has spent most of her career working in the consulting engineering industry on a variety of projects and with a range of public sector clients throughout the United States. These projects have included multiyear interstate design projects, multijurisdictional



2017 CEAAA From left: Erin Flanigan, Bryn Fosburgh, William Lyles IV, Al Dausman and Constance Solina.



2018 CEAAA From left: Daniel Liotti, Brian Harlow, Robert Holden II, Rodolfo Gedeon, Brian Quinn and C.Y. David Yang.

traffic signal systems and statewide transportation planning efforts.

Bryn Fosburgh (MSCE '89) joined Trimble Inc. in 1992 and currently serves as senior vice president for its Geospatial, Civil Engineering and Buildings groups, a responsibility that includes the architecture, engineering, surveying, construction and building operations, and management markets. During his career at Trimble, Fosburgh has held a number of vice president and general manager roles across the surveying, construction and agricultural groups. He also has had responsibility for a number of corporate functions and geographical regions.

William Lyles IV (BSCE '81) is a fourth-generation Boilermaker, third-generation CE alumnus and one of 14 family members to have attended Purdue. From graduation in 1981 through 2009, he focused on his construction career within the Lyles Construction Group, founded by his grandparents in 1945. During this time, he rose from project engineer to CEO and chairman. He remains active in the company, overseeing construction for the parent company as well as participating in critical construction initiatives. Today, Lyles also manages investments and participates in the company's development and rental partnerships.

Constance Solina (BSCE '00) was commissioned as an ensign in May 2000 through Purdue Navy ROTC. She was a key member of the Navy's Task Force Cyber Awakening, focusing on the securing of

industrial control systems. She was responsible for the coordination of three programming cycles articulating the current risk posture for operating the Navy's 70 installations totaling over \$7 billion annually. Her current duty is Director of Installation and Logistics, Marine Corps Air Station, Yuma, Ariz.

THE 2017-18 CEAAA AWARDEES

Rodolfo Gedeon (BSCE '60, MSCE '61) is a well-regarded businessman and civic leader based in Cartagena, Colombia. He was a founding member and president of the Fundacion Mamonal, an association that included all the companies located in the industrial area of Cartagena, and a founding member of Actuar por Bolivar, a nonprofit organization dedicated to helping single mothers establish and maintain small businesses. He currently serves on the board of directors of several major companies in Cartagena and Bogotá, as well as at the Universidad de Cartagena. He is an active member of the National Council of Basic Sciences, known as Colciencias.

Brian Harlow (BSCE '78) was hired by Chrysler Corp. in Kokomo, Indiana, as a plant engineer, which began a career at Chrysler that spanned nearly 40 years. From 1978 to 2000, Harlow's responsibilities included various positions in production, maintenance, quality, manufacturing engineering and product engineering in the Kokomo plants. He was named to his current role of Vice President and

head of NAFTA manufacturing for Fiat Chrysler Automotive in October 2014, and is responsible for all assembly, stamping and powertrain manufacturing operations in the U.S., Canada and Mexico, with more than 65,000 employees in 35 manufacturing facilities.

Robert Holden II (BSCE '90, MSCE '92, PhD '99) has been responsible for over \$300 million in constructed wastewater infrastructure during his career — as a design engineer, project manager and principal. He is especially proud of leading the two largest capacity-increase projects in the state of Indiana at the Belmont and Southport Advanced Wastewater Treatment Plants. He currently serves as vice president and the head of the wastewater group for Wessler Engineering in Indianapolis.

Daniel Liotti (BSCE '85) joined his father's company, Midwest Mole Inc., after graduation and has been with the company for nearly 33 years. One of the company's premier projects was the installation of an 8-foot-diameter tunnel, 2,000 feet long, under the active runway at the Indianapolis International Airport. The tunnel provides utilities to the new Midfield Terminal. For this project, Midwest Mole won the prestigious New Installations Award given by the Trenchless Technology Magazine.

Brian Quinn (BSCE '89, MSCE '91) founded his own company, SE Solutions, to help other companies find and hire structural engineers. That was in 2006. Two years later, his company launched a Structural Engineering Continuing Education division called SE University. SE University now serves over 600 engineering offices in 49 states by keeping its structural engineers up-to-date on current industry standards and trends. Quinn finds great satisfaction in helping fellow structural engineers make advances in their careers and lives.

C. Y. David Yang (BSCE '91, MSCE '93, PhD '97) became the seventh executive director of AAA Foundation for Traffic Safety in 2016. In this role, he oversees the day-to-day operations of this charitable research and education organization and leads a talented staff to fulfill the mission of "saving lives by preventing traffic crashes and reducing injuries when crashes occur." Yang also has authored and co-authored approximately 50 peer-reviewed journal articles, conference papers, and government reports on subjects related to traffic safety, transportation operations, planning, and intelligent transportation systems. In 2015, an article he co-authored won the Institute of Transportation Engineers' Engineering Council Best Paper Award. ■

THE EXCEL FUND

RECRUITING AND RETAINING FUTURE CIVIL ENGINEERS

Did you know that the Lyles School of Civil Engineering has a specific fund to help us recruit students to civil engineering and also help us retain current students? For over a decade, the EXCEL Fund has provided direct support for our efforts to develop outreach programs for K-12 students, recruit outstanding high school students to study civil engineering, and help us retain and support current students as they move into their professional careers. These engagement programs are vital to help potential students and parents understand the essential role of civil engineering in our world.

Thanks to our EXCEL Fund donors, we partnered with the Women in Engineering Program to encourage interaction between current female CE students and female high school juniors and seniors. In addition, we participated in an event that had nearly 1,000 sixth-grade students from Tippecanoe School Corporation at the STEM Conference for Kids. They had the opportunity to interact with our American Society of Civil Engineering student members who taught a session about earthquakes and tunnels, using hands-on activities.

Civil engineers have a lasting — but often unrecognized — impact on our society. Through the EXCEL Fund we strive to bridge this knowledge gap while also instilling excitement about the profession and the many opportunities it presents.

In addition to outreach efforts, the EXCEL Fund provides funding to the External Relations Office. This office guides and assists current students in preparing for civil engineering careers through resume development, interview preparation, engagement with civil engineering firms and much more.

For example, the Industry Opportunity webpage (bit.ly/CE_IndustryOp) offers Lyles School students access to more than 300 companies offering internships, co-ops and full-time positions. Our students certainly utilize this site; more than 70 percent participate in a co-op or internship. These opportunities greatly enhance our students' educational experiences and make them highly recruited, as evidenced by our 95 percent placement rate.

A well-funded EXCEL program will sustain our success well into the future, helping us attract the best and brightest students to the Lyles School of Civil Engineering and aiding our students' transition to becoming successful alumni, many of whom will lead our industry into the future.

We have many achievements to be proud of, and the EXCEL Fund helps us achieve even more!

If you or your company would like to learn more and support the EXCEL Fund, please contact Courtney Schmidt in the CE Development Office at 765-496-0116 or caschmidt@prf.org.

PURDUE CIVIL ENGINEERING: A TRAVELER FEELS WELCOME

It was at Purdue University where he sought opportunity — and it was through the Lyles School of Civil Engineering that he forged his path.

Originally from Iran, Shahin Ariaey-Nejad (BSCE '82) says he had never heard of Purdue University until he met a few American expatriates who suggested the university after hearing he had an interest in engineering. Though the Midwestern university was certainly far from home, Ariaey-Nejad wanted to secure the best education possible and was quickly convinced that Purdue was where he would attain it.

"I had no idea what their connection to Purdue was, but they were positive on Purdue's engineering program," he recalls. "So, I applied and I was actually accepted. I think I was the first from my school that Purdue had ever accepted."

With the first hurdle out of the way, Ariaey-Nejad says, he faced an even greater challenge: traveling to another part of the world to learn engineering in a foreign language. Thankfully, many of his anxieties about whether he'd made the right decision to come to Purdue were wiped away upon his first day of class.

"I remember walking into one of my first classes at Purdue," he says. "I had just come to America two or three days before. I was still very overwhelmed by everything, and I definitely had not adjusted to the culture change yet. I was still wearing my old country outfits even. Then, I walked into my class and I looked at the blackboard and couldn't believe what I saw."

The words "Welcome to Purdue!" were written in Persian letters. The message

was written by Purdue civil engineering Professor John Hayes.

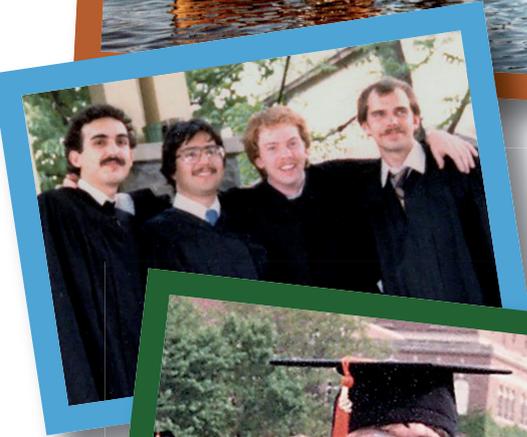
"I looked around and asked, 'Who was this for?' And, I couldn't believe it, it was for me," Ariaey-Nejad says. "Apparently, Professor Hayes had a strong connection and appreciation for foreign students. After that, I felt like this was the school for me."

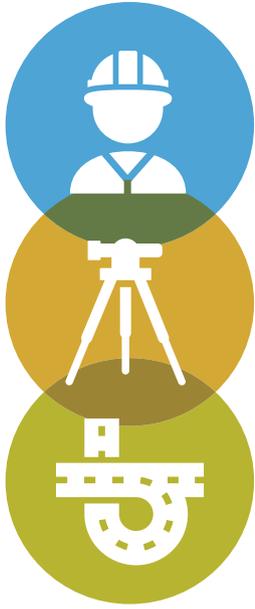
Ariaey-Nejad soon would make a number of friends on campus. He was involved in multiple student groups, including the Purdue American Society of Civil Engineers and the concrete canoe team.

After earning his bachelor's from Purdue, Ariaey-Nejad went on to earn his master's in civil engineering from Johns Hopkins University in 1987. And he decided to stay in the United States to pursue his career in structural engineering.

Today, Ariaey-Nejad works as a structural engineer for CDM Smith Inc. in Poughkeepsie, New York, and has enjoyed a 35-year career in the civil engineering field. His success, he says, is thanks in large part to the education he received at Purdue.

"My experience at Purdue was truly unique in my life," he says. "I can't say I've experienced anything like it since. The faculty here truly make it special, I believe. They want to make sure you're getting an education and understand the material — not simply parroting what was taught. Purdue definitely prepared me for life after college." ■





RODOLFO GEDEON CIVIC LEADER IN COLOMBIA



Rodolfo Gedeon receiving the 2018 CE Alumni Achievement Award: (L-R) Professor Robert Jacko, Rodolfo Gedeon, Professor Jon Fricker.



The Gedeon family: (L-R) Marie Gedeon (daughter), Rodolfo Gedeon, Claudette Gedeon (wife), Rodolfo Gedeon, Jr. (son).

Many Purdue alumni are part of a long and proud Boilermaker family tradition. And some alumni are the ones who actually start the Boilermaker tradition. Count Rodolfo Gedeon among them.

In the 58 years since Gedeon graduated from Purdue's School of Civil Engineering, 14 members of his family have made the trip from Cartagena, Colombia, to become Purdue University students — and now alumni. All of them — his daughter, son, and 12 nieces and nephews — were strongly encouraged by Gedeon, who says it is thanks to Purdue that he was able to accomplish so much in his life.

"I will always be grateful for my Purdue education. Purdue helped me to open many doors during my successful career, and I have learned to do the same for many others," he says.

Growing up in Cartagena, by age 16 he had traveled to only one other town, and he had never heard of Purdue. However, an older brother advised Gedeon — the youngest in a family with seven children — to head out to Purdue's West Lafayette campus.

"My brother had already been to the United States to study engineering. He got his master's at the University of Minnesota," Gedeon says. "My parents

asked my brother for advice, and he said for civil engineering, Purdue was the best place to go."

That was all the persuasion he needed, he says. By September 1956, he was officially a Boilermaker.

"After my first year, things became very simple, and I fit in very well. I soon made the four best friends I've ever had. We're still friends today, actually. We write to each other and come back to campus to watch football games," he says.

Gedeon attributes much of his positive academic experience at Purdue to civil engineering professor Martin Gutzwiller, who inspired him.

"By far, he was my favorite professor," Gedeon says. "He was very tough but very friendly, and he was always thinking about the students and how best to teach them."

Gedeon earned his BSCE in 1960 and his MSCE in 1961 before returning to his hometown. In the following decades, he went on to become a well-regarded businessman and civic leader in Cartagena.

His professional and civic efforts include serving as president of Petroquímica-Colombiana S.A. (PETCO). He was a part-time professor of structural analysis and pavement design at Universidad de Cartagena for six years — before going on to serve

as dean of the School of Civil Engineering for two years. He was a member of the Cartagena City Council and a founding member and president of the Fundacion Mamonal — an association that included all the companies located in the industrial area of Cartagena. He was also a founding member of Actuar por Bolivar — a nonprofit organization dedicated to helping single mothers establish and maintain small businesses.

Another significant role Gedeon played was that of unofficial recruiter for Purdue — at least as far as his family is concerned.

"After I came back home, I would often help my nieces and nephews — and later my own children — with their math and science homework," he says. "And I would always tell them: 'You've got to get better at these; you'll need these skills when you go to Purdue.'"

And as of this fall, the family tradition grew even further. Gedeon's grandson, Guillermo Sanchez, started his first semester at Purdue. His grandfather, of course, came along to act as tour guide.

"The family tradition is still going strong," Gedeon says proudly. "I can't wait to show my next grandchild around on campus." ■

NEW NAMED PROFESSORS IN THE LYLES SCHOOL

THE LYLES SCHOOL OF CIVIL ENGINEERING IS PROUD TO ANNOUNCE THAT SIX OF ITS FACULTY RECEIVED NAMED PROFESSORSHIPS IN 2018.

PANAGIOTA KARAVA

Jack and Kay Hockema Associate Professor of Civil Engineering

Professor Panagiota Karava has been appointed as the Jack and Kay Hockema Associate Professor in Civil Engineering. This is the first “Rising Star”

professorship designed to recognize faculty members in the early stages of their career. Karava teaches architectural engineering and is a member of Purdue’s Center for High Performance Buildings at Herrick Laboratories.

Her research interests are broadly related to smart building technology and sustainable energy systems. Specific topics include: human-building interactions, self-tuned thermal and visual environments, mixed-mode and solar-optimized buildings, and smart and connected energy-aware communities. Karava has built collaborative initiatives and partnerships. One of her most recent projects funded by the National Science Foundation involves sociotechnical research to foster energy-aware communities enabled by new smart technology and cloud data accessibility.



AMIT VARMA

Karl H. Kettelhut Professor of Civil Engineering

Professor Varma teaches structural engineering and is the director of the Robert L. and Terry L. Bowen Laboratory for Large-Scale Civil Engineering Research. His research focuses on experimentation, analysis and design for extreme loads and hazards including earthquakes, fires and impactive loading. He is deeply invested in steel-concrete composite structures, as well as research on high-rise buildings, modular construction, multihazard design and innovation.

Varma is currently working on concrete-filled composite plate shear walls — a new coupled core wall system in high-rise construction, designed to both speed up the building process and grant greater freedom in the design stages. He is also conducting research on performance-based fire engineering of steel and composite building structures.



AYMAN HABIB

Thomas A. Page Professor of Civil Engineering

Professor Habib teaches geomatics engineering. In addition, Habib is co-director of the Civil Engineering Center for Applications of UAS (unmanned aircraft systems) for a Sustainable Environment and associate director of the Joint Transportation Research Program. Habib’s research focus includes the use and advancement of modern sensing technologies and platforms such as LiDAR and UAVs to better address the needs of traditional and new applications in fields such as transportation management, infrastructure monitoring, and precision agriculture — such as the development of algorithms to aid connected and autonomous vehicles and to improve crop yield.

Habib’s research has him working with the U.S. Department of Energy and the Indiana Department of Transportation in collaboration with faculty members from the schools of Civil Engineering and Electrical and Computer Engineering and the Department of Agronomy.



ERNEST BLATCHLEY III

Lee A. Rieth Professor of Environmental Engineering

Professor Blatchley teaches environmental engineering and his research focuses primarily on physicochemical processes. His research team has made significant strides in gaining a greater understanding of the effects of ultraviolet radiation and chlorine on water quality. Applications of his research address the use of ultraviolet radiation and halogens in water treatment, water reuse and water supply in developing countries.

Blatchley has also pioneered the development of photochemical reactor theory to ultraviolet radiation as it applies to disinfection, direct photolysis and advanced oxidation processes. His research has included collaborations with several academic disciplines including environmental engineering, nursing and agricultural economics.



CHAD JAFVERT

Lyles Family Professor of Civil Engineering

Professor Jafvert teaches environmental engineering courses that emphasize water chemistry, water quality modeling, and drinking water treatment in underdeveloped areas around the world. He is an authority on soil-water phase transfer processes of pollutants in the environment. His other research interests include remediation strategies for contaminated sediments, aquatic photochemistry of pollutants including carbon-based nanomaterials, and real-time water-quality monitoring.

Jafvert’s work in underdeveloped areas has resulted in the installation of point-of-use drinking water treatment systems in rural schools and communities in Kenya, Tanzania, India, China and Colombia. The effort in Kenya is through a Purdue startup company based in Eldoret, Kenya. ■



BULLOCK NAMED LYLES FAMILY PROFESSOR

IN OCTOBER 2017, THE PURDUE UNIVERSITY BOARD OF TRUSTEES APPROVED DARCY BULLOCK AS THE FIRST LYLES FAMILY PROFESSOR OF CIVIL ENGINEERING.

Bullock's work has focused on intelligent transportation systems, real-time traffic control, image-based vehicle detection and traffic safety.

Bullock says he is incredibly honored to be named the inaugural Lyles Family Professor.

"I am unbelievably proud that the school and University saw me worthy of such an honor," he says. "This is something I do not take lightly, and I will ensure that the Lyles family — who have already given so much to our school — will remain proud of their continued support for our tremendous University."

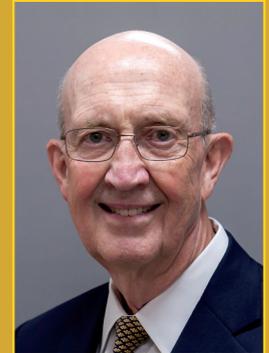


Bullock joined Purdue in 1998 as a Civil Engineering faculty member. He has been honored by the American Society of Civil Engineers and the Transportation Research Board. He was named a Purdue University Faculty Scholar for 2005-10. ■



Brumund receives ASCE OPAL Award

In March 2018, Purdue Civil Engineering alumnus William F. Brumund (BSCE '64, MSCE '65, PhD '69) received the Outstanding Projects and Leaders (OPAL) Award from the American Society of Civil Engineers. The OPAL award recognizes a person's extraordinary contributions to the civil engineering industry throughout their career.



Brumund's specialty is in geotechnical engineering, and — after earning his PhD at Purdue — he went on to teach civil engineering at the Georgia Institute of Technology for five years before joining Golder Associates Inc.

Brumund opened the Atlanta office for the firm and practiced geotechnical engineering while managing and directing various civil engineering projects. In 1985, he became president and global CEO. He served on the parent company's board of directors for 33 years until he officially retired in 2008.

As president and CEO of Golder Associates, Brumund helped transform the North American geotechnical consultancy into a global, multidisciplinary market leader, and he grew the company by 2,000 employees. He also oversaw the expansion of the firm's operations in the United Kingdom, started a company in Germany, acquired a firm in Sweden, acquired a firm in Italy, started a firm in Hungary, acquired all the stock in a partially owned affiliated company in Australia, and expanded Golder Associates' operations in Hong Kong. While serving as CEO, Brumund continued to direct and work on major engineering projects.

Throughout his career, Brumund was registered as a professional engineer in 20 states. He also wrote 27 technical papers and gave 54 invited talks at various venues in the United States and other countries.

In 1993, Brumund was honored by Purdue University with the Distinguished Engineering Alumnus Award. In 2000, he was recognized as the Chapter Honor Member of the Purdue Chapter of Chi Epsilon. He was also the recipient of the 2006 Heroes Award from the ASCE Geo-Institute. ■

CE OPEN GOLF OUTING 2018



CE HOMECOMING BREAKFAST



A couple of future civil engineers show up for breakfast.

Purdue President Mitch Daniels and CE School Head Rao "G.S." Govindaraju enjoy the breakfast.



Mark Perniconi (BSCE '74, MSCE 76') and Professor Robert Frosch catch up while waiting on their fresh omelets.



Professor Andrew Whelton supervises some future civil engineers.

Professor William Travis Horton serves up a made-to-order omelet.

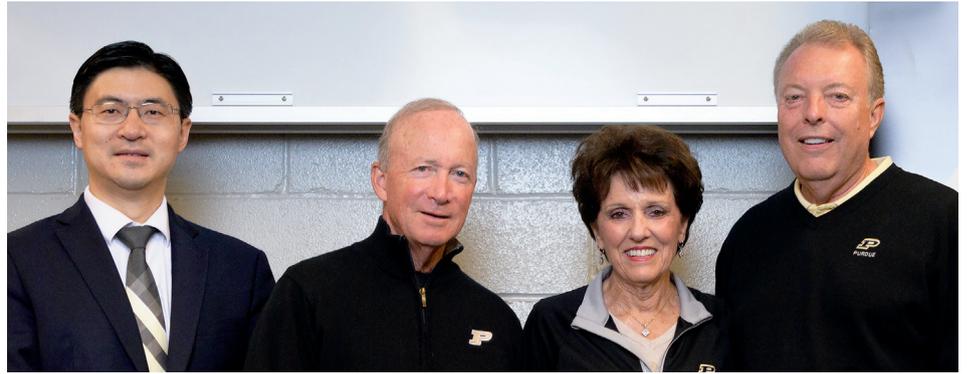


PRESIDENT'S
COUNCIL
PURDUE UNIVERSITY

PRESIDENT'S COUNCIL DISTINGUISHED PINNACLE AWARD

In October 2018, Purdue President Mitch Daniels presented the Pinnacle Award to CE alumnus Jack Hockema (BSCE '68, MS Management '70) and his wife, Kay Hockema.

At Purdue University, one of the highest honors presented to donors is the President's Council Distinguished Pinnacle Award. This honor is bestowed on individuals or couples whose philanthropic contributions have made significant impact on University student and faculty programs, organizations and initiatives. The Pinnacle Award recognizes donors who have given more than \$1 million.

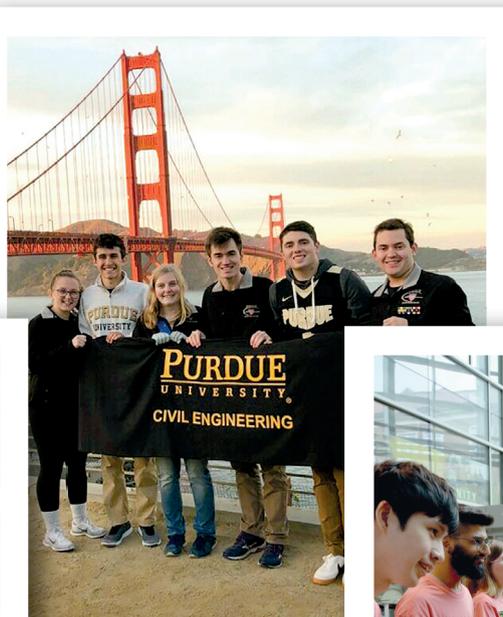


Honoring Jack and Kay Hockema for their generosity with the President's Council Pinnacle Award. (From left): Dean of Engineering Mung Chiang, Purdue President Mitch Daniels, Kay Hockema, Jack Hockema

STUDENT ACTIVITIES



Out in the field, Professor Cary Troy instructs students in the Introduction to the Engineering of Water class.



TOP: Civil engineering students in front of the Golden Gate Bridge, designed by Purdue Civil Engineering Professor Charles Ellis.



RIGHT: Student ambassadors and staff speaking with first-year engineering students at the annual Boiler Gold Rush about the possibilities unlocked through a degree in civil engineering.

SCHOLARSHIPS AND AWARDS



The Mamon and Cynthia Powers Scholarship and the Mamon and Cynthia Powers and Kelly Powers-Baria CE Scholarship. (L-R): Mamon Powers, Cynthia Powers, Mia Sheppard, Alexandra Foster, Darryl Sexton.



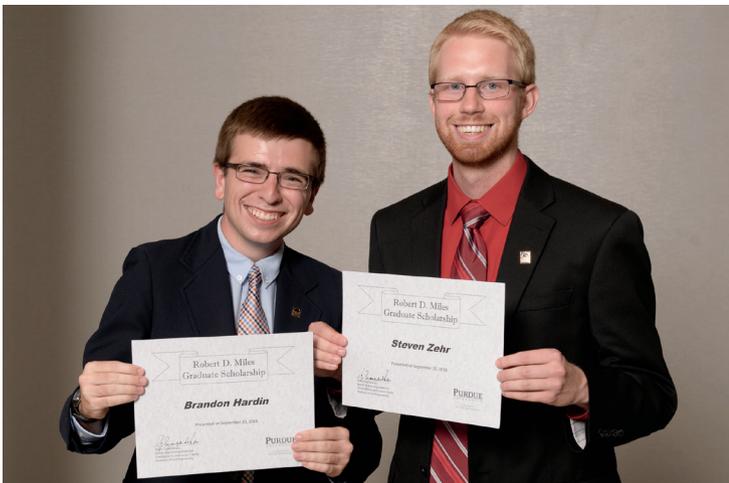
The Zimmerman CE Innovation Award. (L-R): CE School Head Rao "G.S." Govindaraju, Professor Luna Lu, Yining Feng.



The O.M. and Virginia Foxworthy Scholarship. (L-R): Filippo Massobrio, Molly Cooper, Tucker Born.



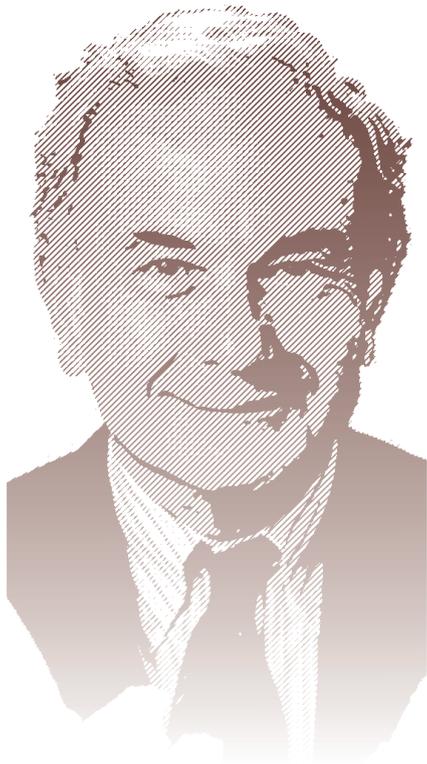
The Charles A. Miller Scholarship. (L-R): Molly Schragger, Charles Miller, Anna Mae Miller.



The Robert D. Miles Graduate Scholarship. (L-R): Brandon Hardin, Steven Zehr.



The William and Martha Dudley Scholarship, (L-R): Victoria Sullivan, Stephanie Maldonado, Audrey Murray, Donald Fuerstenau.



Purdue Engineering mourns the loss of a beloved mentor, researcher and friend: Mete A. Sozen. He died on April 5, 2018, while visiting family in suburban London. He was 87 years old.

Sozen's research revolutionized the field of earthquake engineering. Over the course of his 60-year academic career, he consulted and lectured around the world, earned dozens of honors, and was revered as a teacher and mentor. He taught at the University of Illinois until 1994, and then at Purdue University, where he was the Karl H. Kettelhut Distinguished Professor of Civil Engineering. He advised 58 graduate students earning their PhDs — many of whom are now leaders in the field.

DRIFT, NOT FORCE

Perhaps Sozen's most famous invention was the earthquake simulator for structural applications, a tool that, in the early 1980s, led him to a watershed insight: The design of earthquake-resistant structures should not be based on force, the approach which had been prevailing for decades, but on drift — the degree to which the floors in a building move with respect to one another during an earthquake. This idea represented a radical change in a field that at the time was

A loss for civil engineering: PROFESSOR **METE SOZEN**

still operating on the basis of preconceptions established in the early 1900s. It opened the door to simpler and better ways to design and evaluate buildings and bridges.

AN ADVOCATE FOR SIMPLICITY

Sozen was an ardent advocate for simplicity in engineering. He was an unconditional supporter of "the heroes of the profession" as he called them, people like Talbot, Richart, Westergaard, Cross and Newmark — among others whom he often cited. Sozen was responsible for numerous innovations in design, analysis and testing, in particular for reinforced, prestressed concrete and building systems. In 2006, the Applied Technology Council (ATC) added Sozen to its list of top seismic engineers of the 20th century. The nonprofit ATC helps transfer into practice research findings related to the effects of natural hazards.

MENTOR AND TEACHER

Sozen had a profound influence on his students. Santiago Pujol, Purdue professor of civil engineering, studied under him as an undergraduate and graduate student. "He insisted we call him 'Mete,' not 'Dr. Sozen,' not 'Professor Sozen,'" Pujol says.

"What really made an impression on me was that he was quite kind and patient. He would find a smart way to tell me I was wrong, without exactly saying so," Pujol says, laughing. "He did that all the time."

As a researcher and thinker, Sozen was known for his remarkable focus. "When he was thinking about something, he wouldn't stop," Pujol says. "He would think about it day and night, every day. For weeks, if necessary." Invariably, he would find a solution. "You don't often encounter persistence like that."

Sozen loved research and teaching. "He never thought of retirement as something to be celebrated — because for him, work was a joy," Pujol says. ■

METE SOZEN SAID

Always guess before you calculate.

If we're going to be wrong, we might as well be wrong the easy way.

It is not what I do not know that worries me; it is what I think I know but ain't so.

If an engineer can't guess calculation results within 15 percent, then there is either something wrong with the calculations or with the engineer, or both.

The SDOF has two supreme advantages. It is easy to implement, and it is difficult to believe it is an accurate representation of the building.

Engineers perform calculations to feel good. In the end, design decisions are based on a gut feeling.

How many unbelievable things do you believe in?

Analysis is done to compare competing systems, not to predict!

Question calculation.

HONORING METE

To honor Mete Sozen, the Lyles School is raising funds for an endowment in his name. It will be used to support students interested in earthquake engineering. To make a contribution, contact Don Fry, chief development officer. 765-494-2236 ■ drfry@prf.org

GREETINGS FROM DON FRY

Chief Development Officer for Civil Engineering



Welcome to the party! A rare moment is upon us at Purdue: a convergence in time that compels us to reflect on the past, celebrate the present, and imagine what the future holds for our University and the Lyles School of Civil Engineering.

Our yearlong sesquicentennial celebration is underway with the “Giant Leaps” theme inspired by our own Neil Armstrong’s historic statement on the moon almost 50 years ago. It’s a year that allows us to address the challenges and opportunities ahead and to update our land-grant mission for the 21st century and beyond. This anniversary theme also invites each of us, whatever our pursuits may be, to take “giant leaps” of our own.

Last but not least, 2019 marks the conclusion of “Ever True: The Campaign for Purdue University,” the largest fundraising effort in Purdue history. Thanks to your generosity, the future looks bright for the Lyles School of Civil Engineering. Through your private giving and personal involvement, we will surpass our goals with flying colors, gold and black. Thank you!

As this campaign comes to an end, I’m reminded of an old story you may have heard that pretty well captures the Purdue spirit I’ve witnessed and felt over the years:

Three masons are working at a construction site. A curious passerby asks: “What are you doing?” The first man says: “I am laying bricks.” The second man says: “I am building a wall.” The third worker stops whistling a happy tune, looks skyward and exclaims: “I’m building a cathedral!” To put a Purdue spin on the tale, if the third worker is a Purdue civil engineer, he or she will figure out how to build it one brick higher!

Truth be told, everyone has probably been each of the three masons at one time or another. Of course, the moral to the story is that whatever we do depends on the way we look at it. Having a compelling vision, a worthwhile mission and a lofty common purpose can elevate the way we work and the way we do it. Campaigns can do that. They can unite and inspire us to help create something bigger than ourselves, something good that will serve others down the road.

I’ve been lucky and honored to have served during three campaigns for Purdue, and each one has improved Purdue. Your support has made a difference too, by helping make the Lyles School a leader in educating the best and brightest civil engineering leaders of the future. Thank you!

Enjoy the 150th celebrations, your place in Purdue history, and your role in building a better University “one brick higher.” If our past is any indication, the best is yet to come. And the future starts now!

Hail Purdue!

Don Fry
drfry@prf.org

Chief Development Officer — Lyles School of Civil Engineering
University Development Office — Purdue Research Foundation
Delon and Elizabeth Hampton Hall of Civil Engineering

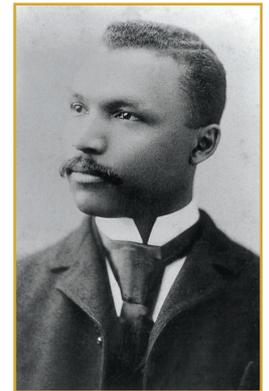


HONORING PURDUE’S FIRST BLACK GRADUATE, DAVID ROBERT LEWIS

“To make each one think, to make him self-reliant, to feel the responsibility of his own effort is a constant aim and endeavor,”

wrote educator David Robert Lewis.

The statement reveals the character of the man who was Purdue University’s first black graduate. Lewis earned his bachelor’s degree in civil engineering in 1894.



Lewis’s Purdue thesis, “Highway Road Construction,” reviewed European road-building practices. He later went on to become an educator and businessman.

Since Lewis’s graduation over 120 years ago, Purdue’s Lyles School of Civil Engineering has been home to thousands of students, faculty and staff of color. We are proud that Lewis chose Purdue, and we work every day to honor his memory, his courage and the significance of his accomplishments.

To help celebrate Lewis’s legacy, the Lyles School of Civil Engineering will host Mamon M. Powers Jr. (BSCE ’70, HDR ’14) for a lecture and luncheon on Tuesday, Feb. 26. Powers is chairman and CEO of Powers & Sons Construction Co., a 50-year-old firm serving Indiana and Illinois.

Please watch the Lyles School website for details.

LYLES SCHOOL OF CIVIL ENGINEERING
Delon and Elizabeth Hampton Hall of Civil Engineering
550 Stadium Mall Drive
West Lafayette, IN 47907-2051



The Panama Canal, the Leaning Tower of Pisa, the Hoover Dam, the Golden Gate Bridge
— giant leaps made possible with Purdue Civil Engineering know-how.

The Lyles School of Civil Engineering is celebrating Purdue's sesquicentennial year, 2019, with a series of **GIANTLEAPS** themed events:

- ▶ The Bridge Bust, our annual student bridge-building competition, with a Giant Leaps twist.
- ▶ A Feb. 26 talk in honor of alumnus David Robert Lewis, BSCE 1894, Purdue's first black engineer.
- ▶ A special Giant Leaps themed alumni achievement award ceremony.

Participate in the Purdue 150th festivities on Twitter: **#takegiantleaps**.

Show Boilermaker pride — and support Purdue scholarships — by purchasing commemorative merchandise at the Purdue Team Store: **purdueteamstore.com**.

PURDUE
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Lyles School
of Civil Engineering