

TRANSITIONS

What's in Store for the Nation's Aging Infrastructure?

How technology and collaboration with industry will shape the future of America's infrastructure **PAGE 4**



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Lyles School of Civil Engineering



MESSAGE FROM THE SCHOOL HEAD

As we near the end of the semester — and the end of 2021 — I find myself eagerly looking forward to the new year. However, I also cannot help but wonder how this year seemed to go by in a blur.

Unlike in years past, I think most of us found ourselves not eagerly looking forward to 2021, but bracing ourselves for it. We were still in the midst of a pandemic and knew we had to continue on and adjust to the state of the world. In the months leading to the new year, we learned what worked and what did not in terms of providing the best education possible and maintaining our research efforts.

Unlike 2020, though, there were very real rays of hope to look forward to. Vaccines were well into production; Purdue University, its students, faculty and staff proved education could continue if proper precautions were taken; and every month felt like we were getting closer and closer to returning to our normal lives.

I suppose, with our collective focus on working together and preparing for the future, that it is no surprise the year seemed to pass so suddenly. But now — with year 2022 just weeks away — I aim to cherish what remains of this year and truly enjoy the next.

It is so easy to focus on what must be done that you forget to stop and appreciate all that we have and what we have accomplished. Thankfully, when it comes to the Lyles School of Civil Engineering, there are a wealth of people and accomplishments to appreciate — and that is what is so special about *Transitions* magazine. It serves as a tremendous way to take stock and celebrate the efforts and achievements of our incredible alumni, students, faculty, staff and friends.

In this edition, you will learn about how our alumni are working to reshape and improve the United States' infrastructure through restoration, innovation and planning ahead as the world becomes more connected. This magazine also highlights several of our amazing alumni who have given back to our school as well their accomplishments and awards.

This, of course, is just a fraction of the incredible work our outstanding alumni are involved in — and I look forward to sharing even more of their stories in future editions to come. I also welcome our alumni and friends to come back to our West Lafayette campus when they get a chance. I would love to meet and reconnect and learn about what you are most looking forward to in 2022.

All the best,

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

TRANSITIONS

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There are more than 4 million miles of public roadways across the United States carrying people and goods to their destinations every day. However, an ever-increasing volume of traffic leads to wear and tear and 43% of the nation's public roadways are classified as poor or mediocre condition.

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Produced in collaboration with *The ESC Plan / theESCplan.com*

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Lyles School of Civil Engineering

SUMMER COURSE

TEACHES HIGH SCHOOL STUDENTS TO

PLAN FOR TOMORROW

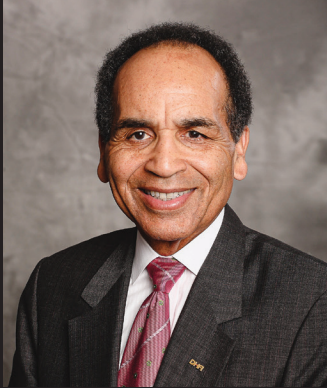
Over the summer, the Lyles School of Civil Engineering offered a one-credit course for high school students — Developing Infrastructure for Tomorrow: An Introduction to Civil Engineering. This weeklong course allowed 25 students from across the United States to understand how infrastructure is designed to accommodate tomorrow's needs through interactive and engaging coursework and a team final poster project. The poster project allowed students to work in teams and present their design to fellow classmates and civil engineering faculty, staff and students.



Delon Hampton and Stephen Bechtel Jr. helped shape and impact Purdue University for generations to come

IN MEMORIAM

In 2021, the Lyles School of Civil Engineering lost two of its greatest alumni and friends — Delon Hampton and Stephen Bechtel Jr. Here, we honor and remember their tremendous contributions to Purdue University, civil engineering and society as a whole.



DELON HAMPTON

Delon Hampton (MSCE '58, PhD '61, HDR '94), was the founder and chairman of the board of Delon Hampton and Associates (DHA), a professional engineering and consulting firm specializing in civil and structural engineering. He also taught at Kansas State University and oversaw research at the University of New Mexico before joining the faculty at Howard University, in Washington, D.C., in 1968, where he would teach, conduct research and publish papers for 25 years.

“Delon was a wonderful man and both liked and respected by a great many people,” said Kumares Sinha, the Edgar B. and Hedwig M. Olson Distinguished Professor of Civil Engineering. “When I think back on my earlier years at Purdue, I have fond memories of working together with him. He would often write to me on how he was doing and would always insist that whenever I was in Washington, D.C., that I should stop by his office and catch up.”

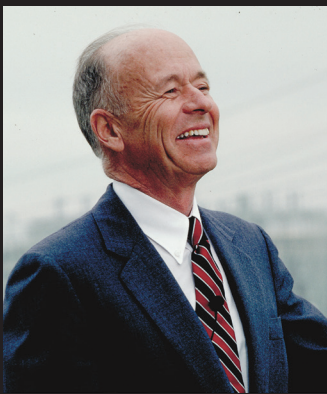
Founded in 1973, DHA won contracts for

such high-profile projects as the U.S. Capitol Visitor Center, international airports in Atlanta and D.C. and metrorail projects in D.C., Los Angeles and Atlanta. Key to its profile were the driving principles and traditions established by Hampton, who obtained professional engineering registrations in 18 states plus the District of Columbia.

He was elected ASCE president for the year 2000. He also served as president of ASCE's National Capital Section and as district director of the ASCE Board of Direction. The society honored him with the Edmund Friedman Professional Recognition Award and the James Laurie Prize. He also was elected to the National Academy of Engineering.

In 2012, in honor of his achievements and loyalty to Purdue University, Purdue's civil engineering building was renamed the Delon and Elizabeth Hampton Hall of Civil Engineering.

He died on January 14, 2021, at his home in Potomac, Maryland.



STEPHEN BECHTEL, JR.

Stephen D. Bechtel Jr. (BSCE '46, HDR '72), led Bechtel Corporation from 1960 to 1990. He was the patriarch of the Bechtel family and a third-generation CEO. Known as Steve Jr., he was a global figure in business, public affairs and philanthropy. He oversaw the company's growth into a world leader in the construction industry, building iconic infrastructure on six continents and pioneering new technologies, engineering and construction methods.

“Stephen — and Bechtel Engineering as a whole — were known throughout the world as one of the central figures in civil engineering,” said Kumares Sinha, the Edgar B. and Hedwig M. Olson Distinguished Professor of Civil Engineering. “For many years, it seemed, practically any major development project around the world was tied to Bechtel. Everyone in the industry knows and respects the name and their global impact is something that cannot be ignored.”

The firm's sales grew 11-fold, its employee

population five-fold and major projects from 18 to 119 during his tenure.

The Bechtel Innovation Design Center on Purdue's campus was named to honor Steve Jr.'s leadership gift through the S.D. Bechtel Jr. Foundation. Other significant Foundation investments in Purdue to foster educational innovation helped launch the School of Engineering Education, the world's first academic program in the discipline; the INSPIRE Research Institute for Pre-College Engineering; and the Ideas to Innovation (i2i) Learning Laboratory.

Highly recognized, Steve Jr. was elected to the National Academy of Engineering (of which he later served as chairman) and the French Legion of Honor; was named a Fellow of the American Academy of Arts & Sciences; and received a Purdue honorary doctorate, the Hoover Medal, and the National Medal of Technology and Innovation.

He died March 15, 2021, at his home in San Francisco.

ADDRESSING AMERICA'S AGING INFRASTRUCTURE

COLLABORATION WITH RESEARCHERS, GOVERNMENT AND INDUSTRY
KEY TO IMPROVING THE COUNTRY'S ROADS, BRIDGES



The American Society of Civil Engineers released its quadrennial report card on country's infrastructure in April. The report card assesses 17 areas of infrastructure, assigning an overall grade of C-. That's up from a D+ in 2017 and marks the first time the score was higher than a D since the ASCE began issuing its report card in 1998. It's an indication that the nation is headed in the right direction, but more work remains.

There are more than 4 million miles of public roadways across the United States carrying people and goods to their destinations every day. However, an ever-increasing volume of traffic leads to wear and tear and 43% of the nation's public roadways are classified as poor or mediocre condition.

"The interstate highway system was built in the 60s and 70s so we are reaching the end of that life cycle," said Darcy Bullock, Lyles Family Professor of Civil Engineering. "A key part of what we're focused on at Purdue is how to maintain our aging infrastructure and use the connected vehicle data available to make smart investments in infrastructure that address the most urgent priorities."

THE CROSSROADS OF AMERICA

Indiana is recognized as a leader among the states, thanks to a commitment to invest in infrastructure that began when University President Mitch Daniels was governor. In 2005, Daniels launched "Major Moves," an aggressive 10-year transportation plan to significantly improve and expand the state's infrastructure. As current Indiana Governor Eric Holcomb states, "For Indiana, 'Crossroads of America' is more than a motto, it's a mission."

The state ranked No. 3 in the country for infrastructure on CNBC's annual America's Top States for Business study, released in July 2021. Many innovations in the improvement, planning, construction and maintenance of infrastructure in Indiana emerge from the Joint Transportation Research Program at Purdue, which facilitates collaboration between the Indiana Department of Transportation (INDOT), higher education institutions and industry.

"More than \$650 billion worth of freight moves through or from Indiana every year," said Bullock, director of the Joint Transportation Research Program. "It is pretty important for our state to maintain high quality infrastructure and also to plan for the next generation of vehicles, including electric cars and connected autonomous vehicles."

A recent study by the Joint Transportation Research Program and Ford Motor Company examined how the quality of pavement markings (i.e. painted lanes) affect vehicles equipped with advanced safety features such as lane keep assist. The findings were published in the journal *Sensors* in September.

"Our findings illustrate how something as seemingly simple as paint on the road is critical to the safety of roadways," Bullock said. "A vehicle equipped with lane keep assist won't be effective if the sensors cannot detect the lane markings. Not only do well-marked roadways improve the visibility of lanes for high tech cars, they also help human drivers see better particularly at night or in inclement weather."

Identifying areas where road markings have deteriorated has been a time-consuming process where crews drive the roads and visually inspect the pavement. Now, data can be gathered from connected vehicles traveling on the roads to easily pinpoint where problem conditions exist.



Instrumented Ford vehicle (at right) used to populate database for roadway infrastructure condition maps.

"For the last 100 years, the automotive industry has built cars and civil engineers have built roads, but the two didn't interface," Bullock said. "Integrating our disciplines to plan for the future of transportation and infrastructure opens up a whole new frontier for civil engineering. Every time you go over a pothole, your vehicle knows it. As the number of connected vehicles on the road continues to grow, data about road conditions will be increasingly leveraged for infrastructure assessment."

MEETING THE CHALLENGE

Another key finding in the ASCE report card on infrastructure concerns bridges. There are about 617,000 bridges in the U.S., 42% of which are at least 50 years old. About 8% of them are considered structurally deficient. According to the American Road and Transportation Builders' Association 2020 Bridge Report, 178 million trips are taken across these structurally deficient bridges every day.

When some of those bridge components are rebuilt and replaced, the aging structures are relocated to the Steel Bridge Research, Inspection, Training and Engineering Center (S-BRITE) at Purdue. The first resident center of the Center for Aging Infrastructure (CAI), S-BRITE boasts three full-scale bridges and several sections of bridges taken from service.

"It is very beneficial for civil engineers to examine an actual specimen to understand what a certain type of corrosion looks like or how cracks occur and how to fix them," said Rob Connor, the Jack and Kay Hockema Professor of Civil Engineering and director of CAI and S-BRITE. "You can look at pictures and do the calculations, but touching a physical structure gives students a tactile opportunity that leads to greater understanding."

The multi-acre bridge component gallery at S-BRITE is the first of its kind for the steel bridge industry. Professional engineers and inspectors from around the country visit the center for hands-on training to identify fatigue cracks and other bridge stressors. Connor envisions a future role for the center to train dedicated infrastructure technicians, much like an appliance technician might receive training and certification from a trade school, except no such program exists for the bridge industry.

"As the design of structures gets more complex and existing bridges continue to age, the issues we encounter are more and more challenging and require specialized knowledge," Connor said. "The development of a cooperative program for bridge technicians in collaboration with a technical school or a dedicated bridge engineering track within civil engineering makes sense for Purdue because we are a leader in this field. We have the knowledge base to positively impact the future of infrastructure across the country."

Right: Walter W. Walb. Below: The Heller Family, Jill, Marsha, David, Grant, Richard and Brock



FAMILY LEGACY

ZEST FOR LIFE AND PASSION FOR
PURDUE REMEMBERED IN
MEMORIAL SCHOLARSHIP

The bonds created among the Boilermaker community often run deep and can cross generations. For the Walb and Jesse families, their Purdue ties extend back more than 60 years and include a recent collaboration to establish the Walter W. Walb Scholarship in Civil Engineering.

David (AG '91) and Jill Heller of Lake Geneva, Wisconsin established the memorial Scholarship in honor of his grandfather and were joined by longtime family friend, Bob Jesse, in creating the new scholarship. The collaboration reunites two former members of the Board of Trustees who both hailed from Fort Wayne, Indiana, and is the latest in personal connections which stretch back decades.

The Walter W. Walb Scholarship in Civil Engineering provides scholarships for undergraduate students enrolled in the Lyles School of Civil Engineering and is renewable for students.

Walb's daughter, Marsha Heller, remembers her father as a generous person and a professional businessman who was not only successful, but people oriented. "He was always interested in students and the education of Purdue students was important to him." Marsha went on to reflect that her dad, "sought out ways to reward academic excellence especially for students who could not afford it."

In addition to his business ventures, Walb found time to serve as the president of the Purdue Alumni Association (1951-53) and was one of the original life members of the Purdue Memorial Union. His service to Purdue University culminated in nine years as a member of the Purdue Board of Trustees. At his passing in 1976, Walb was remembered as a tireless advocate for Purdue and the official minutes of Purdue University mentions, "...to his fellow Trustees, University staff and a myriad of others, Walter will be remembered as one of the warmest and most delightful of human beings, with a magnificent zest for life and friendship."

Bob Jesse (CE '49) had the personal privilege to follow in Walb's footsteps, being another civil engineer appointed to the Board of Trustees, a role Jesse served for nearly 23 years.

Marsha Heller's own journey with Purdue continued later in life, as she graduated from Purdue-Ft. Wayne in 1984, joining at least six other members of the immediate Walb and Heller family as Boilermakers. Bob Jesse, serving then as president of the Board of Trustees, was on stage to hand her the cherished Purdue diploma and an encouraging word which is still remembered years later, "your Dad would be so proud."

The zest for life, the volunteer service with Purdue and the generous support for current and future students are hallmarks of the Walb, Heller and Jesse families and the three generations truly represent a Purdue for Life mindset. Marsha said it well when she noted, "Everything was Purdue."

Planning process documents inspiration for future support

There is a general consensus that success in life is a combination of personal drive and timely support. It can take many forms and from sources as varied as family members, academic advisors or workplace mentors. One Purdue alumnus has been motivated to give by his concern that many don't have the advantages and resources that he did and as a way of expressing his gratitude for help he received along the way.

The R.B Stewart Society recognizes donors who choose to include Purdue in their estate. We are grateful for all donors who make provisions of this kind and are able to acknowledge gifts in whatever combination of public recognition or privacy preferred by our alumni. It is an incredibly personal decision and we appreciate those who make plans of this kind.

Recently, an alumnus from the 1970s rekindled a conversation with Eric Putman, chief development officer, and Scott Hinkel, director of development, about his estate plans. While he has opted for anonymity, the alumnus was willing to share some of the motivation for his bequest which will address two important initiatives: student support and the Lyles School of Civil Engineering more broadly.

The new deferred gift agreement established with Purdue provides clarity for future administrators on how to fulfill his charitable intent, and gives him confidence as it outlines the

parameters for his future gift. "I designated Purdue a beneficiary of my IRA many years ago but taking the extra step to outline a gift agreement now assures me that my gift will be used for ongoing support of the school in ways that are important to me."

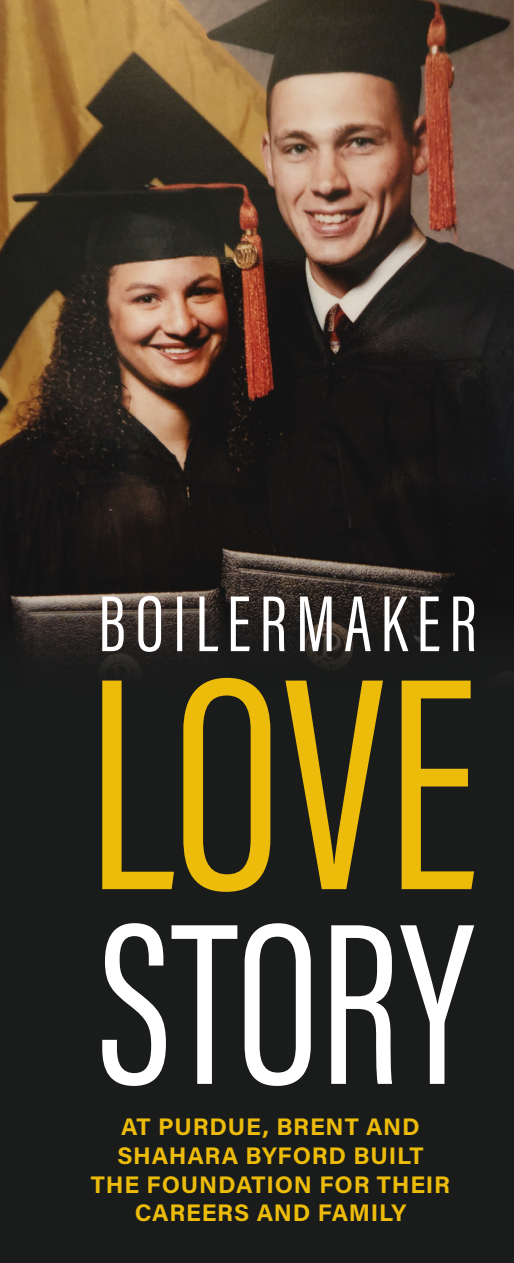
The gift establishes a financial needs-based scholarship with the first \$200,000 coming from his estate with the balance of his gift commitment creating a permanent endowment to benefit a broad array of projects and civil engineering initiatives.

He explained his interest in this way, "I believe a broadly unrestricted fund will equip Rao S. Govindaraju and future heads of the school with dollars to support strategic initiatives and the financial need scholarship was important to me. I also hope that by establishing these endowments others might be encouraged to make similar gifts."

Reflecting on the new gift decision, Govindaraju expressed his gratitude as he noted, "Unrestricted funds are often the margin of excellence for our teaching programs and research initiatives. Gifts like these help the Lyles School of Civil Engineering faculty purchase new equipment and help us adopt and develop new technologies like virtual labs. Students who will receive these scholarships will receive timely help with their tuition costs. The combination will be of great help to future Boilermakers!"

To learn more about the R.B. Stewart Society or to start a conversation about how to effectively communicate your future gift intentions, please contact Eric Putman at EAPutman@purdueforlife.org.





BOILERMAKER LOVE STORY

AT PURDUE, BRENT AND
SHAHARA BYFORD BUILT
THE FOUNDATION FOR THEIR
CAREERS AND FAMILY

When it came time for Shahara Nixon Byford (BSCE '01) to look at colleges, she was searching for a school with a strong engineering program and a competitive softball team.

A multisport athlete in high school, Nixon Byford played summer softball with the Orland Park Sparks of Illinois and was part of the team that won the 1996 Class A National Championship.

Though Purdue's softball team was only entering its third season in the Big Ten, the University's reputation for a world-class engineering education appealed to Nixon Byford. After a campus visit that affirmed Purdue's focus on balancing athletics with academics, she knew she was meant to be a Boilermaker.

"At Purdue, everyone in the athletic department reminded us we were student-athletes in that order," Nixon Byford said. "They were very much committed

to making sure I was going to succeed in engineering as well as on the softball diamond. And that support is a huge part of my success today."

Nixon Byford had aptitude in math and science, but she wasn't certain which field of engineering she wanted to pursue. The opportunity to gain experience in different disciplines through internships led her to a degree in civil engineering.

"I worked in a different internship each summer," she said. "It was a wonderful opportunity to explore different careers and find one that would be a great fit for me."

CIVIL FROM THE START

In contrast, Brent Byford (BSCE '01) knew he wanted to major in civil engineering before he applied to Purdue. Byford, who hails from Indiana, has brothers who work in construction. He'd taken engineering and architecture classes in high school, job shadowed a land surveyor and worked as a roofer. He was interested in attending a large school and after touring a few different schools, Purdue felt like the right fit.

Now married for 19 years, the story of how the couple met varies depending on who you ask. Brent Byford remembers noticing his future wife in some of the large engineering lectures freshman year.

"There weren't a whole lot of women to begin with," Byford said. "And Shahara walks in with bags of ice on her knees and sits down at the front of the class."

They both agree they didn't start to get to know one another until they pledged Chi Epsilon together. It wasn't until they were assigned to a group project in CE 454 as fifth-year seniors that the couple began dat-



Brent and Shahara Byford with their children, Kenzie, Parker and Brayden.

ing. Following graduation, they moved to Chicago to begin their careers in the construction industry.

Nixon Byford joined Pepper Construction, a company she interviewed with at the campus career fair. One of her first jobs involved changing air handlers on the roof of the Chicago Art Institute alongside fellow Boilermaker Jim Hill (BSMET '95), president of the Hill Group, one of the largest specialty contractors in Illinois.

"I'll never forget being up on that roof with another Purdue grad," Nixon Byford said. "I've worked with the Hill Group quite a bit over the years. There is such a great Purdue network in the Chicago area."

It was while Nixon Byford was at Pepper that the company's executives encouraged her to consider a transition to human resources where her operational experience would be a huge asset. She earned a Master of Science in Human Resource Management from Roosevelt University and is now vice president of human resources for Power Construction.

Brent Byford works for the Keller Group, a global geotechnical construction firm. He credits his undergraduate co-op experiences with guiding his career trajectory.

"I co-oped for three semesters as a structural engineer," he said. "And I realized pretty quickly that it was definitely not the path for me. My roommate and I went down to Texas for a summer internship with Walsh Construction and I loved everything about it. I knew then that my future was in construction."

The couple has remained involved at Purdue, visiting campus with their three children, guest lecturing in classes together and donating to support civil engineering and the softball team.

"We've had enough good fortune that we're in a position to give back," Byford said. "It's fun to be back in the classroom and meet the current students. I know that some of them come from backgrounds similar to mine, where if it weren't for companies giving us a chance, we might not have the same opportunities. So it's extremely important to us that we play a role in providing that access and those opportunities."

And who knows how many of today's students might leave with more than their education.

"There is such a sense of pride that goes with earning a Purdue degree," Nixon Byford said. "I'm eternally grateful for everything Purdue has done for my career. And I got to meet my husband there, too. So that's a huge bonus."



Hugh and Audrey Kleasen as students at Purdue and in 2018. They married on June 6, 1953, and together they enjoyed 66 ½ years of marriage

DAUGHTER HONORS PARENTS' DEVOTION TO PURDUE

Hugh (BSCE '53, MSCE '54) and Audrey Kleasen (BSAG '52) both hailed from Buffalo, New York, but they didn't meet until after they arrived on Purdue's West Lafayette campus.

"My dad was renting a room on a farm in Tippecanoe County and he went looking for a meal at the Wesley Foundation," said Kim Kleasen, the couple's daughter. "My mother was there serving dinner and that was the start of their story."

Married in 1953 after Hugh finished his bachelor's degree, the Kleasens eventually settled in Cuyahoga Falls, Ohio, where they raised their family. Kim Kleasen remembers rooting for the Boilermakers during football season. Her mother taught her the Engineer's Yell, chanted by students during the 40s and 50s.

E to the X, DY DX
E to the X, DX!
Cosine, secant, tangent,
Sine, 3.14159!
Square root, cube root, BTU,
Slipstick, slide rule,
Yeah Purdue!"

The Kleasens loved their time at the University and believed in the transformative power of higher education as a pathway to an enriching life.

"Each of them came from families with a legacy of education, even though neither had families of great means or wealth," Kim Kleasen said. "As my parents moved through their lives and developed a bigger sense of philanthropy, they chose to fund a scholarship for civil engineering students and made provisions in their estate plans to fund a professorship in civil engineering."

Following her parents' deaths, Kim Kleasen has been collaborating with the civil engineering development team to realize the couple's vision for their Purdue legacy.

"Purdue was a very special place for both of my parents," she said. "They returned to campus often. By establishing a named professorship in civil engineering, they will always be tied to Purdue. It's gratifying to me to carry out one of my parents' biggest wishes."



STUDENT Q&A

MEET CIVIL ENGINEERING SENIOR AND SCHOLARSHIP RECIPIENT DELANEY LEWIS

WHY DID YOU CHOOSE PURDUE CIVIL ENGINEERING?

I grew up in Indiana, so I was already very much aware of how great Purdue was and how strong its engineering programs are. Now, in my senior year, I couldn't be happier with my decision to come here. I have learned so much and made so many great friends and had so many incredible experiences along the way.

WHY DID YOU DECIDE TO PURSUE A CIVIL ENGINEERING DEGREE?

I've always loved buildings and design work so I had a pretty good idea that civil engineering was what I wanted to pursue. After my freshman year, I really loved the CE classes and that made me feel even more confident in my decision.

HOW HAS YOUR SCHOLARSHIP AT THE LYLES SCHOOL OF CIVIL ENGINEERING HELPED YOU?

Receiving my scholarship really allowed me to focus fully on my studies while also being able to be part of academic and social student groups. Without it, I would not have been able to participate in the industry mentor program. My scholarship allowed me to have the flexibility to meet with my mentor on a regular basis and I received a lot of guidance through it.

WHAT IS SOMETHING YOU LEARNED ABOUT CE AS A STUDENT?

What surprised me was just how versatile civil engineering actually is — especially at Purdue with its nine different concentrations. It gives you so much flexibility to really find what you want to focus on for a career.

WHAT ARE YOUR GOALS AFTER YOU GRADUATE?

First, I plan to pursue a master's degree in civil engineering here at Purdue. I also aim to become a licensed structural engineer. As for what I would like to do in my career, I've always been interested in high rise and building design.

ALUMNI AWARDS

The Distinguished Engineering Alumni Award and the Civil Engineering Alumni Achievement Award are among the highest honors bestowed by the Purdue College of Engineering and Lyles School of Civil Engineering, respectively. In 2021, one Purdue Civil Engineering alumnus received the DEA Award and five alumni received the CEA Award.

DISTINGUISHED ENGINEERING ALUMNI AWARD

The College of Engineering's DEA 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/alumnae are engaged in cutting-edge engineering work, and their record of accomplishments is indicated by their growth into positions of increasing responsibility.



ANDREA RINALDO

Andrea Rinaldo (PhD '83), professor of hydrology and water resources and director of the Laboratory of Ecohydrology at the Swiss Federal Institute of Technology, is a top authority in the field of ecohydrology — a field which he co-founded and

helped define. His theory of self-organized fractal river networks and efficient transport networks is globally renowned. With his commitment to the subject, he directs the Lab of Ecohydrology, blending laboratory and field work with theoretical modeling to develop an integrated ecohydrological framework to understand for instance the spatial ecology of species, biodiversity in river basins, population dynamics, biological invasions along waterways and the spread of waterborne and water related diseases.

Drawing on wisdom gained from nearly 40 distinguished years as a global leader in his field, Rinaldo offers this guidance to today's Purdue students: "Follow your vocation if you feel you have one without agonizing on whether you should pursue it in spite of its uncertainties."

CIVIL ENGINEERING ALUMNI ACHIEVEMENT AWARD

The primary criterion for the CEAAA is excellence. The award applauds career achievements and contributions to the civil engineering profession. The recipients are selected by a faculty committee and approved by the entire civil engineering faculty. With the Civil Engineering Alumni Achievement Awards, we reaffirm our commitment to be the nation's preeminent civil engineering program by reflecting on what some of our most distinguished graduates have accomplished in their illustrious careers.



WILLIAM BAILEY JR.

After earning his master's degree, William Bailey Jr. (BSCE '88, MSCE '89) accepted a position with Crawford, Murphy and Tilly in Springfield, Illinois. He spent the first 15 years of his career focusing on structural engineering projects ranging from major river and interchange bridge designs to buildings and water and wastewater treatment projects. In 2004, CMT opened a branch office in Indianapolis and asked him to return to his home state and serve as manager. In 2018, Bailey became the sixth President of CMT in its 72-year history.



THOMAS CHANCE

Thomas Chance (MSE '83) founded C&C Technologies in 1992. It was the first company in the world to offer autonomous underwater vehicle survey services to the oil industry. In April of 2015, he sold C & C Technologies to Oceaneering International. In 2010, Chance started ASV Global LLC which developed autonomous surface vehicles. ASV soon became the largest unmanned vessel company in the world. He then sold ASV Global in 2018 to a major defense contractor where he remained in his leadership position until his retirement in June 2019.



TIMOTHY JACOBS

Timothy Jacobs (BSCE '84, MSCE '85, PhD '88) started his professional career as an assistant professor of engineering at Duke University. In 1996, he joined the newly-formed research group at Sabre Inc. where he helped develop and implement some of the first revenue management, scheduling and fleet assignment models and practices used in the airline and hotel industries today. After holding executive roles at American Airlines and U.S. Airways, Jacobs joined Amazon in 2016 as the director of research science, where he directs numerous strategic development efforts worldwide.



CARRIE WARNER

After completing a master's in architecture, Carrie Warner (BSCE '95) joined Halvorson and Partners, a structural engineering firm in Chicago. Within her first year with the growing group, Warner was handling construction administration for a 37-story tower on the Chicago River. By 2006, Warner was a senior project engineer on such significant projects as the 85-story Index Building in Dubai and 118-story Russia Tower (unbuilt) in Moscow. For over 20 years, she has practiced with colleagues at this same firm, which in 2016 joined WSP.



TIMOTHY WILSCHETZ

Following graduation, Timothy Wilschetz (BSCE '83) worked for C. Rallo Contracting Company in St. Louis and the Sverdrup Corporation before moving to New York to pursue an MBA at Columbia University in 1989. He joined Merrill Lynch's public and project finance group in 1991, and subsequently led transportation finance teams at both Lehman Brothers and Morgan Stanley. In 2008, Wilschetz joined KPMG's Global Infrastructure Advisory group and during his 10 years there led the financial advisory work on eight "Deals of the Year," including the State of Indiana's \$2.6 billion Ohio River Bridges project. Upon retirement in 2019, Wilschetz accepted an adjunct professorship with the Lyles School of Civil Engineering.



LASTING COMMITMENT

Deep appreciation for professor's research inspires Shetterleys to support innovation lab

A professor's inspiring research has sparked an incredible gift to a Lyles School of Civil Engineering laboratory.

In October 2021, the Purdue University Board of Trustees ratified a \$1.1 million gift made by Specification Products Inc. The gift goes to further the education and research efforts at the Sustainable Materials and Renewable Technology (SMART) Laboratory renamed the Joe and Lisa Shetterley Innovation Lab in recognition of the gift.

"After seeing the amazing work and research being done through our partnership, I felt like this was something I should do to further support it," said Joe Shetterley, president and CEO of Specification Products. "The work being done at Purdue and in this lab is of great importance to people."

Na "Luna" Lu, ACPA Professor of Civil Engineering, has been named the inaugural director of the lab.

"Dr. Lu is the key reason why I felt compelled to make this gift," Shetterley said. "We partnered with Dr. Lu and her lab in 2019 for research on concrete and from there our relationship grew and I gained such a deep appreciation for what she does. Seeing her work and her passion for more than just academic research and making a lasting impact on society, I knew we had to continue working with her as much as possible."

Megan Gumbel, executive vice president at Specification

Products, said the relationship developed between the company and Purdue Civil Engineering has already proven to be of immeasurable benefit.

"What we witnessed with Dr. Lu was her passion for research and education, her incredible working relationship with her students, and how she navigates her professional relationships to make an impact on industry and society at large. All of these qualities were beyond impressive to us," Gumbel said. "You can tell she genuinely cares about what she's doing and the people she's working with. From our very first encounter with her, we knew we had to make this a lasting partnership."

Lu said she feels that she and her lab have also benefited tremendously and she "is very grateful for the partnership."

"I've always felt like civil engineering's true purpose is to work toward benefiting others and society," Lu said. "Our work is meant to contribute to society and I look forward to seeing what we can accomplish together. I feel very fortunate to be where I am, and I greatly respect and appreciate what Joe and his company have done. This gift will result in a great benefit to research and education in civil materials engineering. As a result, it will make a profound impact in civil engineering and our society at large."

GREETINGS FROM ERIC PUTMAN

CHIEF DEVELOPMENT OFFICER // LYLES SCHOOL OF CIVIL ENGINEERING

Over the past year, there have been repeated reminders of just how important civil engineering is to society. You may recall last winter, Texas was within minutes of losing its electrical grid and the ability to power and heat major cities. In the southeast, sudden and unexpected tragedy struck when a Miami condominium facade collapsed in the middle of the night. Repeatedly, we were reminded of aging roads and bridges as legislators in Washington, D.C., debated the merits of various transportation infrastructure bills. And in March of this year, the Ever Given cargo ship crashed into the side of Suez canal and we were shown how significant international waterways are to the global economy.

Throughout this year we have been reminded that civil engineering is not only interesting, it is critically important.

Thanks to the generosity of alumni and friends, the 567 undergraduate students and the 393 graduate students enrolled in the Lyles School of Civil Engineering this year are being well trained to make their mark on the world. Their lives as Boilermakers are only beginning and over the course of their careers, they will join a robust community of Purdue alumni who are expected to address great challenges around the world. They will begin their first steps into a lifelong identity as a Purdue-trained engineer.

The spirit of the lifelong community is expressed on campus as well. We are all becoming more familiar with the Purdue for Life Foundation identity which combined Purdue's development function (University Development Office) and alumni engagement (Purdue Alumni Association) into one integrated organization.

The connection to your alma mater does not end with graduation and the Purdue for Life Foundation has three significant tenets; Stay Connected, Get Involved and Give Back.

Many of you reading this magazine have made those principles your own. We are grateful that you have stayed connected. We are grateful that you have chosen to get involved. And we are incredibly appreciative of your decision to fund scholarships, support faculty and the research and teaching mission of Purdue. You are contributing to the future opportunities of this generation of Boilermaker students and I hope you enjoy some of the personal stories we have been able to highlight in this edition of *Transitions*.

There is one additional point of pride to share with you: thanks to your generosity, 170 of the 567 undergraduate students received scholarship support this year representing nearly 30% of the Lyles School undergraduate students. I find that simply amazing and appreciate all of the investments which have been made over the year to make this level of scholarship support possible.

I hope you are encouraged to know the difference you are making in the lives of today's students, and I trust you will read and enjoy the insights on how much we value your partnership.

We continue to be grateful for the many ways you demonstrate your personal commitment to the Lyles School of Civil Engineering at Purdue. If you would like to start a new conversation about how you can Stay Connected, Get Involved and/or Give Back, I encourage you to email me at EAPutman@purdueforlife.org.

Hail Purdue – and Boiler Up!



Eric Putman
Chief Development Officer, Lyles School of Civil Engineering
University Development Office, Purdue for Life Foundation



“ The connection to your alma mater does not end with graduation and the Purdue for Life Foundation has three significant tenets; Stay Connected, Get Involved, and Give Back. ”



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