

The Trend in **ENGINEERING**

UNIVERSITY OF WASHINGTON COLLEGE OF ENGINEERING NEWSLETTER AUTUMN 2017



UW advances
the future of
neural engineering

Pages 4-5

FROM THE DEAN



We're looking forward to welcoming students back to campus for a new academic year. Our new Direct to College admission program will go into effect for the freshman class of 2018, meaning that students who apply to the UW this fall for first-year admission in 2018 will be eligible. Though it doesn't open more seats to qualified students — that will require additional state investment — this new policy will provide incoming students with the certainty that they can pursue a UW engineering degree.

We continue to work with the state to address our capacity issues to better meet student and workforce demand. This year the UW pursued state funding to expand high demand degrees in engineering and computer science. It was a difficult budget year as the state focused on funding K-12 education. The UW received \$2 million over the biennium to provide for 60 more enrollments in engineering and computer science. We will continue to partner with the state on funding so we can better serve our community and allow Washington students to pursue their professional aspirations.

I hope you'll enjoy this issue, which features stories about neural engineering and the Career Center @ Engineering. Our year will be filled with many events and activities, including our annual fall lecture series, highlighted on page 12. If you cannot join us for it, please look for it on UWTV or visit us on campus for another event.

Mike Bragg
Frank & Julie Jungers Dean of Engineering

Welcoming a new class of innovators

Several exceptional faculty members will join the College this year. We highlight two below. Meet them all at enr.uw.edu/newfac2017

Corie L. Cobb

**Associate Professor, Mechanical Engineering
Washington Research Foundation
Innovation Professor in Clean Energy**

Corie L. Cobb joins us through a Washington Research Foundation Professorship in Clean Energy and holds a joint position in ME and the Clean Energy Institute. She previously worked at the Palo Alto Research Center (PARC), Inc., where she developed advanced

manufacturing technologies for solar cells, batteries and high strength and high toughness materials. She has also held positions at Applied Materials, Hewlett-Packard, Bell Labs, Google and Toshiba.

Cobb received her Ph.D. in mechanical engineering from UC Berkeley in 2008. At the UW, she will investigate manufacturing and design methods that enable next-generation energy storage devices and multifunctional materials.



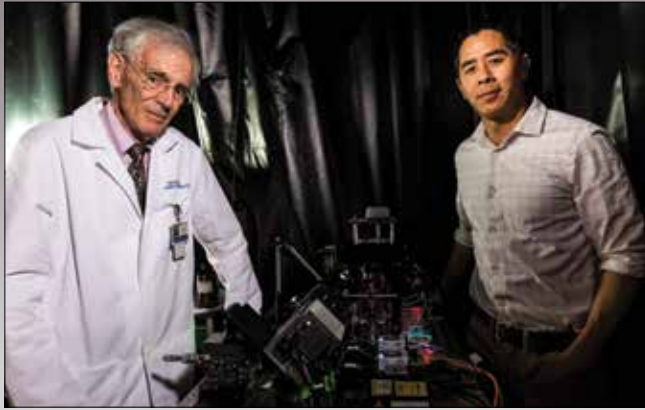
Siddhartha Srinivasa

Boeing Endowed Professor in Computer Science & Engineering, Paul G. Allen School of Computer Science & Engineering

Siddhartha "Sidd" Srinivasa joins us from Carnegie Mellon University, where he was Finmeccanica Chair in Computer Science and founder and director of the Personal Robotics Lab.

Throughout his career, Srinivasa has made significant contributions to the field of robotics, including advances in motion planning, state estimation, information gathering and shared autonomy. His research in robotic manipulation is focused on enabling robots to perform complex tasks in dynamic environments, with and around people. Srinivasa built HERB, the one-of-a-kind Home Exploring Robot Butler, to serve as a testbed for new algorithms, software and other technologies that will help robots engage in robust interactions with their human counterparts.





3-D microscope can examine biopsies and scan tumors during surgery

When women undergo lumpectomies to remove breast cancer, doctors try to remove all the cancerous tissue while conserving as much healthy tissue as possible. But currently there's no reliable way during surgery to determine whether the excised tissue is cancer-free at its margins — the proof doctors need to ensure that they removed the entire tumor. It can take several days for pathologists to process and analyze the tissue.

That's why many women undergo multiple breast-conserving surgeries — to remove cancerous cells missed during their initial procedures.

A new microscope invented by a team of UW mechanical engineers and pathologists could help solve this, and other, problems. It can rapidly and non-destructively image the margins of large fresh tissue specimens with the same level of detail as traditional pathology — in no more than 30 minutes.

"Surgeons are sort of flying blind during these breast-conserving surgeries," said mechanical engineering associate professor Jonathan Liu. "If we can rapidly image the entire surface or margin of the excised tissue during surgery, we can tell them if they still have tumor left in the body or not. And that would be a huge benefit to cancer patients."

First battery-free cellphone makes calls by harvesting ambient power

A team of UW computer scientists and electrical engineers has invented a cellphone that requires no batteries — a major leap forward in moving beyond chargers, cords and dying phones. Instead, the phone harvests the few microwatts of power it requires from either ambient radio signals or light.

"We've built what we believe is the first functioning cellphone that consumes almost zero power," said Shyam Gollakota, associate professor in the Paul G. Allen School of Computer Science & Engineering. "To achieve the really, really low power consumption that you need to run a phone by harvesting energy from the environment, we had to fundamentally rethink how these devices are designed."

RESEARCH

Drone vs. truck deliveries: Which create less carbon pollution?

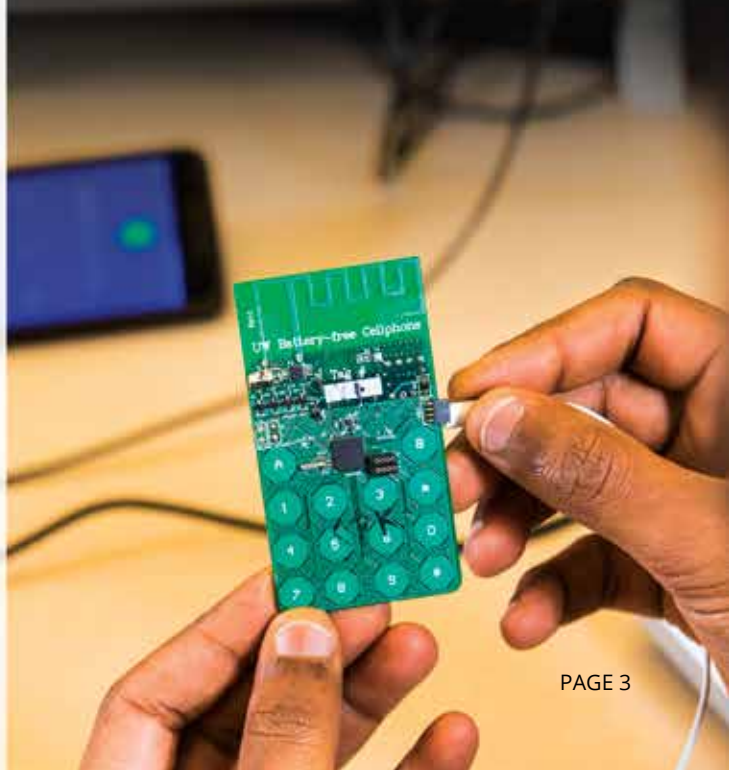
UW transportation engineers have found that delivering packages with drones can reduce carbon dioxide emissions in certain circumstances when compared to truck deliveries.

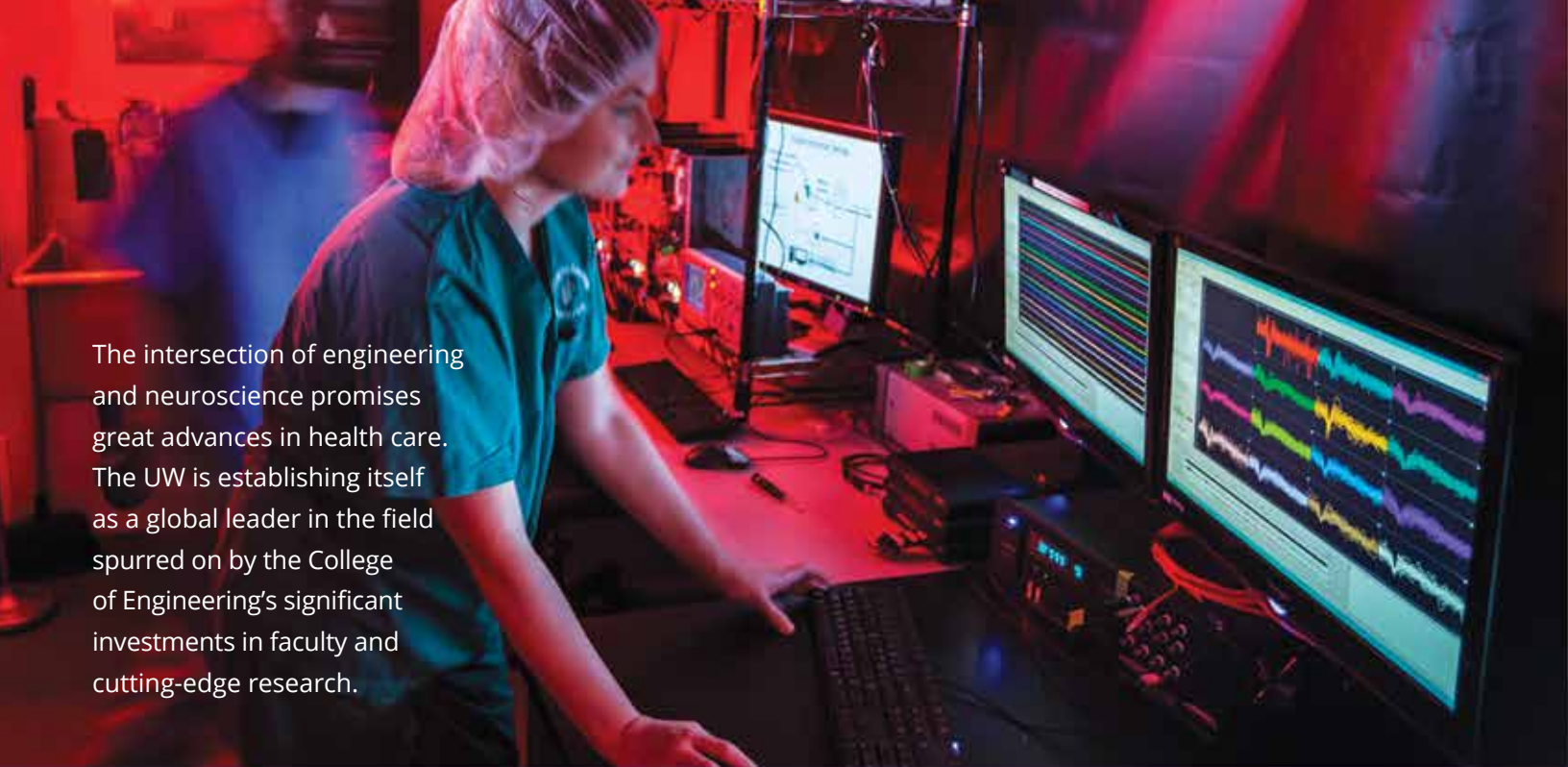
According to their study, drones tend to have carbon dioxide emissions advantages over trucks when the drones don't have to fly far to their destinations or when a delivery route has few recipients.

Trucks — which can offer environmental benefits by carrying everything from clothes to appliances to furniture in a single trip — become a more climate-friendly alternative when a delivery route has many stops or is farther away from the warehouse.

For small, light packages, drones compete especially well. But carbon benefits erode as package weight increases, since these unmanned aerial vehicles must use extra energy to stay aloft with heavy loads.

"Flight is much more energy-intensive — getting yourself airborne takes a lot of effort. So I initially thought there was no way drones could compete with trucks on carbon dioxide emissions," said civil and environmental engineering professor Anne Goodchild. "In the end, I was amazed at how energy-efficient drones can be. Trucks compete better on heavier loads, but for really light packages, drones are awesome."





The intersection of engineering and neuroscience promises great advances in health care. The UW is establishing itself as a global leader in the field spurred on by the College of Engineering's significant investments in faculty and cutting-edge research.

Investing in innovation: UW advances the future of neural engineering

A woman with a spinal cord injury recovers the ability to use her once-paralyzed hands. A man with Parkinson's disease alleviates his symptoms thanks to deep brain stimulation. A stroke survivor regains control of motor skills.

Using brain recording and stimulation to bring artificial or paralyzed limbs to life and restore function may sound like science fiction, but every day UW engineers are collaborating with researchers throughout campus to make this a reality.

Neural engineering is a rapidly growing area of research, and the UW has risen to prominence in the field by leveraging partnerships across UW Medicine, UW Engineering and UW Arts & Sciences.

Through research hubs like the Center for Sensorimotor Neural Engineering (CSNE), housed in the College of Engineering, neurosurgeons and scientists collaborate with neuroethicists and engineers to develop devices that enhance health, function and independence for people with disabilities. Their goal is to engineer ways to empower the brain and spinal cord to recover from injury, inventing new treatment for patients.

To build on the momentum, UW Engineering is recruiting new faculty who will bring expertise in emerging technologies for brain recording and manipulation and expand collaborations across campus.

"The University of Washington is uniquely equipped to be the world leader in neural engineering," said Michael Bragg, the Frank & Julie Jungers Dean of Engineering. "Our outstanding faculty across campus and at UW Medicine provide a strong

foundation for the UW. Our new faculty hires represent a transformative addition to an already world-class team that will solidify and expand our national profile in the field."

Transformative faculty recruitment

These new faculty members will join a UW community already working toward better understanding and interventions in nervous system function.

"These high impact hires in neuroengineering will provide complementary skills to our UW teams to accelerate advancements and make a difference for people with stroke, traumatic brain and spinal cord injury, multiple sclerosis, Parkinson's disease, paralysis and other mobility problems," said Cecilia Giachelli, the W. Hunter and Dorothy Simpson Endowed Chair in Bioengineering (BioE).

By January 2018, three leading researchers will have joined the UW Engineering faculty through appointments in BioE and Electrical Engineering (EE). All will work as part of CSNE's research team:

Andre Berndt came to the UW in January 2017 as an assistant professor in BioE. A protein engineer specializing in the development of next-generation optogenetic tools — tools using light to control cells in living tissue — for brain stimulation and recording, Berndt received his Ph.D. in 2011 from Humboldt University in Germany. His research focuses on the development of bio-sensors and actuators to monitor and control cell activity.

Azadeh Yazdan-Shahmorad, who holds a Ph.D. from the University of Michigan (2011), joins the UW this autumn as the Washington Research Foundation Innovation Assistant Professor of Neuroengineering in BioE and EE. She has developed ways to implement optogenetics in non-human primates and rats to study

plasticity in sensorimotor connections. Ultimately she hopes to use neural technologies to develop stimulation-based therapies that help restore function and mobility in people with neurological disorders.

In January 2018, **Amy Orsborn** will join the UW as the Clare Boothe Luce Assistant Professor in EE and BioE. Her research explores how the brain learns complex skills and how to combine brain adaptation with machine learning to create natural, intuitive interfaces for patients. A 2013 Ph.D. graduate of the UC Berkeley-UC San Francisco bioengineering program, Orsborn is interested in improving brain-machine interfaces to restore motor function.

Together we will

"As part of CSNE's research team, these new faculty members will help propel us to our goal of building devices to engineer



plasticity and improve function following stroke, spinal cord injury and other neurological conditions," said Rajesh Rao, co-director of CSNE and professor in the Paul G. Allen School of Computer Science & Engineering. "These hires have already turned heads in the field and will cement UW's position as one of the top institutions in neural engineering."

In addition to EE, BioE and CSNE, partners in this banner faculty recruitment include the UW's Institute for Neuroengineering, the Washington Research Foundation, the Washington National Primate Research Center, Molecular Engineering & Sciences Institute and the Institute for Stem Cell & Regenerative Medicine.

"Hiring extraordinary faculty members in the area of rehabilitation technologies and devices for spinal cord injury and stroke strengthens our ongoing work," said Radha Poovendran, professor and chair of EE. "The barrier to collaboration is indeed zero at UW."

Rajesh Rao named Cherng Jia and Elizabeth Yun Hwang Endowed Professor

After their daughter Karen's car accident and spinal cord injury, EE alumnus Cherng Jia Hwang (Ph.D. '66) and Elizabeth Yun Hwang (MLIS '65) sought care that would improve their daughter's overall quality of life.

They learned about treatments that could someday transform paralysis diagnoses. However, there were no solutions offering immediate impact for those already suffering from spinal cord injury.

The Hwangs wanted to do more. With a passion for innovation and a commitment to those suffering from spinal cord injury, they launched The Cherng Jia and Elizabeth Yun Hwang Endowed Professorship. Housed in the UW's EE department, the professorship is built on the Hwangs' vision of making life better for those with paralysis. It supports the critical advancement of rehabilitation technologies for spinal cord injury and stroke.

In June, Allen School professor and CSNE co-director Rajesh Rao was named the inaugural Cherng Jia and Elizabeth Yun Hwang Endowed Professor.

"The professorship is an honor," Rao said. "I regard it as a recognition of the great collaborative effort of CSNE students, faculty and staff over the past six years that has made the UW a premier global destination for neural engineering."

This gift comes in the midst of the UW's most ambitious philanthropic campaign in its history, "Be Boundless — for Washington, For the World," which seeks to raise \$5 billion by 2020.

"The selection of Professor Rao is ideal," Hwang said. "His work lays the groundwork for research on developing



a device-based rehabilitation technology to improve the quality of life of people with spinal cord injury and brain damage."



Career connectivity

Engineering career center links future engineers and employers

By Chelsea Yates

Thanks to the Career Center @ Engineering (CC@E), mechanical engineering senior Katherine Chun spent her summer developing satellite technology through an internship at NASA's Glenn Research Center.

Chun learned about CC@E shortly after it opened in September 2015 as she was planning a networking event for the UW's ASME chapter.

Impressed by the CC@E staff's attentiveness and warmth, she decided to seek their help for internships. "The Center seemed to understand what engineering employers want and was equipped and excited to help me land an internship that would be a great fit," she explained.

She worked with Center staff at nearly every stage of the process: understanding how to initiate conversations with recruiters, polishing her cover letter, navigating intimidating online applications and honing in-person interview skills.

"I wasn't taught these skills in my engineering classes, so the Center really filled a void," she said.

CC@E serves everyone from new undergraduates looking for professional experiences to help them choose an engineering major to active job-seekers to graduate students and alumni. It also functions as an entry point for employers seeking to hire engineering professionals.

"The College of Engineering is naturally suited as a hub to connect potential employers to future engineers," said CC@E's director Gail Cornelius, a degreed engineer who worked at The Boeing Company for almost 18 years before opening the Center. "As the demand for engineers grows in Washington and beyond, the Center wants to be in the forefront of connecting employers with students."

Supporting student career development

A collaboration between the UW Career & Internship Center and the College of Engineering, CC@E offers a full range of career services: honing resume-writing and interviewing skills that are put to the test during career fairs and recruiting events, connecting students with internship or job opportunities, offering guidance on everything from salary negotiation to networking and using social media effectively.

"It's never too early for students to start exploring career options, and we tailor our services to individual students' needs," said Cornelius.

Internships are an important way for students to discern what kind of corporate culture they're comfortable working in, or whether they really are attracted to the work that a chemical or civil engineer does. CC@E helps students identify such opportunities, as well as how to get credits that fit into their academic and professional trajectory.

A collaboration between the UW Career & Internship Center and the College of Engineering, the Career Center @ Engineering connects engineering students and employers.





This is something that Chun can attest to.

“Along with receiving guidance on opportunities specifically relevant to me as an engineering student, like my NASA internship, I’m learning how important it is to think about personal career development in a broader sense,” she said.

A “one-stop shop” for employers

In addition to supporting students, CC@E collaborates with companies to develop individualized campus recruiting strategies. The Center assists employers who may be hiring across a range of disciplines —materials or electrical engineers, students with expertise in construction, bioengineering, manufacturing or aerospace — by offering a single point of contact to reach all of the UW’s 10 engineering units, as well as corporate and foundation relations representatives.

“If a company wants four different kinds of majors, they can come to the Center and easily access any and all talent,” Cornelius explained. “We are the ‘one-stop shop’ at the College of Engineering for corporate employment and internships.”

The Center aims to make it easier for local employers to gain access to UW students who can fill that talent pipeline.

“Engineers are critical to the economy, and I’ve come to rely on Gail and her team to provide guidance on how best to reach UW students,” said Brad Stevenson, a Boeing recruiter who hires for internships and entry-level positions company-wide.

“The Center has helped us with everything from finding space on campus for information sessions and interviews to identifying broader recruiting strategies to fill roles,” he added. “It’s great knowing we have a partner on campus who understands and can speak to our hiring needs.”

CC@E staff are especially interested in helping employers broaden their scope when considering how to hire. “If recruiters come to us interested in hiring, say, electrical engineering majors, but we know of HCDE or industrial engineering students who have the desired characteristics, we’ll make the connection,” said Cornelius.

“Majors don’t always define careers, and we’re happy to facilitate conversations with employers to determine what skills are necessary for that next-generation workforce they’re looking to fill,” she added.

Next steps

Since opening its doors two years ago, CC@E has reported positive impact in student and employer engagement. In its first year, Center staff assisted more than 2,200 engineering students and reported a 15% increase in traffic in its second year.

Last year alone, the Center hosted more than 500 employers to recruit and interview students, lead information sessions and participate in career fairs.

Additionally, more than 700 job and internship interviews took place on campus with engineering students.

Though these numbers may seem impressive, Cornelius is eager to increase them.

“UW Engineering’s new Direct-to-College admissions process will give us more opportunities to work with students from the time they start at UW, which is important because students should be thinking about career development as early as possible,” she said.

While CC@E currently touches about 35% of the engineering student body, she wants to increase this number to over 50% in the next two years.

“Professional development is as important to future engineers as their academic excellence,” Cornelius said. “The more we can do to help the UW Engineering community understand this, the better.”

CC@E is committed to meeting the needs of students on a one-on-one basis, something that has already had a big impact on many future engineers, like Chun.

“Working with the Center has completely changed my outlook on job-searching,” she said. “Instead of being intimidated by it, I feel prepared and excited.”

Read more about CC@E opportunities for students and employers at enr.uw.edu/current/careercenter



STUDENT EXPERIENCE

Aiming for the STARS

By Chelsea Yates

Launched in 2013, the STARS academic redshirt program is designed to increase the number of students from economically and educationally disadvantaged backgrounds who graduate with UW engineering degrees by providing them with extra academic support, community, mentoring and funding. STARS students participate in a “redshirt” year their first year during which they develop study skills and deepen their foundation in math and science to help them succeed in their engineering studies.

With this redshirt year, STARS students typically spend five years at the UW. However, we are pleased to highlight and congratulate three students from STARS' first cohort who completed the program — and their engineering degrees — in four and graduated last spring.

Learn more about STARS
at enr.uw.edu/current/stars

Jasmine Fuerte-Stone

Major: Bioengineering

Hometown: Vancouver, WA

Why bioengineering?

I became interested in bioengineering because of its direct impact on improving quality of human lives. I was initially interested in prosthetics, but I changed focus several times while in the major. Bioengineering is a broad field, and I didn't know that I would be exposed to so many areas. I knew that it would be a very competitive program, but STARS set me up for success in many ways.

What's the most memorable part of STARS?

My second year at the UW, I tutored first-year STARS students and truly enjoyed it. That experience led me to apply for a few part-time tutoring jobs on campus. I worked as a tutor in the Engineering Academic Center and CLUE (Center for Learning and Undergraduate Enrichment). I also partnered with another bioengineering student to set up a BioE study center where students can mentor other students. I had no idea I enjoyed teaching and mentorship as much as I do. STARS opened that up for me.

STARS also provided foundational coursework and helped me strengthen my problem-solving skills. It introduced me to a support network of friends, study partners and mentors right from the start. And it taught me how to balance priorities, responsibilities and interests.



What are you up to now?

At the UW, I worked in bioengineering assistant professor Jennifer Davis's lab, where the research focuses on applying molecular and genetic engineering to study fibrotic wound healing. In particular, how — at the cellular and molecular level — tissue, especially in the heart, repairs itself. After graduating, I changed paths through an internship at the Infectious Disease Research Institute focusing on vaccines. I enjoyed all research I did in my undergraduate career, and I'm still figuring out what I want to focus on in the long term. Once I have a better grasp on that, I plan to return to school for a Ph.D., and am excited to see where new opportunities will take me.

Courtney Seto

Major: Industrial & Systems Engineering

Hometown: Vancouver, WA

Why industrial engineering?

I took a career placement test in high school, and the results suggested that I consider industrial engineering. At the time I had no idea what that was, but it sounded interesting: people-focused engineering with a business angle. STARS exposed us to the many different areas of engineering. I found myself gravitating to industrial engineering, and I'm glad I did — it was a great fit. So I guess sometimes those job placement tests you take in high school are accurate. Who knew?!

What was the best part about STARS?

Definitely the community. STARS students are from underserved communities across Washington, and many of us wouldn't have the opportunity to pursue engineering without STARS. Our first year, we took most of our classes together, and we studied together all the time. It was like having a built-in support network based on shared experiences and interests. STARS helped make the UW (which seemed huge and overwhelming) small and inviting.

Without STARS, I would have struggled greatly. I didn't know what I didn't know, and STARS filled in a lot of blanks. For example, I had no idea how important internships are for engineering students, or why students should get involved early in research. I feel that I owe a lot to STARS.

What are you up to now?

I'm in a job rotation program at Honeywell Aerospace. Over three six-month intervals, I'm immersed in key areas of industrial and systems engineering: industrial production, data analysis and supervision. I'm excited to put my degree to work.



Tuyen Truong

Major: Human Centered Design & Engineering

Hometown: Seattle, WA

Why HCDE?

I originally wanted to study civil engineering, but my interests shifted during my first year at UW. I thought about changing my major to psychology because I loved studying human development and interactions, but my long-time passion for technology motivated me to stay in engineering. In high school, I had the opportunity to build my own computer through a MESA (Mathematics, Engineering, Science Achievement) program — it was very empowering and instilled in me an interest in and curiosity for technology. I first learned about HCDE through STARS — it seemed like a field in which I could align my interests in human behavior and creativity with math, science and technology.

What's the most memorable part of STARS?

During our first year, we participated in a math problem-solving workshop. I thought I was good at math, but I quickly discovered that I had a lot to learn. The workshop ended up being more about developing problem-solving skills than math, and I've held on to those skills ever since. My cohort really bonded because of that workshop. The friendships I've developed through STARS have been so important — not just on a social level, but also for encouragement because we are all hardworking and highly motivated.

What are you up to now?

After a summer full of travel (my family visited Vietnam — it was our first time back since immigrating to the U.S. in 1997!), I started a user experience (UX) design internship at Avvo, a company that provides people with online legal service information. I'm working closely with UX designers, content strategists, developers and researchers and am gaining exposure to the company's different design approaches.





College leadership changes

Laura Lowes selected as new Civil & Environmental Engineering chair

Laura Lowes, the William M. and Marilyn M. Conner Professor in CEE, has been appointed chair of the department. She has served as the department's associate chair since 2015. Her research is in the field of structural engineering, focusing on computational modeling of reinforced concrete structures with an emphasis on safety and resilience in the context of earthquakes and other natural hazards. Lowes holds leadership roles in multiple national research consortia, and she is a fellow of the American Concrete Institute.



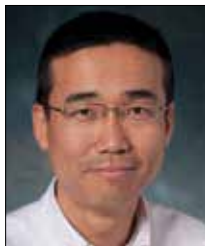
Greg Miller named vice dean of Research and Faculty Affairs

Civil and environmental engineering professor Greg Miller was named vice dean of Research and Faculty Affairs for the College of Engineering this spring. As vice dean, he supports research programs, helps seed new College initiatives, manages faculty affairs and assists faculty with research and funding. Prior to this new role, Miller served as chair of CEE for eight years. He has also held other UW leadership roles, including UW Engineering Associate Dean of Infrastructure & Computing and CEE Director of Instruction.



Jihui Yang to serve as Materials Science & Engineering chair

Jihui Yang, the Kyocera Professor in MSE, has been appointed chair of the department. He has chaired MSE's undergraduate committee and brings experience in both academia and industry. Yang's research focuses on thermoelectric and energy storage materials with an emphasis on the design, synthesis, testing and understanding of advanced thermoelectric materials and Li-ion battery materials for energy conversion and storage. A fellow of the American Physical Society, he has authored 100 papers, holds 19 U.S. patents, and has established strong research funding from the U.S. Department of Energy in recent years including a partnership on battery research with the Pacific Northwest National Laboratory.



UW Engineering teams win big at summer competitions

For the fifth year in a row, the **Concrete Canoe team** took first place at the ASCE Regional Concrete Canoe Competition in Boise, Idaho.

EcoCAR 3 won several awards at this year's national competition, which took place at locations throughout the Washington, D.C., and Detroit, Michigan, metro areas. The team's awards included the NSF Innovation Award and Most Creative Outreach Event Award. ME undergraduate Rachel Krause received the General Motors Women in Engineering Rookie Award.

The **Formula Motorsports team** placed fifth with their electric car at this summer's FSAE competition in Lincoln, Nebraska. This year marked the first time in the team's history that their electric vehicle qualified for competition.

The **Human Powered Submarine team** won the fastest two-person sub competition and received second place for most innovative design in June's International Submarine Races in Potomac, Maryland.

UW Society for Advanced Rocket Propulsion participated in the Spaceport America Cup this June in New Mexico. The team successfully launched their rocket and won second place in the advanced liquid propellant category.

Happy 50/20, UW Bioengineering!

UW Bioengineering is celebrating 50 years of engineering better health for a boundless future. This year marks 50 years since the Center for Bioengineering was founded on campus, and 20 years since BioE was established as an academic department. Learn more at bioe.uw.edu/anniversary

Partnership with CMMB launches new center on smart, connected communities

CMMB Vision (CMMB) has awarded UW Electrical Engineering (EE) a \$1.5 million gift to establish a new research center. The CMMB Vision-UW Center on Satellite Multimedia and Connected Vehicles will focus on developing the next generation of smart cars and ubiquitous connectivity.

Using satellite and broadcast technologies, CMMB seeks to deliver data to vehicles and mobile devices with unprecedented speed, scale, low-cost and universal connectivity.

"Our technology is global," CMMB president and CEO Charles Wong said. "From Asia to Africa, we cover 6 billion people and over 143 countries."



Many developing nations do not have the infrastructure to support current broadcasting technologies. According to Wong, mobile devices can become a less expensive option to connect resource-poor communities.

For Wong, and CMMB vice-chairman and CTO Hui Liu, the UW reflects their global vision and possesses the innovation to support it. Liu, who was a professor in EE, remembers the University's dedication to entrepreneurship and invention.

"The UW is one of the foremost innovative universities in the country – something we are really looking for in the development of this technology," he said.

The center comes at a time when smart cities research is flourishing. In Fall 2015, UW and EE leaders signed a "Smart Cities" agreement with leaders of Shanghai Jiao Tong University. The agreement formalized the commitment of both universities to work together on smart cities research, teaching and collaboration.

Within the past year, UW engineers and computer scientists have promoted the development of smart cities around the country through developing smart posters and clothing, redesigning spectrum wireless usage and tackling urban mobility challenges in places like Seattle and Nashville.

"We are dedicated to the advancement of smart cities," EE professor and chair Radha Poovendran said. "This partnership with CMMB further advances this mission and will foster impact on a global level."

Nominate an exceptional engineer for a 2018 Diamond Award

The Diamond Awards honor outstanding alumni and friends who have made significant contributions to the field of engineering. If you would like to nominate an engineer for a Diamond Award, please do so by October 16, 2017 at enr.uw.edu/da.

Leave an engineering legacy: Support students through planned giving

Fostering the greater common good — together. Today's engineering students will be tomorrow's leaders, and you can help set them up for success through planned giving.

Our students need hands-on, collaborative learning opportunities, academic support, financial assistance and state-of-the-art facilities. When you make a gift to the College of Engineering's Campaign for Students through your will, trust or retirement plan, you're enabling a new generation of engineers to tackle society's greatest challenges.

Planned gifts allow you to take care of your loved ones and your own financial security while offering creative, flexible strategies to support future Washington engineers. Some even provide you with income. Many can reduce your taxes.

To learn how you can support engineering students through planned giving, contact Katie Frisbie Bunten, Associate Director of Advancement, frisb@uw.edu or 206-616-8310.



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2017 Engineering Lecture Series – Engineering the Data Revolution: Fake News, Smart Cities and Data in DNA

Borrowing from Nature to Build Better Computers: DNA Data Storage and Beyond

Luis Ceze, Professor, Paul G. Allen School of Computer Science & Engineering

Thursday, October 12

As our capacity to produce and collect data grows, we are quickly reaching the limit of mainstream storage technologies, yet our ability to engineer biomolecules is rapidly improving. Nature may be our best inspiration for future computer systems. Join us to hear from computer scientist Luis Ceze, who along with partners at the UW and Microsoft, has developed a process to encode, store and retrieve data in DNA that broke a world record for the technology.

Finding “Fake News” in Times of Crisis: Online Rumors, Conspiracy Theories and Information

Kate Starbird, Assistant Professor, Human Centered Design & Engineering

Thursday, October 26

Recent public debate around “fake news” has highlighted the growing challenge of online misinformation. This complex problem lies at the intersection of technology, human cognition and human behavior — and may make us unwitting accomplices to the spread of incorrect facts and misleading communication. Hear from Kate Starbird, whose research investigates online rumors to explore what conspiracy theories reveal about political propaganda.

Making Cities Smarter for Drivers: Using Data to Improve Urban Congestion and Parking

Lillian Ratliff, Assistant Professor, Electrical Engineering

Tuesday, November 7

Congestion on urban arterials is a challenge for city officials and commuters alike, made worse by slow-cruising vehicles hunting for curbside parking. By using transportation data streams from cities, Lillian Ratliff is proposing innovative solutions. Join us to learn about the novel algorithms Ratliff has developed to help alleviate congestion, and how a collaboration with SDoT may lead to citywide traffic and parking improvements.

All lectures are at 7:30 p.m., Kane Hall, UW Campus – FREE! Registration required at events.uw.edu/Lecture2017.
Presented by the College of Engineering in partnership with UW Alumni Association.

