

# SCHOOL OF ENGINEERING AND APPLIED SCIENCE

YEAR IN REVIEW 2017 18



School of Engineering  
& Applied Science





Dear Friends of the School of  
Engineering and Applied Science,

This has been another exceptional year for our School, with a number of accomplishments and several changes in store to further improve our programs and the opportunities for our students.

First, I must report with a deep sense of loss, but also a deep sense of gratitude for having known an extraordinary individual, the passing of Don Herak this March. Don went to our Lord surrounded by family and was honored through a beautiful funeral mass at the Cathedral here in Spokane and a wonderful gathering after the funeral on the Gonzaga Campus. Don will be missed, but his legacy will be truly enduring on our campus.

Second, we once again will be welcoming a new faculty member to campus this fall. Dr. Harmandeep Khare will be joining our Mechanical Engineering program this fall to contribute in the arena of Materials and Manufacturing. This fall, we will focus our search process on a new faculty member in the realm of Robotics and Mechatronics.

Third, there will be a significant change in the leadership of our School. I have been honored with nomination to a Jefferson Science Fellowship position for the coming year with the U.S. Agency for International Development in Washington, D.C. This position will provide Gonzaga with a visible, significant presence in the realm of international development.

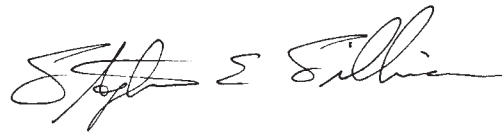
As such, I will step away from my role as Dean as of this Fall. It has been my honor over the past six years to work with exceptional faculty, students and staff to build the strength and numbers of

our undergraduates, our faculty, and our staff. We have developed the plans for an exceptional new building and we have encouraged our students to develop strengths through establishing a number of active student clubs / organizations, as well as an entrepreneurial spirit as expressed through senior capstone projects. I would like to deeply thank my faculty and staff for all of their accomplishments! Finally, I have had the true honor to develop a deep relationship with many of you. Thank you all for your support over the past six years.

I am happy to share that Dr. Joseph Fedock, Emeritus Professor of Civil Engineering at Montana State University, has accepted the position as Interim Dean of the School of Engineering and Applied Science. I would ask that you support him with your energies and generosity as he continues to build our programs through further expanding our faculty, and in defining even more exciting opportunities for our students. Please know that the Dr. Fedock will have my full support in his efforts.

Thank you and I look forward to continuing my relationship with you, just in a new role.

Sincerely,



Steve Silliman





## ENCOURAGING TEAM – BASED, HANDS-ON LEARNING

On a Wednesday night in the Manufacturing Technology Center this past spring, Courtney Maciolek ('19) ground the end of a steel bar, shaping it to fit a handmade coupler as part of a student-built bridge.

A few yards away, Abe Hobson ('19) contoured the end of a tube to fit the frame of the new Baja Car.

Across the room, a model rocket hung in a spray paint booth as David Barnes ('19) prepared to coat it with primer.

These were only a few of the tangible projects undertaken by student clubs and chapters of professional organizations during the past academic year. Some of Gonzaga's other engineering and computer science clubs focus on networking, including bringing speakers to campus to share advice on careers and internships. All of projects fulfill a goal of the School of Engineering & Applied Science: give

students opportunities to translate classroom theory into practical skills.

SEAS has spent the past several years encouraging student chapters of professional organizations and clubs. That effort is paying off with a dozen active clubs and chapters. Each one provides networking opportunities, presentations, and projects designed to transform their studies into career-enhancing experiences.

"I'm happy to see this level of involvement by the students," said Dr. Rhonda Young, who advised the American Society of Civil Engineers (ASCE) student organization this past academic year. "These events let students problem-solve and show resilience in a way we can't create in the classroom. Interacting with professionals and other schools creates connections that last throughout their engineering careers."

Maciolek's Steel Bridge team competed in early

May, and she said the experience was exciting and encouraging. "The judges and other teams recognized Gonzaga hasn't been in this competition for many years, and they cheered us on and wished us luck. We got to see how others designed their bridges, and they loved to talk about details when asked," she said. "I got involved with the bridge because I was drawn to the idea of applying concepts I learn in class to more practical situations."

Hobson, a Baja Car competition project manager for the Society of Automotive Engineers (SAE) Gonzaga chapter, says that more opportunities happen at Gonzaga because of its smaller program size.

"This is one of the few schools where you can get hands-on experience as early as freshman year," he says. "Other schools have a waiting list to get on their competition teams, and make the first-year and second-year students only watch."



Society of Women Engineers Vice President Kylie Muntean introduces a panel of students discussing internships.



American Society of Mechanical Engineers, Gonzaga student chapter. Two students turned their interest of Aerospace engineering into a desire to build model rockets.

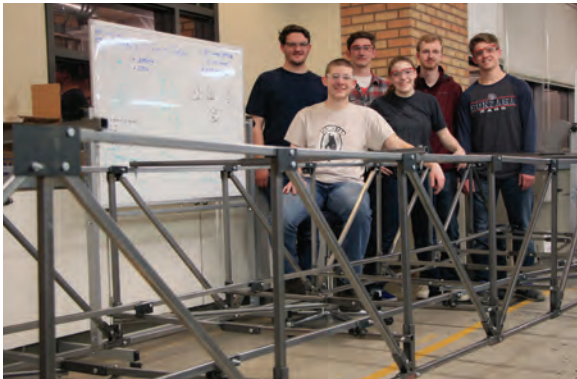


SAE President and mechanical engineer Isabella Verdugo ('19, center) guides other club members on the designs for the back framework of the Baja Car.

SAE group members specifically asked newer students to join the team designing the club's fifth consecutive Baja Car. Molly Fackelman ('21) jumped at the chance.

"It's gotten me experience in the machine shop and with SolidWorks before I would have in classes," she said, referring to the computer-aided design programs that students typically learn in their second year.

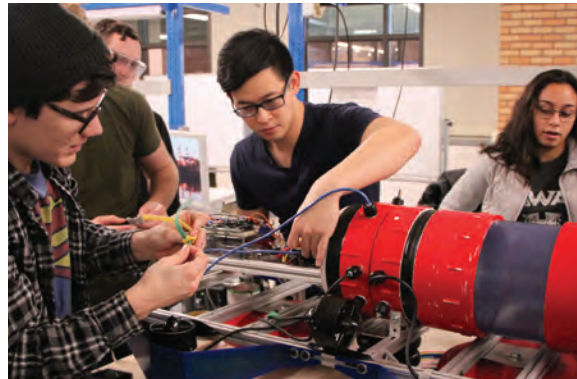
Networking is a key goal for many of the clubs. The Society of Women Engineers (SWE), Institute of Electrical and Electronics Engineers (IEEE) and the American Society for Engineering Management (ASEM) each held events with guest speakers on a range of career topics.



American Society of Civil Engineers, Gonzaga student chapter ASCE Steel Bridge team poses with their creation in the SEAS Student Projects Lab the night before leaving for competition in Oregon.

Each group also performs service to school and community. In February, members of several SEAS clubs banded together to call all students accepted into an engineering or computer science program for Fall 2018. The current students spoke to hundreds of prospective Gonzaga students to answer questions and share what they think makes Gonzaga and SEAS special.

Further, at the orientation for incoming freshmen, those first-year students in the SEAS programs are welcomed with invitations to experience the clubs for themselves. No matter what their interests, these incoming students commonly find one or more groups excited to help them develop skills together.



Computer engineering students Tyler Willis ('19) and Aaron Wong ('19) pack the electronic core back into the RoboSub chassis before other GU Robotics club members bring it to the Martin Centre pool for testing. The team took the autonomous robotic submarine to San Diego this summer to compete for the first time in the International RoboSub Competition.

## STUDENT PROFESSIONAL CHAPTERS & CLUBS

**American Society of Civil Engineers (ASCE)** entered several regional student competitions and guided elementary and middle school students through experiments focused on water filtering, bridge building, and transportation systems.

**American Society for Engineering Management (ASEM)** brought students together to hear from alumni working at prestigious companies.

**American Society of Mechanical Engineers (ASME)** explored rocketry for the first time, in cooperation with the Spokane Area Rocket Club.

**GU Robotics** prepared to compete for the first time with their autonomous submarine, which is required to perform a number of difficult tasks without human intervention.

**Gonzaga Without Borders** laid the groundwork for future international project efforts in Africa.

**Gonzaga Women in Computing** held bi-weekly group events connecting students with alumni and other friends of Gonzaga computing programs, fostering an encouraging community for women pursuing computer fields.

**Material Advantage** fabricated and tested an I-beam bridge section, placing in the top half of the annual international SAMPE Student Bridge Competition.

**IEEE (Institute of Electrical and Electronics Engineers)** sent two students to the national "Rising Stars" conference, led several soldering workshops, and helped Spokane's professional IEEE chapter win "Top Small Section" in the western United States.

**Society of Automotive Engineers (SAE)** competed in their fifth consecutive Baja Car competition, held May/June in Portland.

**Society of Women Engineers (SWE)** events included forums on applying for internships and preparing for a sophomore semester abroad with the Gonzaga-in-Florence program. They also assisted at a local school program to inspire young students in the STEM disciplines.

**Tau Beta Pi**, the engineering honors society, inducted 18 members and submitted the Engineering Management program as eligible for inclusion, opening the door to a wider membership range in the future.



## ► THE POWER OF PARTNERSHIP: DEVELOPING FUTURE PROFESSIONS

### AVISTA'S LONGTIME SUPPORT PREPARES GENERATIONS OF STUDENTS FOR CAREER SUCCESS

A car slams into a power pole, breaking the lines and taking down the power throughout a multi-block residential area. A 911 call is placed, but provides no immediate information about the downed pole's location. Instead, Avista Utilities must send a crew to search for the broken lines—delaying response times and needed repairs.

This is a common problem for Avista. In response, the utility company turned to SEAS's senior design students for help. As part of Gonzaga's Center for Engineering Design and Entrepreneurship (CEDE) program, student-design teams worked for two years with Avista's engineering professionals to develop a cost-effective sensor that can be attached to the power pole. If a pole is knocked down—by a car or even weather—the sensor detects the location of the outage and sends that information to Avista, allowing Avista to respond and restore power more quickly.

The smart pole sensor project is one of more than 40 student-design projects that Avista has sponsored over the last 20 years. Named Outstanding CEDE Sponsor of the Year in 2017, the company's strong partnership and real-world projects have helped prepare dozens of Gonzaga SEAS students for career success.

Heather Rosentrater, Avista's vice president of energy delivery, said she is proud of the relationship her company and her alma mater have built over the

years. A Gonzaga alumna, Rosentrater earned her bachelors degree in electrical engineering in 1999, and she continues giving back, having recently joined the SEAS Executive Council.

"Avista values the partnership and relationship with Gonzaga and its students enabled by the CEDE program," she said. "We benefit by hiring well-qualified program participants as summer students and as new engineers. We also benefit through the development opportunities that our employees get from serving as mentors to project teams."

Like many companies across the U.S., Rosentrater said Avista is losing significant experience and knowledge as longtime employees retire. Partnering with Gonzaga and supporting programs like CEDE helps prepare graduates to backfill this natural loss of talent.

"It is essential that companies actively engage in activities to help prepare our future workforce to successfully hit the ground running once they start their careers," Rosentrater said. "One of the ways to help prepare them is by supporting university programs that expose students to real-world design and team projects."

Stephen Silliman, Dean of SEAS, said that partnerships with industry leaders like Avista—as well as the involvement and guidance from SEAS council member Rosentrater and other exemplary alumni—

greatly enrich the overall learning experience and create valuable opportunities for students to interact with top engineering and computer science professionals.

"We are extremely grateful for Avista's longtime commitment to Gonzaga and our engineering students," Silliman said. "Over the past 20 years, the company's dedicated professionals have influenced dozens of our seniors and helped put them on a path to success. Our ongoing collaboration with Avista is a true testament to the power of partnership in educating future professionals."

### SPONSOR A ZAG PROJECT

In 2018, 31 regional organizations collaborated with CEDE to sponsor senior-design projects. But as SEAS's student enrollment grows, there is a need for new partners to bring projects to the table, benefiting both the organization's strategic goals and the skill growth of Gonzaga SEAS students..

To learn more about sponsoring a CEDE project please contact Toni Boggan at (509) 313-3913 or [boggan@gonzaga.edu](mailto:boggan@gonzaga.edu). Visit [www.gonzaga.edu/CEDE](http://www.gonzaga.edu/CEDE)





## OUTSTANDING STUDENT

### Kyle McCrohan Shines as a Zag

When Kyle McCrohan walked across the Spokane Arena stage this past May, graduating with honors and a degree in computer engineering, there was a very special person on his mind: his mom.

Growing up in Cambodia in the 1970s, McCrohan's mom was forced into work camps during the brutal Khmer Rouge regime. Her family moved to America, where she entered public high school. Despite no previous formal education and being able to speak little English, she worked the long, dedicated hours needed to achieve a master's degree in electrical engineering from Villanova—just six years after fleeing a war zone.

"That's a big thing that motivates me because I can see how hard she had to work," McCrohan said. "My mom went through so much suffering to get me this opportunity at Gonzaga. I had to make the most of it."

And make the most of it he did. Named SEAS's 2018 Outstanding Student of the Year, McCrohan filled his time at Gonzaga with achievements both in and outside the classroom.

It was clear McCrohan would shine as a Zag when two years ago he and two engineering classmates created a new iOS app, Chow Chow, that allowed students to preview and review food in the COG (the campus dining hall). The app was an immediate hit. Within the first two weeks of its launch, Chow Chow had 500 downloads.

"Everywhere I'd go, my friends would stop me and be like, 'You made this?! This is awesome!'" McCrohan said. "We developed Chow Chow completely on our own, and we learned a lot along the way. It was really great to see that it was bringing a benefit to the Gonzaga student community."

For his team senior-design project, McCrohan applied his engineering skills to help create an innovative notetaking application, Aurora. Note takers can customize the app to record and format notes to their specific needs and individual styles.

McCrohan was also among a group of engineering students in the Hogan Entrepreneurial Leadership Program that spearheaded the first-ever "Girls Rock-It," a science fair that brought 30 middle school girls to campus to grow their interest in STEM careers.

"We recognized that women are underrepresented in STEM, and it was an issue that all of us as Hogan engineers felt strongly about and wanted to address," he said.

But McCrohan's talents don't stop there. A skilled musician, he was a four-year member of Gonzaga's Jazz Combos and Jazz Band—performing vocals, piano and tenor saxophone.

"It's really been the highlight of my extracurriculars here at Gonzaga," he said.

Now a Zag grad, McCrohan is kicking off his career in Seattle as a software test engineer at Climate Corporation, a digital agricultural company that develops technologies to help farmers make informed decisions about growing crops. He was hired by a fellow Gonzaga alumnus after interning at the company for two summers.

McCrohan is the latest in a long family line of engineers. In addition to his mom, his dad holds a master's in electrical engineering, and his grandfather has a Ph.D. in electrical engineering. His family's engineering tradition influenced his career choice, but he points to his mom's Cambodian roots as the foundation to his success.

"Any time that I might feel like slacking or take it easy, I just remind myself of all the challenges my mom overcame," he said. "That really inspires me."



## HONORING HERAK

ALUMNUS HAD TRANSFORMATIONAL IMPACT  
ON ENGINEERING EDUCATION

If you know Gonzaga, you know the name Don Herak.

For 50 years, distinguished alumnus and longtime benefactor Don Herak gave his time, energy and resources to support the growth of SEAS and the success of students across Gonzaga. He passed away in March at the age of 94, but his legacy will live on for generations.

Herak's lifelong relationship with Gonzaga began when he himself became a Zag. After graduating in 1946 from Gonzaga with a degree in civil engineering, Don went to work for the U.S. Bureau of Reclamation in Montana for five years. He and his late wife Carol returned to Spokane, where he began a long career with Acme Concrete and Building Materials. He eventually became Acme's president and owner — growing the company into one of the premier suppliers of concrete in the nation.

Bill Ilgin, former dean of the School of Engineering (1975-88), first met Herak in the 1970s. Ilgin, a civil engineer like Herak, often accompanied students on field trips to Herak's concrete company, which at that time was located just a few minutes from campus. Even back then, Herak's passion about the school was very evident. In 1980, Ilgin formed the school's first Engineering Advisory Council, a board of industry leaders who would help steer SEAS's future. Ilgin has said it was obvious that a seat on that new council should be reserved for Herak.

Herak poured himself into the new advisory role, helping the school create a 10-year strategic plan and achieve its long-sought goal of full accreditation. But he did more than offer his guidance. He was on the ground—making sure things got done.

"As an engineer himself, he knew what the students needed to be successful in the industry," Ilgin said.

"He was very involved in all respects; he was on top of everything."





In 1984, Herak joined the Gonzaga Board of Trustees, a post he would hold for 30 years. He continued to be an outspoken advocate for engineering education, garnering the trustees' support of a much-needed expansion of Dillon Hall, then home to the School of Engineering.

"The engineering industry was in a new era of computers and technology. We had to have the latest equipment for our students, but we needed more space to house it," Ilgin said. "Don was absolutely amazing in getting support for this expansion from the Board."

Herak put his money where his mouth was. In 1988, the Heraks donated to kickstart fundraising

for the expansion project, resulting in the building being renamed the Don and Carol Herak Center for Engineering. Over the years, the Heraks gave a significant contribution to the School of Engineering, providing critical funding not only for the expansion, but also for equipment, faculty development endowments and scholarships.

"He was absolutely adamant about engineering," said Margot Stanfield, Gonzaga's former VP of University Relations. "He realized that to stay competitive, we needed to keep our campus up and our buildings and programs modernized. A lot of what you see today is what he really pushed for."

President Thayne McCulloh agrees with this history of philanthropy and support. "Every year since 1957, the Heraks have given to many aspects of Gonzaga life, including faculty chairs and development; numerous building projects; the Great Teachers Program; the James McGivern Scholarship Fund and many others; academic programs; and numerous memorial funds and unrestricted endowments," said McCulloh. "Don Herak played a critical role in the University's decision to build the McCarthy Athletic Center and has been a steadfast supporter of Athletics for over forty years." The Heraks have

supported more than 75 initiatives and areas, including:

- School of Engineering
- Scholarships (including the Carol L. Herak Scholarship)
- Athletics
- Law School Champion
- Miscellaneous Support

Herak's philanthropy stretched deep into the Spokane community in his establishment of the Nazareth Guild to raise money to support Catholic education in the area, and strong support of the Spokane Symphony. He also made a significant difference through his professional work—building dams, highways, bridges and buildings throughout the Pacific Northwest and beyond.

"Most people didn't realize what an impact he had on the entire northwest through his company and work as a civil engineer," Stanfield said. "He really had a regional presence."

Herak was a strong man of faith who lived for the greater good, exemplifying his commitment to helping others in everything he did.

"Don was very outgoing, easy to talk to, and always tried to help out wherever he could," Ilgin said. "He was a great friend."

In recognition of this extraordinary friendship and support, Gonzaga honored the Heraks in 2010 with the Ignatian Spirit Award. Herak was also the recipient of Gonzaga's Distinguished Alumni Merit Award in 1982, and Gonzaga bestowed upon Herak an honorary Doctor of Laws in 2004.

"Don always said Gonzaga gave him far more than he ever gave back," said President McCulloh. "He was the living embodiment of a man truly influenced by his Jesuit roots, empowered by his steadfast faith in God, and always appreciative of his many blessings."



Gina Sprint and David Schroeder  
Join Computer Science Faculty

## NEW FACES PREPARE STUDENTS TO TACKLE BIG PROBLEMS

For Gina Sprint, Ph.D., and David Schroeder, Ph.D., joining Gonzaga's computer science faculty was like coming home.

Sprint grew up in the Spokane area, attending Lakeside High School in Nine Mile Falls and graduating from Eastern Washington University. She later moved to Pullman to complete her graduate work in computer science at Washington State University.

"Getting to come back to Spokane was amazing," she said. "Gonzaga is my first experience with a small liberal arts school, and it is wonderful to teach here."

Although not from Spokane, Schroeder felt a different kind of homecoming as Gonzaga reminded him of his own undergraduate experience.

"I went to a small liberal arts school, and it was just a great place to learn. I knew I wanted to work somewhere that offered a similar learning experience," he said. "There needed to be an emphasis on teaching the whole person, because we're complete humans, we're not just computer scientists. I found that at Gonzaga. It was a place I wanted to be."

The two assistant professors agree that personal interaction with their students is among the top benefits of teaching at Gonzaga.

"The small class sizes are amazing, not just for the students, but in terms of getting to know the students and being able to track their progress," Sprint said.



"When I was at a small school, I loved that if I had something I was interested in, I could go talk to my professors, and they'd know my name and what I was interested in," Schroeder added. "I think it's awesome that we get to do that for our students here at Gonzaga."

The small class sizes also mean more opportunities to engage students in research. Sprint, who is particularly interested in wearable computing and technology applications for health care, is working with a student researcher to explore how health data collected through wearable sensors can be used to improve treatment outcomes for patients undergoing rehabilitation.

Schroeder, who completed his postdoctoral research at the University of Minnesota Duluth, teaches courses in areas such as data visualization and abstract algorithms and data structures. His research focuses on solving visualization problems facing scientists who work with complex datasets. Currently, he is researching ways to efficiently compute how people perceive colors.

"The way that you tell computers what to display is completely different than how we humans perceive it," he said. "The whole goal is to match what people perceive with what the computer does."

Recognizing an increasing industry need, SEAS has placed a strong emphasis on growing the computer science program in recent years. Adding talented faculty like Schroeder and Sprint will help attract more students to the program and produce skilled computer science graduates ready to meet industry demands.

In the end, Sprint said, teaching computer science is all about preparing students to tackle tough problems with confidence.

"As a computer scientist, your entire job is really about solving problems. And if problems were easy to solve, then computer science wouldn't be the hot field that it is now," she said. "But many students are quick to give up if something is too difficult. As a teacher, it's my job to help these students realize that it's supposed to be hard ... that's why they're here learning. I try to get them excited about solving those tough problems and not give up in the face of difficulty."



## DISTINGUISHED LECTURER

The School of Engineering and Applied Science features several speakers each academic year, based on a generous donation from Ed and Bunny Renouard. The lecture series involves both the formal lecture and an informal meal with the invited speaker and undergraduates.

Thanks to suggestions from faculty members, this year's trio of lecturers gave undergraduates an opportunity to interact with professionals from both industry and academia.



**Dr. Thomas Pratt**

SEAS Electrical Engineering Professor Steve Schennum recommended a Research Professor of the University of Notre Dame. Dr. Thomas Pratt's talk entitled "Radio Frequency Physical Layer Research in Communications, Radar, and Sensing" reached across multiple disciplines including electronic warfare, wireless communications, and power-line communications. He shared information about the basis of his research, termed polarization dispersion. This inherent feature of signals passing through multipath channels is well known in optical communications, but is only now being applied to the wireless community as a security function.



**Dr. Jason Prapas**

While earning his doctorate, Dr. Marc Baumgardner of SEAS collaborated with Jason Prapas, who is now Translational Research Director for MIT's Tata Center for Technology and Design. The two wrote a paper examining how a chimney affects the amount of carbon monoxide released, and together developed a more efficient cook stove. Prapas's talk, "Translating Research Into Impact," included that early project not only to demonstrate the importance of networking, but on the connections and communication needed to improve lives in emerging markets. During the informal lunch with students, Prapas talked in depth about his experience as co-founder of the venture development firm Factor[E], helping connect creators of technology to social entrepreneurs specializing in business.



**Dr. Michael Kintner-Meyer**

With almost three decades of experience in the international energy and environment field, most of that in research & development, Dr. Kintler-Meyer's talk "Opportunities in Science and Technology" shared his perspective as an Electrical Engineer of how technology has affected our lives and some of the future challenges our students can aspire to address. He discussed much of his research performed as a Staff Scientist for PNNL (Pacific Northwest National Laboratory), primarily with grid-friendly technologies and smart electric vehicle charging strategies.





## SEAS WELCOMES HARMAN KHARE, PH.D. TO MECHANICAL ENGINEERING

The Mechanical Engineering department's newest faculty member wants to make the word "tribology" a common word.

Many might think it refers to sociology or anthropology, but the term means the study of surfaces in motion. Coming from the Greek root meaning "to rub," tribology explores friction, wear, and lubricants.

"Before starting tribology research, I was honestly unaware the word existed," says Dr. Harman Khare, who begins teaching this fall as a SEAS Assistant Professor. "Being able to reduce or eliminate friction and wear is crucial for sustainability – reducing energy consumption and greenhouse emissions – as well as for designing next-generation engineering systems such as advanced vehicle powertrains and extraterrestrial space systems."

Khare spent the last four years at the University of Pennsylvania, where he oversaw research projects in nanotribology. He earned his Ph.D. at the University of Delaware, and researched several solid coatings with aerospace applications, including molybdenum disulfide (MoS<sub>2</sub>) and diamond-like carbon coatings.

"What really drew me to tribology was that I was able to take my interests in hands-on design, experimentation and automotive mechanics, and apply it to an area of research where I could make profound economic and societal impact – something I see value in. Along the way, I could learn new concepts in surface chemistry and materials science. Tribology is highly interdisciplinary," he says.

That desire to cross departmental boundaries drew Khare to Gonzaga. On his visit to the campus, he was struck at the close-knit community. "Everyone seemed to know everyone else, people are invested in each other and in the community," he says.

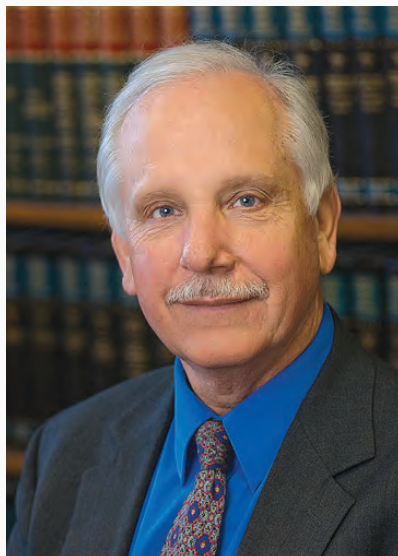
He says he is also impressed by the School of Engineering & Applied Science's desire to teach students the social impact of their work by combining hands-on research and community outreach. "Despite its already strong reputation, there is a keen, shared desire within all of the School to continue finding innovative ways to improve engineering education, to constantly advance student learning experiences," he says.

Khare has introduced many students to their initial research laboratory experiences, and he will continue to do so at Gonzaga. "Beyond technical education, working in a research laboratory also provides several other (often less obvious) skills which a student will carry with them as innovative members of society, long after they graduate," he says.

Khare expands the school's diverse global perspective. The U.S. is one of three countries he's called 'home' in the past three decades. His early childhood was spent on the African continent, and his first college experiences were in India. He remains curious about different cultures and their cuisines, language, and music.

"I've always valued human diversity," he says. "I think all current and former Gonzaga faculty, staff and students carry with them rich and diverse experiences, yet everyone shares the common pursuit of academic and personal excellence, and service for the greater good."

That is why he believes Gonzaga is a wonderful fit for him. "As someone who believes in the power of diverse and shared experiences, I want the Gonzaga community to consider me as an ally and someone willing to listen and willing to work with them in the pursuit of these shared ideals," he says.



Dear Alumni and Friends of Gonzaga SEAS,

I am honored and very pleased to have the opportunity to serve as the Interim Dean of this outstanding School at Gonzaga. I look forward to the opportunity of meeting many of you during the course of this next year, and to help advance SEAS to its next level of success.

In terms of introduction, I come from Montana State University in Bozeman, where I have served in multiple roles over the past 28 years, including Associate Dean of Engineering, Interim Provost and Vice President for Academic Affairs, and Professor of Civil Engineering. Prior to my MSU experiences, I was a faculty member and engineering department chair at Santa Clara University for 11 years.

My professional area of expertise is in earthquake engineering. I have been engaged in the seismic instrumentation of buildings and dams in California, and I worked as an engineer on the seismic design of power plant facilities early in my career. In recent years I have been substantially involved with various higher education organizations, and have served on the Board of Commissioners for the Northwest Commission on Colleges and Universities.

I am a native of Phoenix, AZ, and received my undergraduate degree from Arizona State University. My wife, Wendy, and I are the proud parents of three adult sons. Wendy is a retired local school district registrar and an aspiring weaver and spinner. My interests include biking, hiking and non-fiction historical works.

In conclusion, I strongly support the ideals of Jesuit education, and I very much look forward to serving Gonzaga University and the School of Engineering and Applied Science this year.

With Gratitude,

A handwritten signature in black ink that reads "Joseph J. Fedock".

Joseph Fedock  
Interim Dean of Engineering & Applied Science



## GIFTS BUILDING A BRIDGE TO FUTURE INNOVATION



There is a new generation of people for others who want to make the world better in new ways. Their dreams are not limited by disciplines or fields, so why should their education be? Their aspirations are achievable when they arrive at the intersection of science, engineering, art and heart.

The most technologically advanced collaborative spaces can take education to the next level—turning new, life-changing ideas into realities will take inspiration and collaboration.

The Integrated Science and Engineering (ISE) facility will be the bridge between the College of Arts and Sciences and the School of Engineering that will usher in a new era for an entire region of Gonzaga's campus. It is a vision for the future that puts students and the communities they will someday impact first, and the University community is stepping up.

A challenge has been issued by some generous Gonzaga alumni, who are encouraging others to give in support of the ISE project. They are so dedicated to this vision of the University's future that they have committed to match up to \$1.75 million in donations. Opportunities to name research and teaching laboratories, faculty offices, and classrooms are still available, all leading to significant impacts on Gonzaga students and the communities they will someday affect.

This multi-million-dollar project will make a difference worldwide through the achievements of the Gonzaga students who will graduate having experienced how to explore, research, and form innovative, life-changing solutions to global challenges. Your support will touch lives on campus, in the region and far beyond.

DEGREE AND CERTIFICATION PROGRAMS:

M.S. Transmission and Distribution Engineering

Transmission and Distribution Engineering Graduate Certificate

B.S. Civil Engineering

B.S. Computer Engineering

B.S. Computer Science

B.S. Electrical Engineering

B.S. Engineering Management

B.S. Mechanical Engineering