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${f [}$ letters to the $editor{f [}$



BAD CHOICE

I was disappointed by your choice to profile CMT Laboratories in the Summer 2015 issue of the WPI Journal. While I applaud Ms. Machon's efforts to verify the quality of various cannabinoids in medical marijuana products, I disagree with the Journal editor's decision to publish such an article given that consumption of such cannabinoids (and much of the industry's activities) is illegal according to federal statutes.

In addition, I believe there is also some question as to the overall medicinal benefit of cannabinoid consumption; especially product from the newer, highly potent, engineered strains.

A year or so ago, I briefly considered offering similar cannabinoid QC testing laboratory services. My discussions with the local special agent in charge of the Drug Enforcement Agency field office, as well as addiction counselors in some nationally recognized treatment centers, dissuaded me from doing so. In particular, the addiction counselors had observed higher incidences in psychoses in patients who had habitually consumed medical marijuana. Even though I could have obtained proper licensing from the DEA to analyze cannabinoids, I decided against it since the possible adverse social implications outweighed any pecuniary benefit.

I recognize WPI alumni are engaged in various cutting-edge areas of technology but feel that profiling participants in such a controversial industry is inappropriate until the legal and long-term medical aspects of cannabinoid usage are resolved.

—John L. Lombardi '90

Chief Executive Officer, Ventana Research Corp.

INEXCUSIBLE OMISSION

In the Summer 2015 issue of the WPI Journal there is an illustration on page 41 listed in the index as "An Illuminated Look at our 150th Anniversary." After looking at it several times, I could come to no other conclusion except that whoever created this "Illuminated illustration" did so in the dark. It is incredulous that Kaven Hall, named for a 1865 graduate; Skull Tomb, home to experiments by Robert Goddard, Class of 1908, and the father of modern rocketry; and Alumni Gymnasium were not mentioned.

Civil Engineering is one of the core programs that has existed since the beginning and Kaven Hall has been its home since the mid 1950s, nearly half the history of the Institute. Alumni Gymnasium is an iconic building that was one of the first six or seven buildings on campus and the first building on that side of West Street. The WPI website says, "Alumni Gym, built by WPI alumni, for WPI students, with love, has stood as a landmark at the heart of the campus for almost a century." It served not only athletics but as the de-facto campus center for thousands of students for almost ninety years.

The fact that the administration wants to demolish it and replace it with a plaque is, in itself, appalling. Regardless, Kaven Hall, Skull Tomb, and Alumni Gym do exist and are a major part of the history of WPI and to be left off an "Illuminated Look" is an inexcusable omission. They certainly are a greater asset to the history of the Institute than Beanies, The Wedge, and Gompei the Goat.

-Arthur R. Bodwell '64, '65 (MS CE)

WARM MEMORIES OF BILL GROGAN

It was with sadness that we read of Bill Grogan's passing, although our memories of him are not what was written in the obituary in the *Journal* and totally unrelated to his management of and involvement in the change from a traditional engineering education to a project-oriented approach.

Our Class of '68 memories are somewhat different. We remember him in 1966 through very sleepy eyes at 8 am every Monday, Wednesday, and Friday in EE201. We remember him joining us Tuesday evenings for the regular meetings of that not-so-illustrious society, the IHEE. We remember looking at his bloodshot eyes through our bloodshot eyes every Wednesday morning at 8 a.m.; the unwritten rule was that if he could make it to class (and he never missed), we also had an obligation to show up.

We remember Bill Grogan as great teacher and as a buddy.

-Peter Saltz '68

-David Rice '68

WE WANT TO HEAR WHAT YOU HAVE TO SAY! PRAISE US OR PAN US, OR SIMPLY SHARE BY SUBMITTING YOUR LETTER TO EDITOR DOREEN MANNING AT DMANNING@WPI .EDU.

Letters may be edited for length and clarity.



Dear Friends,

In 1965, Harry Storke, WPI's 10th president, wrote a note to the Board of Trustees in which he praised the Institute for its "continuing tradition of self-criticism and self-improvement." President Storke believed that this habit of constructive introspection was the key to maintaining WPI's "reputation for quality."

I think he was right. The university is stronger today because we haven't shied away from asking tough questions - about our mission and the manner in which we carry it out, and about our responsibilities to our students, to our community, and to society.

A year ago, in my inaugural address, I called on the WPI community to continue that tradition of self-reflection. "Because we are a community that thrives on imagining more - because we are WPI," I noted, "we must look at the challenges that still exist in our neighborhood, our nation, and our world and ask, 'How can we do better?'"

In the intervening year, we've been working hard to answer that question and to develop a new strategic plan to guide WPI through the remainder of this decade. Starting with retreats with a broad swath of the WPI community, and moving on to an intensive planning process involving more than 100 community members, together we crafted a set of initiatives that will build on our strengths and better align WPI with the needs of our students and the opportunities inherent in our changing world.

A number of these ideas aim to enhance the value of our distinctive approach to undergraduate education. The WPI Plan is still the core of our curriculum because it is remarkably effective at preparing technological professionals to make a positive impact on the world. We want to enable students get even more out of the Plan by helping them align their projects, courses, and even co-curricular pursuits with their passions and interests. We call this having "a major and a mission."

We also want to enable students to get more value out of the investment they make in a WPI education by helping them get more real-world experience or even complete a bachelor's and a master's degree – all within a four-year program. In part, that will mean enhancing our summer sessions by offering more courses and more opportunities to complete required project work. Also, we know that completing a project overseas can be a life-changing experience for our students, so we will work to make this opportunity available to all undergraduates.

At the graduate level, we will experiment with new approaches to online learning that will give students the flexibility to take a complete course or choose individual modules to gain new competencies. We will develop a new plan for our PhD programs to make them more innovative and more appealing to top students, and focus our research enterprise in ways that will help us recruit the best faculty members and better compete for large interdisciplinary research awards.

Finally, to enhance our reputation and visibility, we will establish a Center for Project-Based Learning to share our extensive knowledge about this valuable approach to learning with other colleges and universities. And, we will build the Robert A. Foisie Innovation Studio, a space where innovation, global engagement, and entrepreneurship will come together in new and exciting ways.

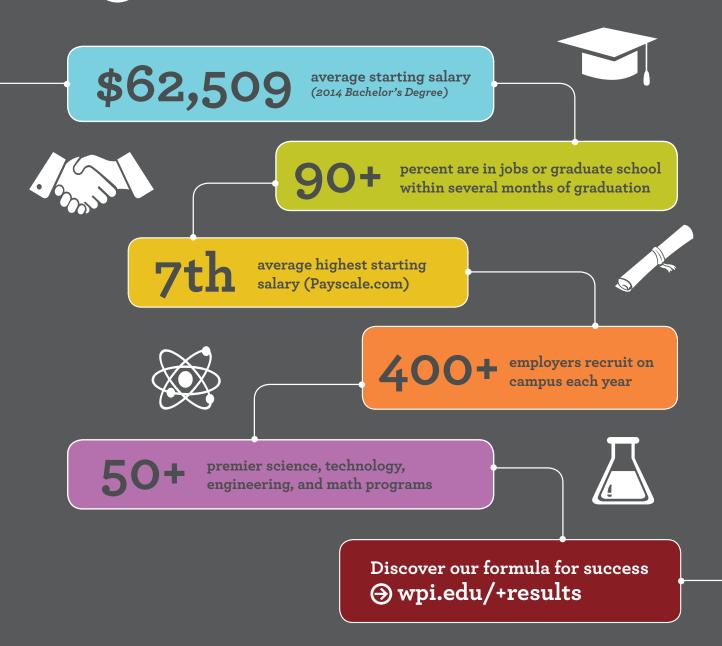
You'll hear more details about this plan in the months ahead. In the meantime, I welcome your thoughts on our new aspirations and ask your support as we build upon the success that you and other members of the greater WPI community have helped create.

Sincerely,

Worcester Polytechnic Institute



These results are typical at WPI.



As you know, the education you get here is anything but.

A BUSINESS MIND

FOISIE SCHOOL OF BUSINESS BRINGS IN NEW DEAN FOR EXPERIENCED LEADERSHIP

This spring WPI announced the appointment of Michael Ginzberg as dean of the Foisie School of Business. He comes to us from American University's Kogod School of Business, where he served as dean and professor of technology management.

TECH TRENDS

The continuing digitalization of everything we do is obviously changing our world, but if I were to identify a single trend that will have the biggest impact, it is data - the growing availability of massive amounts of data about everything in our lives. Having the ability to manipulate large, diverse data sets, extract meaning from them, and devise tactics and strategies informed by those data will be key to success in business (and most other endeavors).

GOALS

I want the Foisie School to be recognized as a global leader in the management of technology-based enterprises (and that includes enterprises in what we traditionally define as business as well as in other spheres). If we accomplish this, we will become a destination for students (undergrad as well as graduate) and practitioners alike.

THE ALLURE OF BUSINESS

Like most MIT freshmen of my generation, I assumed I would be a rock star physicist. I quickly discovered that I was more interested in people than particles, and quickly gravitated to economics and psychology. Then I found out about computers (which at the time were just beginning to have a real

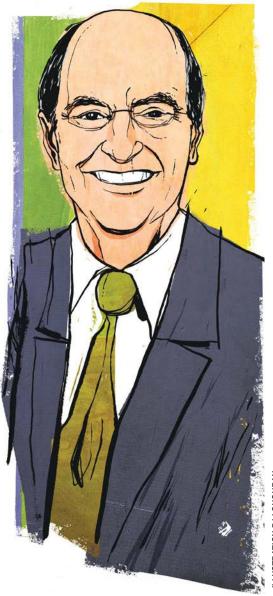
impact on the practice of business). Putting these all together, I became focused on the use and impact of technology in human settings (organizations being primary) and I have stuck to that for the past (hmm!) years.

START-UPS

Tech start-ups, almost by definition, are trying to do something that has not been done before. They are taking the forefront of technology and applying it to have an impact in the practical world. Being a part of that is exciting. I work now with emerging firms in the data analytics and e-health areas. If they are successful, it will be of significant benefit to all manner of human activity. Playing even a small part in that is personally very rewarding.

EXTRACURRICULAR

Though I have never been particularly interested in watching sports, I have always enjoyed participating. I have been an avid (adult) bicycle rider since I was a graduate student, and I also enjoy hiking, climbing, and skiing. Perhaps the most unexpected, though, is I took up playing soccer when I was 40. Over the next several years, I broke two legs – neither of which was my own! Several people suggested I retire before doing any more damage.



in great company

The qualities that define a WPI education are precisely what makes us a great business partner.

Learn how a strategic partnership with WPI can help move your company forward.

IDENTIFY

customized solutions to meet your business needs

BUILD

the next generation of employees and leaders—for your company

CONNECT

with world-class researchers and faculty experts

FIND

the right graduates who fit your needs and match your culture

SOLVE

business challenges by sponsoring a project

EDUCATE

your workforce with customized professional development programs

DEVELOP

new product concepts

LICENSE

new technology and move your ideas to market

ACCESS

university laboratories, equipment, and advanced research facilities

ADVANCE

cutting-edge research and get an early look at breakthrough technologies



Academic and Corporate Development Sharon Deffely, Executive Director 508-831-5635, sdeffely@wpi.edu wpi.edu/+engage he numbers are daunting: the Royal Academy of Engineering reports that the United Kingdom will need more than one million engineers and technicians in the next five years, a shortfall blamed on the recession and limitations of the UK's own educational system.

For Shannon Healey '17 and a trio of WPI classmates, the challenge was a call to action.

In May and June of this year, the students traveled to the university's / RQCRQ3 URMFW &HQMI, where they worked with the London Transport Museum to create the Inspire Engineering Mentoring Program, a curriculum designed to generate interest in the field among high school students. They also developed the Full Speed Ahead Program to encourage students to pursue a STEM (Science, Technology, Engineering, Mathematics) career.

"I had been inspired to pursue a career in STEM as a child," says Healey, a chemical engineering major from Houston. "By participating in this project, I felt as if I could return this favor and inspire other likeminded individuals."

Founded in 1987, the London Project Center was the first of more than 40 international WPI centers that now dot the globe. Henry Strage '54, a founding member of the Project Center, recalls that London was an obvious location to test the concept abroad both culturally and linguistically. "It turned out to be a stimulating, hands-on way to keep in touch with WPI and interact with current students," says Strage. "Plus, the learning curve for expanding the project work to other locations was made a lot easier as a result of the lessons learned in London."

Each academic year, 48 students
– mostly juniors – travel to England
for seven weeks to work on a
research project with 100

organizations that include local governments, museums, and nonprofit groups.

The students have completed more than 300 projects to date, covering everything from developing museum exhibits to using photovoltaic systems in affordable housing, to working with London boroughs to promote environmental sustainability and carbon reduction.

Project center work allows students to complete their IQP (Interactive Qualifying Project), a requirement for graduation. But working abroad serves other purposes, says Dominic Golding, project center co-director and an associate teaching professor in the Interdisciplinary and Global Studies Division.

"We bill this as a pre-professional experience," he notes. "It's very intense. We expect the students to put in a typical 40- to 45-hour week at the offices of their host organization. For most students, it presents them with an opportunity to go outside their comfort zone. Interacting with people who have a slightly different view on the world than you do can be a compelling and powerful experience."

Students select any of several projects developed by Golding. They spend seven weeks prior to leaving WPI doing background work and writing a research proposal.

The London Project Center was created and modeled after projects administered by individual faculty members in the early to mid-1980s. Another UK center, the Worcester, England, Project Center, is scheduled to start its work this academic year.

That effort was pushed by Lord Faulkner of Worcester, who wants to promote interaction between the University of Worcester and WPI. In September, WPI President Laurie Leshin visited the West Midlands city.

-By Andrew Faught



 $[\mathbb{W} \pi]$

BIG NEWS

FOR ENGINEERS FANS...

WPI football will be moving up from the Liberty League to the New England Women's and Men's Athletic Conference as part of a new seven-member team group. NEWMAC announced in April that it will be sponsoring football as a championship sport beginning in the fall of 2017.





Hydro Dog – a quadruped terrestrial robot actuated by fluidic muscles is still a puppy. Conceived and raised by WPI students in the laboratory of physics professor Marko Popovic, who pioneered the muscle concept in 2013, the robotic pet was warmly received at the Vecna Robot Sprint and the annual Cambridge Science Festival's Robot Zoo.

The knee-high metallic canine weighs 35 pounds. It is propelled by a pump that causes water-filled latex tubes to swell and release, generating energy. With its legs moving in tandem, it can hop or bound on terrain not suitable for wheeled vehicles. Designed as an MQP by 2015 grads Thane Hunt, Andres Leiro, and Daniel Fitzgerald, Hydro Dog features easily reconfigurable aluminum skeletal framing, and makes use of some off-the-shelf

components - including a CamelBak® water reservoir normally carried by thirsty hikers.

Hydro Dog had just started walking days before attempting the road race, and it did not complete the 100-meter course. But it was a hit at the Robot Zoo, a kind of petting zoo where robot-loving kids gather to try out technology from around the world. The event attracts tens of thousands of visitors, and Popovic noted with pride that WPI outdrew MIT and Harvard.

Next, several of Popovic's graduate students, plus a team of MQP undergrads, hope to beef up Hydro Dog with improvements to strength, speed, and dynamic control. With work planned on both the exoskeleton and the exomusculature, the group hopes to create additional "bones" and "muscles" to directly interface with the human body, which could help augment or restore normal limb function. One of Popovic's pet project ideas is to use Hydro Dog legs to create a "legchair" that would offer great mobility to wheelchair users.

-By Dave Greenslit



RESCUING FÈS FROM RUIN

WPI FULBRIGHT **SCHOLAR TO AID** IN RESTORATION OF AN ANCIENT MECCA

The historic city of Fès, once the capital of Morocco, was built with labyrinthine passageways and enclosed by high walls to thwart invaders. Today the once-prosperous trading center faces a different kind of threat. Ancient structures are crumbling, and the pressures of modern civilization can complicate decisions about restoration.

Hajar Jafferji '11, '12 (MS CE), currently a doctoral student in civil engineering at WPI, received a Fulbright U.S. Student Award to compare the performance of traditional and modern building techniques. "During my graduate work in materials science, I began thinking about the materials used in

ancient times, when there was no mechanized technology or computer software to assist builders with designs," she says. "What was it that made these historic structures so durable, able to last to the modern day?" Working with Ader Fez, a local government organization, Jafferji is analyzing deficient riads (traditional homes), mosques, and souks (marketplaces) that might incorporate lime-mud brick, cement, and wood.

"I believe that by restoring Fès, the history of the city can be preserved," she states, even with need to incorporate modern amenities, such as access for emergency vehicles, into a city of bicycles and donkey carts.

An important aspect of her work-and of the city's future-is collaboration with local artisans and skilled

craftsmen. "These artisans safeguard crafts that are often solely oral knowledge that is passed down through generations." Jafferji contends that outside solutions, such as new building materials that are foreign to locals, are never the ideal answer. "Solutions to engineering problems must include input from local citizens regarding what is appropriate in their particular socioeconomic context."

Jafferji will also spend time with women students from Al Akhawayn University in Ifrane, where WPI has a project center, to learn about STEM education in the Arab world. "I hope to learn more about Moroccan culture and to bring back lessons learned," she says. "Sharing our experiences will provide a unique opportunity to better understand our societies."



WORCESTER'S DIRTY WATER

LESSONS FROM THE 1899 SANITAR' ENGINEERING CHALLENGE

WORCESTER, Mass., 1899: The city of Worcester is in crisis. The Blackstone River has turned toxic from household and industrial waste. Storm runoff floods low-lying areas and contaminates drinking water. Despite a court order to install a water treatment system, litigation drags on, with residents and business owners fighting to protect their interests. It's up to Worcester's elected officials to agree on the best way to clean up the mess.

Enter future engineers from the 21st century – that is, contemporary WPI students. As part of a Humanities and Arts seminar run by department head Kris Boudreau and research and instruction librarian Laura Hanlan, students designed an elaborate role-playing game based on the actual historical scenario, with support from a Teaching Innovation Grant from WPI's Morgan Center for Teaching and Learning. To prepare for their roles, the students delved into original sources that would have been available to their real-life counterparts, such as "An Act Concerning Sewers and Drains in the City of Worcester" from 1867, and Thoreau's "Civil Disobedience."

Characters in the game range from wealthy industrialists (including some of WPI's founders), to labor organizers, minorities, and environmental pioneers such as Ellen Swallow Richards – the first woman admitted to MIT. They make their pitches, the city's Common Council votes – and the students win and lose points based on the strength of their arguments.

"Students were going down to the Worcester Historical Museum and enthusiastically scrolling through reels of microfilm," says Hanlan. Their engagement, and the research and information literacy skills they gained, are critical for them as future scientists and engineers, she says.

Boudreau plans to pilot the game in a team-taught first-year course during C- and D-Terms, with participation from WPI faculty in philosophy, engineering, and entrepreneurship. She says, "WPI's projects present a terrific opportunity for students to learn to appreciate the complexity of the heterogeneous world we occupy - and embrace that complexity as an opportunity to do real good."



Before a prime-time television audience, Bite Force – a robot designed by Paul Ventimiglia '12 (shown holding his trophy) – won ABC's hit television show BattleBots, beating out 24 other teams made up of professional engineers, college students, and amateur robotics designers from around the world. BattleBots pits remote-controlled robots against each other in a combat arena, where survivors are also judged on speed, strength, and design elements. The 250 lb. Bite Force took top marks in aggression, control, and defense.

"I have looked up to these competitors as engineering idols for years, so to win is both hugely satisfying and humbling." says Ventimiglia. "I hope by competing in such events, I can help inspire the next generation of designers."

WPI was the top sponsor of the winning team, which also included Jeremiah Jinno '07. Bite Force also received support from VEX Robotics, Big Blue Saw, Magmotor, Applied Welding, and Aptyx Designs (Ventimiglia's new company). In 2009, while still a student at WPI, Ventimiglia led a university-sponsored team to victory in NASA's Regolith Excavation Challenge with

Moonraker, which won the \$500,000 top prize. His work on a robotic hand prosthesis was also used as a prototype by a team from WPI that won the prestigious Cornell Cup in 2014.

"Paul's success in this event does not surprise me at all," says associate director of robotics engineering Ken Stafford, who continues to be one of Paul's mentors. "He spent his time at WPI focusing on understanding problems, and then solving those problems in the most elegant, simple ways. This is a classic WPI approach, and is reflected in all the robots he has touched."







ALEX SCHWARTZ '09 is founder and CEO of Owlchemy Labs, a small game studio based out of Austin, Texas, and Winnipeg, Manitoba. Formed by Schwartz in 2010, Owlchemy's titles now include physics racer Snuggle Truck, supernatural log-chopper Jack Lumber, VR skydiving game Aaaaaculus!, mobile VR skydiving game Caaaaardboard!, chooseyour-own-adventure Dyscourse, and HTC Vive VR playground Job Simulator.

Q. WHAT LED TO THE FOUNDING OF OWLCHEMY?

A. After jumping into game development and getting a feel for both its art and its tech. I knew I wanted to be at the intersection of the two—as a problem solver. I began as a technical artist at a AAA [triple A] game studio, honing my skills before leaving and forming my own company.

Q. WHAT ABOUT YOUR COLLABO-**RATION WITH VALVE AND HTC?**

A. My company was built on the concept of designing silly, absurd, and polished game experiences for PC and mobile, though for the first three years this meant building games for regular phones and computers. In late 2013 that formula was disrupted when we built our first virtual reality game – Aaaaaculus!, a skydiving game for the Oculus Rift that we adapted to VR from a prior collaboration. It turned out to be a formative decision: building one of the first fully featured VR games in the world started us down an exciting path.

Owlchemy was brought into the loop early with Valve and HTC's

VR headset, the Vive. Our small team played a part in one of the most incredible, secretive, and fulfilling initiatives we've ever been privy to. This period of behind-closed-doors development led to the creation of Job Simulator, our new game set to launch in December on the HTC Vive.

Q. WHAT'S IT LIKE BEING A LEADER IN THE VR INDUSTRY AT THIS EARLY STAGE IN ITS **DEVELOPMENT?**

A. It's exciting trudging through the unknown, trying to solve design problems not yet tackled not only in games, but throughout the entire medium. We're trying out game mechanics and design features that may or may not work. It's almost impossible to know beforehand; as a company, we must stay nimble and iterate as

fast as possible while learning to fail. Working on virtual reality in 2015 forces us to test our hypotheses every day, as no one can predict what will be fun or will fail completely in VR. We're basically our own guinea pigs for all of this.

Q. WHAT'S NEXT FOR OWLCHEMY?

A. We've recently announced that Owlchemy Labs is transitioning to being a VR-only company. We're excited about exploring the intersection of gaming, VR, and AR [augmented reality] while building content for upcoming VR platforms. The goal is to continue to make a splash in the VR space and build amazing content.

Learn more about Alex and his company at owlchemylabs.com.

BEATING CANCER

AT ITS OWN GAME

Taking aim at the fundamental biology of cancer cells, the National Institutes of Health (NIH) has awarded \$747,000 to WPI for a three-year research project that will explore the molecular mechanisms associated with the genetic mutations and chromosome instability observed in all cancer cells. The goal is to turn the genetic tables against cancer by learning more about the molecular basis of cancer cells' uncontrolled growth. That knowledge could one day bolster the effectiveness of cancer

treatments and improve patient outcomes. Led by Amity Manning, assistant professor of biology and biotechnology, the research will examine how specific molecules can change the way DNA is packaged and organized within cells, causing genetic errors that can, in turn, transform normal cells into cancer cells. The study will also explore whether the same factors that affect DNA and cause chromosomal instability can be controlled to make cancer cells more susceptible to existing chemotherapy drugs.

"These are basic studies that we hope will give a better understanding of the genetic changes and cellular processes that allow cancers to grow and spread," Manning says. "The more we understand about the changing biology of the cancer cells, the more leverage we will have in treating the disease."

In her previous work as a postdoctoral

researcher at Massachusetts General Hospital, Manning identified several DNA regulatory molecules that are common to many solidtumor cancers, including non-small cell lung cancer. Those molecules appear to play a role in chromosomal instability, genetic mutations, and drug resistance that are characteristic of these cancers.

In this new project, Manning and her lab team will build on that work by using genetic screening techniques to further test those molecules, and to search for additional molecules that change the way DNA is packaged and processed in cancer cells.

"Chromosomal instability gives cancer cells an advantage," Manning says. "It enables the cells to grow and spread in ways that evade the body's natural defenses and resist the drugs we throw at them. We have to find out what the cancer cells know, so that we can fight back."



MANNING AND HER TEAM AT GATEWAY PARK LAB.

HIGH JUMP

LAURA PUMPHREY '15 is the second student from the WPI women's track and field team to receive three All-America honors. In her final appearance at the NCAA Division III Track and Field Championships in March, the biomedical engineering major cleared 5' 5" to end the competition in a three-way tie for fifth, her best indoor placing. In 2013 she received All-America honors for indoor and outdoor high jumps. She shares the WPI team All-America record with Julie Eagle '13. "So many aspects of being involved in athletics have contributed to my academic success," says Pumphrey. "When I first came to WPI I was shy, but my track and field experience helped me become more confident and outgoing. My team has been a great support network, and being able to act as a leader and mentor helped me realize my full potential."





▶ QUOTABLE

THEY DO SO REGULARLY AND WITH GREAT IMPACT. AND, DESPITE HUNT'S ASSERTIONS, HOUT FALLING IN R DISSOLVING INTO

-President Laurie Leshin,

commenting on Nobel Prize-winning biochemist Tim Hunt's public remarks about "the trouble with girls." Leshin's op-ed piece in the Boston Globe Magazine began "Here we go again."

PHD PROGRAM LAUNCHES

With one of the first master's programs in data science launched in 2014, WPI is now adding to its list of firsts the nation's first interdisciplinary PhD program in data science. Drawing upon WPI's faculty expertise in business, computer science, and mathematical sciences, the program is designed to meet a growing demand for highly trained scientists with transdisciplinary technical and scientific expertise.

"We live in the era of big data," says Elke Rundensteiner, professor of computer science and director of WPI's Data Science Program. "Large volumes of digital data rich in variety and complexity are being generated in practically all domains, including business, healthcare, telecommunications, science, and engineering. The ability to extract insights from this data is becoming a vital skill for our economic and societal wellbeing; it has created a tremendous demand for data scientists who are well versed in analytics and computing, can work in teams, and have strong statistical skills and a keen business sense."

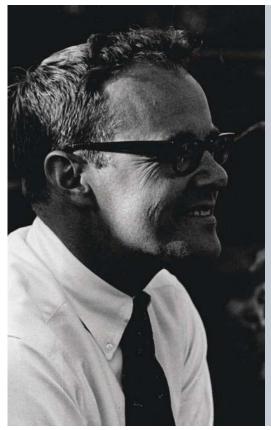
BOOSTING PROJECT LEARNING

IN LATE JUNE, WPI WELCOMED 90 **PARTICIPANTS FROM 17 COLLEGES** AND UNIVERSITIES TO CAMPUS FOR THE FIRST INSTITUTE ON PROJECT-**BASED LEARNING**, offered by WPI in partnership with the Association of American Colleges and Universities. Under the mentorship of WPI faculty, participants from across the United States, plus India and Saudi Arabia, formulated action plans to take back to their institutions.

"The 2015 Institute on Project-Based Learning was highly productive and generated good discussion and ideas for our college. I developed a specific, concrete plan for two of my own courses."

> -Ryan Keen, Assistant Professor of Psychology, Behavioral Science Department, Middlesex Community College





OPENING THE "TUNA FILES"

Bill Trask – known to many as Tuna – came to WPI in 1958 to serve as director of placement. Daily, he would jot down the day's doings in a bound diary. A half-century of scrawled notes – along with a houseful of WPI memorabilia – form a rich history of the man and the university he loves.

"It turns out that Bill's kept track of everything he's done for over 50 years-and most of what he's done is connected with WPI," says Jessica Branco Colati, assistant director for curation, preservation, and archives. In addition to the graduating seniors who passed through his door during his four decades in career services, his touch was felt by countless others through his work on everything from admissions and orientation to Commencement. He was tapped for Skull (with the Class of '63) just a few years after he arrived at WPI. Now retired and in his 80s, "Tuna" can be found on campus almost any day of the weekrunning Tech Old Timers, or schmoozing with current students over card games at the Greek houses.

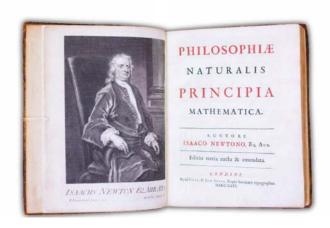
A small selection of Bill's treasures was on display in Gordon Library at Homecoming 2015. Over the next year, members of the WPI Archives staff-assisted by dedicated volunteers-will



continue the mammoth task of creating a preservation plan and sorting through material for the William Foley Trask Collection. Counted thus far are 50 cartons of diaries, nearly 100 WPI-themed T-shirts, and more than a thousand postcards. "And Bill can tell you exactly what each one is from, and what it means," says Colati.

One of the younger "friends of Bill" is Sarah Conlin '14, who is helping coordinate the project. Conlin is an expert on student life at WPI, having documented the first 100 years in her recent MQP. "No matter when you went to school, no matter whether you really knew Bill or not, he has something in his collection that relates to your time at WPI," she says. "He has more than I do from my four years here."

Colati sums it up neatly. "Who actually keeps every ticket, every program, the minutes of every meeting, for 50 years? Bill does - and we're grateful for it!"



©MDCLXXXVII

A bestseller when it was first published (in Latin) in 1687, Newton's Principia is still revered as the foundation of classical mechanics. The first edition created a buzz in the European science community and rapidly sold out. The much sought-after second edition with additional material aimed at doubters – was 26 years in the making. Sir Isaac, who was knighted in the interim, brought out only one more edition in his lifetime, in 1726. The publisher's records for the third edition show a print run of 250 copies.

WPI is among the few universities to possess one of these. Although a third edition might not seem so impressive, it was the last to come from the author's own pen, and subsequent editions (including the English translation) rely on it.

The hefty leather-bound tome is fetched from the Gordon Library closed rare book stacks each fall, when mathematical sciences professor Joseph Fehribach invites his students for a presentation.

They get to see Newton's three laws of motion in their original Latin – and to turn the hand-cut, ink-embossed pages. "Principia is the basis for all of classical and planetary mechanics," Fehribach says. "In its time, it was as big a step forward in our understanding as would be relativity and quantum mechanics at the beginning of the 20th century."

WPI's copy was a gift from Mrs. L. L. Conant-wife of Levi Leonard Conant, who chaired WPI's math department in the early 1900s. The original binding and pure rag paper pages have held up well through three centuries, but the book was recently taken apart and hand-sewn back together by an expert conservator, with matching leather used to repair a broken spine hinge.

"You want to keep things as close to the original as possible," says special collections curator Kathy Markees, "because you don't know what information you might be losing."

CELEBRATING OUR PAST





















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wpi.edu/+alumniweekend

[TURNINGpoint]

There was no turning point for **ISABELLA MENDES** '06 when it came to choosing between music and a more reliable career.

Music was always a part of her life growing up, but so was math, and each held for her a special place. Born and raised in Brazil, Mendes chose WPI in part because of its reputation as a top engineering school, but also because of its strong musical offerings, presenting a way to keep each of her concentrations in even tones.

By day Mendes has worked on her career path; from consulting/design engineer, to program manager analyst at the Yale School of Engineering and Applied Science, to her current position of assistant director for academic affairs and student life at Yale's School of Management. Yet her underlying current throughout has been her music. "I enjoyed my career as an engineer quite a lot, but music is, without a doubt, my ultimate passion," she says.

The singer/songwriter and pianist loves the freedom that comes with writing her own songs, and expressing them in her unique way. "I think this was the link I saw with engineering—the creative side of designing a connection, solving a problem."

Currently based in Connecticut, Mendes can be found performing in the Isabella Mendes Quartet. She is also the front woman for Brazilian jazz band Sambeleza, and has released two albums this year: Blame Destiny, a solo album of original songs, and Sambeleza Live, a cover album of Brazilian Bossa Nova songs.

Mendes says it was her engineering experience at WPI that built the foundation of her professional growth and prepared her to tackle her sudden notoriety in the jazz world. "An engineering education never goes to waste; it has allowed me to have an analytical mind that can be applied to just about anything in life."

-Doreen Manning

A SEASON ON

RAISING MELONS (AND MORALE) AT THE BOTTOM OF THE WORLD

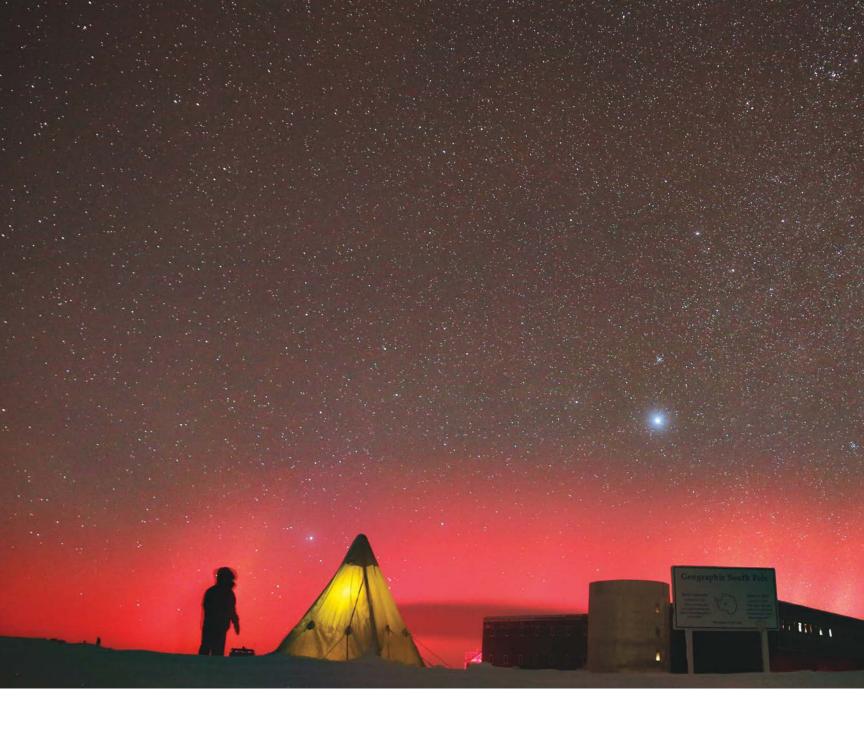
BY JOAN KILLOUGH-MILLER | IMAGES PROVIDED BY MARISSA GOERKE





While working in the greenhouse I noticed that a cantaloupe had fallen off the vine overnight. We all passed it around and smelled it all day. It's amazing how good a cantaloupe smells after almost five months without seeing fresh fruit!" (August 18, 2015)

That succulent melon was sliced thin and gleefully shared over lunch at Amundsen-Scott South Pole Station, in the midst of the Antarctic winter. Marissa Goerke is in charge of the greenhouse that feeds 45 hardy souls at the southernmost point on Earth -90degrees south latitude. She also supports nine research experiments and cheerfully shoulders her share of the housekeeping duties to maintain the station's tiny winter population.



Since South Pole Station was built in 1956, only 1,454 people (214 of them women) have spent an entire year "on the ice," according to statistics kept by Bill Spindler, the station's unofficial historian. He notes that Goerkewho turned 23 in February – set a record as the youngest female to "winter over." She documented her year as an engineering and science support associate for the United States Antarctic Program in spectacular photos and vivid prose at 90south.blogspot.com. Some of those blog posts are extracted here. Goerke also responded to our questions via email during the Pole's limited windows of Internet connectivity.

A little background: The Amundsen-Scott South Pole station is about at 9,300 feet in elevation (but feels higher due to the thin atmosphere), and sits on about two miles of ice. The average monthly temperature for the austral summer is -18°F (-28°C); (-60°C). The pole experiences one day that lasts the entire year. This means one sunrise, one sunset, and about six months of darkness. (October 20, 2014)

Goerke arrived at the South Pole on Nov. 7, 2014, after an orientation that included everything from team-building exercises to snow survival school. On the last leg of her journey to Antarctica, she picked up her ECW (extreme cold weather) gear in Christchurch, New Zealand, and took a moment to snap a sunset photo – the last sunset she would see for almost a year.

"I am basically the eyes and ears in the field," she says of her research responsibilities. "The scientists up north turn to me to do their troubleshooting and repairs, and to compile and transfer data." She goes out to check on





precipitation. "I can see and hear lightning that happens anywhere between here and the equator," she marvels.

Miscellaneous duties range from wielding a chainsaw to widen ice tunnels, to washing dishes, cleaning bathrooms, and refueling planes. Goerke was tasked with painting an outdoor mural of Roald Amundsen and his crew – the Pole's original explorers – working from one of the earliest photographs ever taken at the South Pole. Paint evaporates rapidly in that climate, and she had to thin and stir it frequently to break up ice crystals in the roller tray. She also reports on happenings at the station as the South Pole correspondent for the Antarctic Sun.

The last flight of the season came today. The next one won't be until November 2015. I was in charge of marshaling it in (hand signals, passengers, and cool flight deck radio headphones) which was really awesome. As per tradition the last "Herc" [Hercules military

The minute they are cut off from the outside world, the "winterovers" gather for a beloved tradition: watching The Thing, in all three movie versions. Imagination and ingenuity give birth

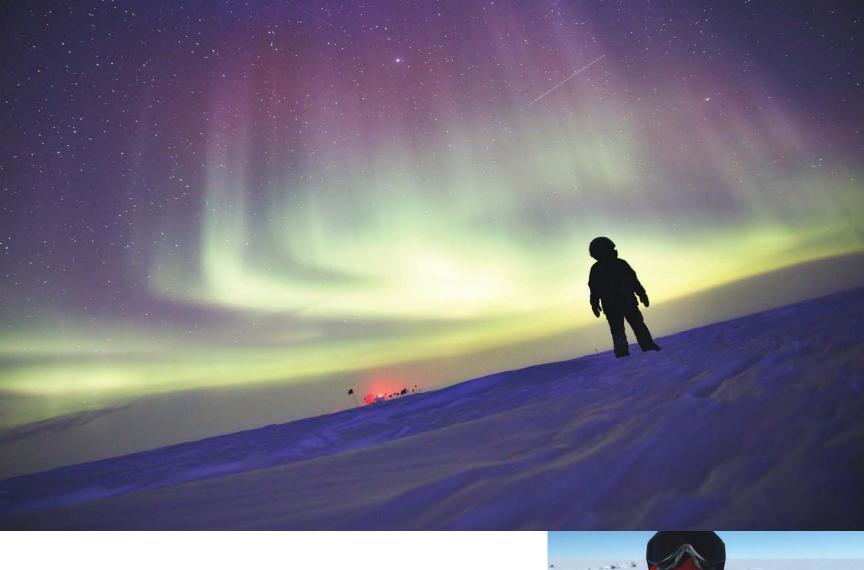
to other zany amusements, some of which are shared (by telephone and Internet) with other stations scattered across the continent. There's the famous (at least in Antarctica) 48-hour short film festival. And this year Goerke organized a Trans-Antarctic International Darts Tournament that drew in nine stations representing seven different countries. ("That's the most stations and most countries to ever participate in a darts tournament in Antarctica ever," she notes.

bubbles at -104 today. They freeze, crack or shatter and the pieces float around. This place has a very alien feel to it sometimes, like we really aren't supposed to be here, but it's absolutely amazing that we

Embracing life in the highest, driest, coldest, windiest, and emptiest place on Earth, Goerke describes an existence that is both beautiful and complicated. Equipment freezes and shatters, fuel gels up, and special gear is required just to go outside. "Eyelashes frozen together are a common occurrence," she notes. Goerke grew up in San Diego. "My winter clothing consisted of jeans and a hoodie, and I complained that it was too cold if it got below 65°." She was glad she landed in Daniels Hall her freshman year so she didn't have to go outside for meals in the New England winter.

each of her experiments daily – a 1.3-mile hike that passes through every time zone. In the dark season, her "commute" requires a headlamp, flag lines, and the standard-issue "Big Red" parka.

On a typical workday, she might be out testing resistors or calibrating equipment at -50o to -100o F. A recent to-do list: 1) repair computer with spare parts; 2) secure it onto a sled; 3) drag it back to its site; 4) lower it back into place; 5) re-install it inside an ice vault. She takes special pleasure in looking in on her favorite experiment, the University of Florida's study of lightning-induced electron



It was her IQP at a remote desert research station in Namibia that sparked her polar dream. "I loved living, working, and sleeping under the stars in such an interesting environment," she says. When it came time to interview for her current post, she says her WPI education set her apart. Some applicants spend years on the wait list; Goerke was accepted the first time around. Her project experience gave her something the other candidates likely hadn't gotten in college: "Solid stories about how I've worked in isolated environments and dealt with extreme conditions. Also, my MPQ with Caterpillar in Shanghai allowed me to demonstrate that I have worked with other professionals in the field, not just my peers," she adds. "WPI helped me develop skills in problem solving and critical thinking. And living in a place where it is commonly 50 below makes even simple problems a lot more complicated to deal with!"

Even in the harshest conditions, Goerke's blog posts remain upbeat. When visibility is almost nil on her walk back to the base, she writes, "I can easily see how it could make

someone nervous or claustrophobic or agoraphobic or just plain disoriented to be surrounded by so much black nothingness and blowing snow, but I thought it made pretty cool pictures." When a hint of sun returned to the Antarctic horizon, after four months of complete darkness, she notes, "That Milky Way, though... it's amazing. I'm going to miss it."

August is sometimes called "Angry August" because at this point we have been stuck in the station with each other for over six months. It's also when we begin planning our off ice traveling I'm a little sad to see the stars go and the sun come back. I have and I don't really want it to end. Although I could really use a nice, crispy, juicy apple and some Cheez-Its. Also some garlic stuffed



"After that, I want to go on a few adventures where there are trees, humidity, smells, and mountains, and I get to see the sun and stars on a daily basis - not that 24/7 darkness isn't one of the coolest things I've ever experienced. I would definitely consider another season on the ice. I love it here!" J

MEET THE CHALLENGE



GIVE what you can



MAKE a difference

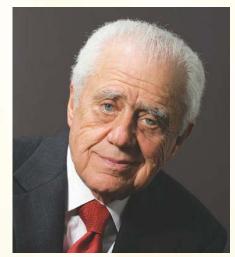


the future

Bob Diamond '56

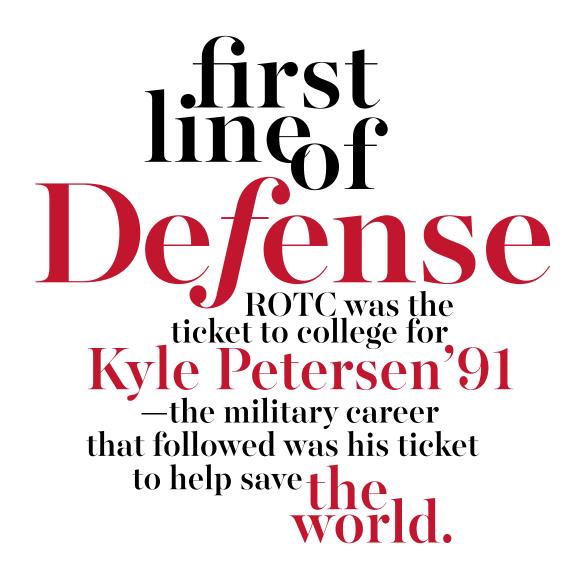
Bob Diamond, who was the 2013 WPI Innovator of the Year, has proven himself as a forward-thinking entrepreneur. He has pioneered such emerging technologies as the caller ID we take for granted today, and the cloud-based home security and management system that is still very fresh. That's why the focus of the Foisie Innovation Studio is so inspiring to Bob, and why he generously donated \$500,000 to the project as the first major contribution to the Alden Trust Challenge.

"Attending WPI had a very dramatic effect on me, it changed the trajectory of my career, my outlook. I'm proud to be able to support WPI now through the Foisie Innovation Studio and this challenge from the Alden Trust."



Join Bob Diamond and look forward with us. If we raise \$9 million together, the Alden Trust will invest another \$3 million to make the Foisie Innovation Studio a reality.

Every gift makes an impact.



BY KATE SILVER | ILLUSTRATION BY YUTA ONODA



yle Petersen considers himself a detective, of sorts. As a specialist in infectious diseases, his job revolves around uncovering clues: a fever here, muscle aches there. He must use the tools at hand-microscopes, technology, his senses - to come up with a diagnosis, whether he's working in a lab studying never-before-seen viruses in South America or consulting one-on-one with patients injured in combat.

When he answers the phone in mid-August, it's been just a few days since the captain in the United States Navy Medical Corps and his family-wife, Catherine, and 8-year-old twin daughters, Megan and Allison - returned from living in Lima, Peru. As commanding officer of Navy Medical Research Unit No. 6, Petersen had overseen a 300-member team dedicated to detecting infectious diseases that could threaten the military and public health. NAMRU-6 developed vaccines, medications, and diagnostic tests, and created strategies for combating such scourges as malaria, dengue fever, yellow fever, and typhoid fever.

Yesterday, he was focused on saving the world. Today, he's readjusting to life stateside as he prepares for his new roles as internal medicine site director for the Veterans Affairs Medical Center in Washington, D.C., and as associate professor of medicine at Uniformed Services University of the Health Sciences.

The biotech grad, who went on to become a doctor of osteopathy and a 21-year Navy veteran, has grown accustomed to an everevolving adult life. That life began at WPI, where a physiology professor opened Petersen's eyes to the world of medicine and where his involvement in the Reserve Officer Training Corps not only paid for his education, but paved the way to a colorful career. Working in the military, Petersen never knows what lies ahead. But he's always excited to take on the next adventure.

LURE OF THE LAB

Petersen grew up in Stony Brook, N.Y., where his dad was a sheet metal worker and his mom worked as a librarian. Money was limited, and it was a given that he'd need financial assistance to go to his school of choice.

That school was WPI, where Petersen hoped to major in biotechnology. By enlisting in ROTC, he earned a full NROTC scholarship. At first he had his sights set on becoming a nuclear submariner, but that changed in his junior year when he took a physiology class taught by Dan Gibson. "He was one of my all-time favorite professors," says Petersen.

In part, that was because of the "asparagus experiment." While teaching the class about how different human bodies process the same chemical compounds in different ways, Gibson noted that Babe Ruth had once declined to eat asparagus at a party, proclaiming that it made his pee stink. Most bodies, in fact, turn asparagusic acid, found only in asparagus, into volatile sulpher componds that end up in the urine, but a small fraction don't (there are also people who produce them but for genetic reasons can't smell them. Gibson brought out a can of asparagus, had each student eat a spear, and soon after, visit the restroom. Their

"It was fun, bringing in that element of baseball history and actually doing the see-and-smell kind of thing. He was that kind of guy," says Petersen. For another lab experiment, he remembers euthanizing a frog, removing its leg, applying electrodes to the sciatic nerve, and

assignment was to write up their own

about their physiology.

experience and explain what it told them

watching the neuron fire. For this biotech major, to study a body was to delve into engineering of a different sort, one filled with complex muscles and vascular structures, with nerves going everywhere.

It was that class – and, soon, another scholarship via the Navy's Health Professions Scholarship Program – that changed his path. "That's when I thought, 'wow, medicine would be pretty cool," he says. "And that's why I finally decided I should apply to medical school. It will be just like Gibson's lab, I thought.

I'll be doing that all the time."

Petersen graduated from Des Moines University in 1994 with his doctor of osteopathic medicine degree. After eight years of scholarships, he was committed to eight years in the Navy, and through those years, there wasn't a dull moment. He interned in internal medicine at the Naval Medical Center Portsmouth (Va.) and then attended "dive

school" at the Naval Undersea Medical Institute in Panama City, Fla., to train with enlisted Navy officers. He moved to California for his residency at the Naval Medical Center San Diego, and to train for his fellowship in infectious diseases. Over the next two years, in Puerto Rico, he alternated between working in the emergency room and spending time on the waterfront, where he had access to a hyperbaric chamber to treat divers who surfaced too quickly and got the bends (decompression sickness). But his many years in ROTC followed by military service couldn't prepare him for what was next: serving as a doctor during wartime. When the Iraq war began in 2003, he was assigned to a hospital ship in the Persian Gulf that received marine casualties from the

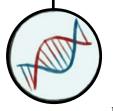
initial assault phase.

"It was like MASH," he says. "There was a lot of carnage. I still have some...just bad memories. You see these young 19-, 20-year old kids blown up six ways to Sunday, and missing limbs. And when they come off the battlefield some of them are just mangled, and you have to cut off the pants or take off a boot to see what's left. It's really hard on your psychological well-being day in and day out."

For years, he'd looked forward to seeing patients and saving lives. In the thick of it, he was proud to take care of the severely injured and help get them back on their feet again. But he knew, from the mental toll, this wasn't a position he could take on long term.

Deployment was also challenging on a personal level - Kyle and Catherine had to reschedule their wedding date because he was on a ship, returning home from Iraq. A couple of years later, not long after learning she was pregnant with twins, he was sent to Guantanamo Bay for six months to provide medical attention to prisoners. When complications arose with the pregnancy, the Navy allowed him to come home. Three days later, Catherine was admitted to the hospital, and their daughters were born soon after.

As a new father, Petersen was ready to slip into a more predictable schedule. A position opened up at the Naval Medical Research Center in Silver Spring, Md., and he became the deputy department head for undersea medicine research. He worked with rats and pigs researching ways to mitigate decompression sickness. The Navy needed to know: if a submarine runs into a problem underwater, and more than 100 military personnel have to get to the surface quickly, how do you help them? The research brought back the basic medical science he'd learned at WPI: designing good experiments, timing the drug dosing, maintaining lab notebooks, and writing up the results. The job also gave him the mental reprieve he needed. Putting on the lab coat, he was distanced from the battlefield and the devastation of war. There was safety in the lab



environment, comfort in the purity of the scientific method. In 2011 he was recommended for a post in Peru as the executive officer

at an overseas Naval lab. Kyle and Catherine and their 4-year-old girls packed for an adventure in South America.

HONOR, COURAGE, COMMITMENT — AND MOSQUITOES

Since 1983 the U.S. Navy has operated a regional research lab focused on tropical disease jointly with the Peruvian Navy (the Navy has similar labs in Singapore and

Egypt). Petersen says it's important to have a lab in South America because it allows scientists to learn about pathogens – including those that cause dengue fever and malaria - that can't be easily studied in the United States because of the limited number of cases.

"You need hundreds of thousands of cases to do a clinical trial," he says. "You can't do a clinical trial on malaria in the U.S. because you get maybe 100 cases a year. So it was a real neat opportunity to go down there."

By establishing these sites abroad, the Department of Defense is monitoring vulnerable areas in case of an outbreak. Rainforests and tropical areas are a particular area of concern, says Petersen, because many viruses and pathogens originate in bats and other disease vectors that live in these environments. "And now you have encroachment by loggers, oil drillers, gold miners, and others who perturb the habitat; there's a huge potential to bring those pathogens out."

After two years in Peru, he was promoted to commanding officer, overseeing 300 personnel. In part, his work involved screening patients and looking for new strains of dengue, malaria,

and hantavirus, among other microorganisms. He focused on bringing in new technology that improved screening capabilities. For example, he says, in the past the lab would screen for viruses using molecular biology and the polymerase chain reaction – an inexpensive technique to amplify DNA. But the

success rate was only about 30

percent, so the majority of specimens came back negative. Under his leadership, the lab invested in technology that could sequence the full genome and then grow the pathogen based on that. "In 2012-13 our lab counted 11 viruses never before described in humans."

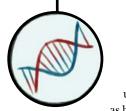
By identifying the genes and

proteins, the lab could then create the antigens and work toward producing medication and vaccines. (Vaccines work by introducing a pathogen into the system; the immune system then produces the proteins or antibodies to fight it off.) In addition, the lab has worked on antibiotic-resistant bacteria, succeeded in breeding a particular type of mosquito to perform malaria tests, and identified new strains of dengue fever.

But the memory that makes Petersen the proudest revolves around that detective work that drew him into the profession. That's the work that the lab has done on malaria.

A couple of years ago, one of the lab's entomologists came to Petersen and told him about the trouble she was having getting a colony of finicky anopheles mosquitoes - the females of which transmit malaria - to breed. That was a problem, because the lab infected the mosquitos with malaria and used them in research. And they needed a reliable supply of new mosquitoes.

She'd tried everything she could to put the bugs in the mood: manipulating humidity, temperature, lighting, noise level. Nothing worked.



In the absence of breeding, the lab had to capture the mosquitoes in the field using human volunteers as bait. "They'd sit there

all night in a field with no bug repellant on, with one part of their body exposed, and every time a mosquito landed on them they'd suck it up with a straw and put it in a container," says Petersen. "So it was dangerous and it was a lot of work."

The entomologist met a scientist from Mexico at a conference who told her she was going about it all wrong. He said she needed to apply a different psychology with the insects: instead of trying to coddle and seduce the bugs, she needed to stress them out. Put them in hot, dry, uncomfortable conditions, he said. When they are facing death, the mosquitoes will breed. Intrigued, the entomologist requested funds to bring the scientist to the lab to help out.

Petersen took time to work behind the scenes, securing that funding and recruiting staff. To his delight, the experiment worked. NAMRU-6 was the first lab to start a successful breeding program with this type of mosquito. Through that program, they're able to harvest malaria spores and send them to the United States for use in human trials, in hopes of one day creating a vaccine.

"This was the first time it had been done in the history of science," he says. "It was a huge accomplishment for the lab. And I was really proud."

MARCHING ON

Petersen says his ROTC experience at WPI was instrumental in helping him become a better leader. And it was his leadership skills, medical know-how, and science and research acumen that led to the position in Peru, according to Gregory Martin, MD, chief of infectious diseases - tropical medicine with the U.S. Department of State Office of Medical Services. Five years ago, when Martin was the Navy surgeon general's specialty leader for infectious diseases, he suggested Petersen for the job.

"He was respected by the scientists because he was not just somebody who'd been stuck in charge; he could talk the talk and walk the walk," says Martin. "He has good leadership skills, he's a good scientist, and he's a good physician. That combination is really important for success in that kind of high-visibility position."

> Martin first met Petersen 13 years ago, when he hired him as head of the

> > International Travel Clinic at the National Naval Medical

Center. Martin was the center's chief of infectious diseases at the time, and Petersen had just completed his fellowship. Martin recalls being impressed by his intelligence and confidence, even at that early stage. "He has always had a different

perspective on things than anyone else," says Martin. "He looks at the world from a whole different realm."

By the time Petersen left Peru in August 2015, he says the clinic had the highest budget of any of the seven Naval research and development

labs (not including headquarters) and the most published articles. But after nine years working behind the scenes, he was ready to return to the hospital.

FORWARD FACING

Looking back, Petersen says he's loved both areas of his work: the lab and the clinic. At the same time, both came with their own challenges. When he transitioned to his lab jobs, he needed a break from the human side of medicine. Now, he's ready

for another change. He says watching budget crises and government shutdowns unfold over the last four years in the Navy was exhausting, and he's ready for something new.

"If it wasn't for the deployments and the wartime casualties, I would have said my favorite time was just being in a staff position at the hospital, treating patients in HIV clinics, going in and treating patients in the ward, and working with junior physicians and mentoring and teaching." And that's exactly what he's returning to in his new role in Washington, D.C.

After more than two decades in service, Petersen often fantasizes about retiring. But the variety of his work and the opportunities to travel and explore keep him coming back.

"I keep saying [I'm going to retire] every three years," he laughs. "And then the next adventure comes along." J



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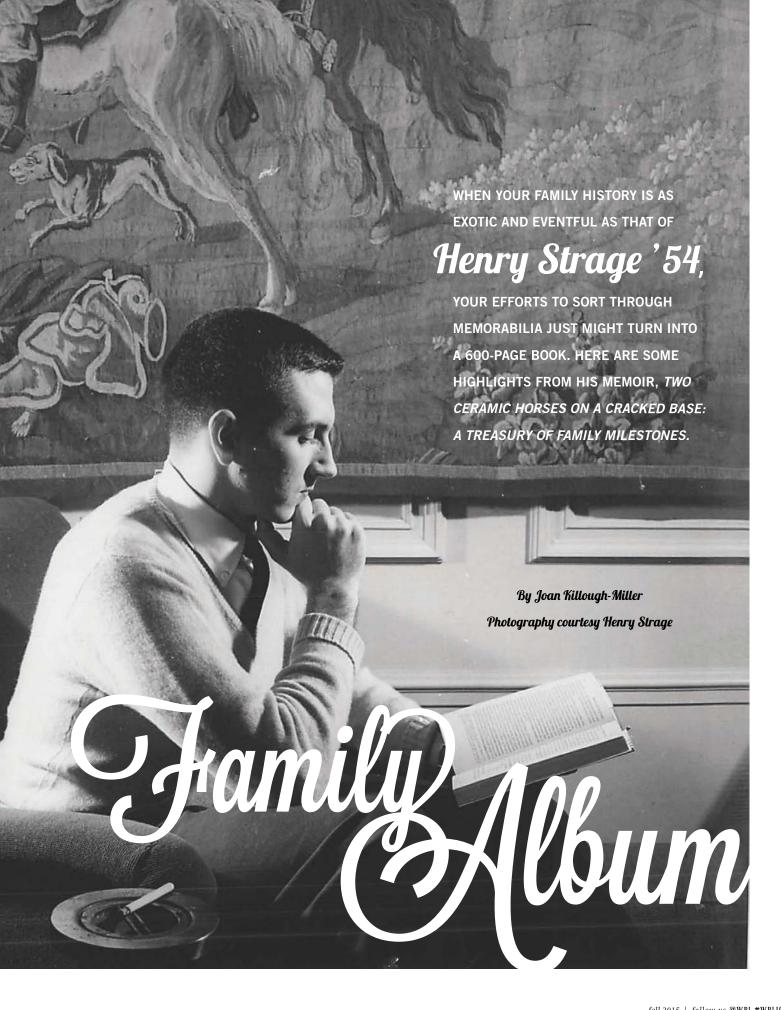
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GIFT OF THE CLASS of 2009

Patrick Degenhardt













HOW THIS BOOK CAME TO BE

4 When I was 70 I took a course at the Open University in the UK called 'How to Write a Family History.' My eyes were opened to the treasures and mysteries that are hidden in family photographs. Many photographs carry secrets that are unlikely ever to be deciphered unless one takes the trouble to scan and enlarge them, and carefully study the minute details that may be hidden in the background."

Henry's research took him around the world. His wife, Alberta, urged him to "stitch together" his stories into a book. The title refers to a ceramic statuette that his parents carried along with every move, and which now sits in his library in London. Where did it come from? And why was it so important? Despite extensive research, he concludes, "In some cases, there simply are no answers."

THE MANCHURIAN CONNECTION

Henry's paternal great-grandfather, Aron Strascheffskey, was abducted into Tsar Nicolai's Imperial Russian Army at the age of 8. After 25 years of forced service, Aron settled in Finland, and later moved his family to St. Petersburg. Henry's ancestors on both sides were among millions of Russian Jews confined to the "Pale of Settlement," where they endured harsh treatment. Henry's maternal grandparents migrated east from Russia, to Manzhouli, a Mongolian city in Manchuria, where a small settlement of Jewish refugees established a community, with schools, synagogues, and kosher shops.

Henry's parents met on the Trans-Siberian Railway. His mother, Sonya, had been studying piano at the music conservatory in St. Petersburg. His father, Michel ("Misha"), an engineering student, was fleeing Russia without papers after being falsely accused by the police of hiding some family jewels.

The 23-day train journey was long enough for the couple to fall in love. Sonya helped Misha bluff his way past suspicious Mongolian border guards. Only months later did they discover Misha's family had advised him to look up Sonya's family when he reached Manchuria.

HELLO, AMERICA

"When we moved to America in 1939, no one had pointed out to me that Americans spoke neither French nor Russian," says Henry, who was born in Belgium but spoke Russian at home. Growing up in Cleveland and New York City, he embraced everything America had to offer, including the Boy Scouts, American Indian summer camp, and baseball. "I'm sure I was the only Russian-speaking Belgian-born batboy in America," he quips. Scorning kasha – a staple of the Russian diet – he was thrilled by corn on the cob and cherry pie at the Horn and Hardart automat.

At WPI, Henry distinguished himself by almost electrocuting his ROTC Signal Corps commanding officer while trying to connect a switchboard during a field training exercise. "Although I had practiced setting up the switchboard several times in the classroom, no one told me that in the field it was crucial to ground the equipment." The shocked CO was hurled 20 feet across the field. Henry still managed to graduate and went on to receive an honorary doctorate from WPI.

HENRY THE ENGINEER

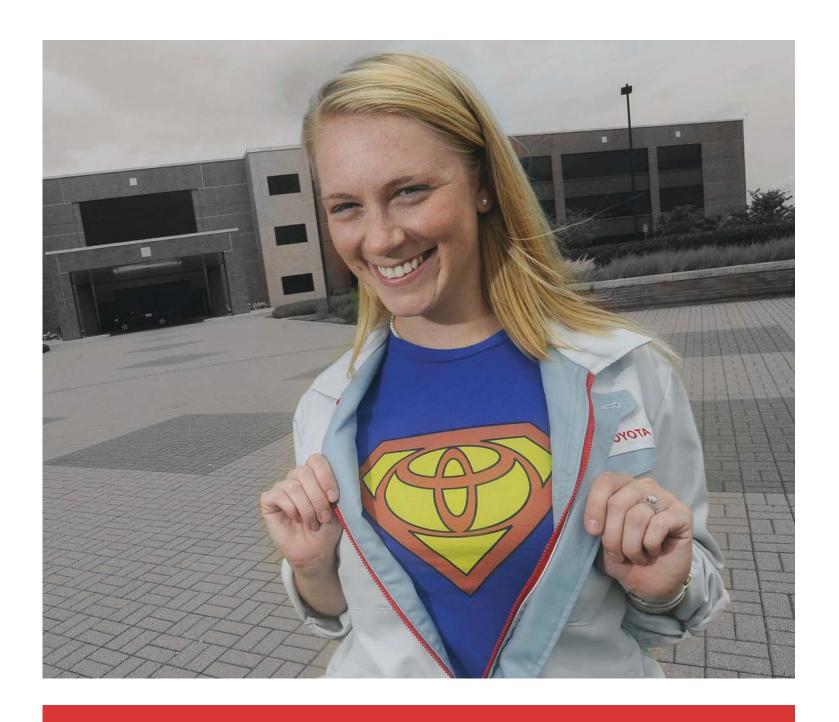
4 I think I was always destined to become an engineer. I was everlastingly curious about how and why things worked. And I enjoyed making things, whether it was helping [older brother] Mark make model spotter planes during wartime, building rubber band airplanes with balsa wood and crepe paper, or trying to recreate the Eiffel Tower with toothpicks."

At the 1939 World's Fair, days after he arrived in America, Henry was wowed by what he saw: "Despite the fact that I did not know a word of English, the fair made a big impression on me. All six-year-old boys love to turn handles, push buttons, and watch machines turning, and to see airplanes close up, and to look inside lovely new cars. If this was what America was like, I was sure I would love every minute of our stay."

At WPI, professor Bob Wagner challenged Henry to enter the annual Peel Prize competition. Henry's prize-winning entry - a soapsaving system for commercial laundries attracted the interest of Procter & Gamble. Although at the time he lacked firm data to validate his invention ("Frankly, I was making up the numbers"), his concept has become common practice in the industry. Fifty years later, Henry returned to WPI to reinstate the competition as the Alberta and Henry Strage Innovation Award with a permanent endowment and prizes that far exceed the \$75 first prize he won back in 1954.

In 1962, Henry was sent to London by his employer, McKinsey & Co., for a six-month posting. It turned into a 50-year adventure for the Strage family.

In addition to Two Ceramic Horses on a Cracked Base, Henry has written three other books and a full-length historical drama that was produced in London. He is contemplating a second volume of his memoir with tales from his life as a parent and grandparent: "Perhaps for this effort, Alberta will join me as a co-author!" J



DANA BUCKLEY LENOIR '12

she engineers details that could make a difference between life and death

on a

She had been working for Toyota for under a year when she got a firsthand lesson in the importance of good engineering. Dana Lenoir was running errands in her brand new Camry when another vehicle ran a stop sign, smashing into her car's passenger side. The sedan was totaled; a steel support beam was now bent at a 45-degree angle. She, however, emerged unscathed – and fascinated.

"Of course, it's a Michigan winter – January, 25 degrees below zero – and I'm on my hands and knees looking at the car," she laughs.

M, LIKE, I GOT HIT!"

I want to see!' It was actually a cool learning experience."

Not many drivers would have that reaction, but for Lenoir it was a priceless example of theory become practice. As a safety and crashworthiness engineer at the Toyota Technical Center in Saline, Mich., she is part of a team responsible for developing and testing systems that protect drivers and passengers in the event of an accident – everything from seatbelts and airbags to the vehicle's steel frame, and from the structure of the steering column to small but surprisingly important details, like the hood-locking mechanism. She has worked on the Sienna, the Tundra, and the Tacoma, and as she waited by the side of the road for a tow truck, she felt grateful that engineers like her had made sure the Camry was crash-worthy, too.

BY AMY CRAWFORD

PHOTOGRAPHY LON HORWEDEL

CRASH COURSE

Lenoir hadn't planned to crash cars for a living. When she arrived in Worcester, a math geek from a small town in New Hampshire, her goal was a career developing better prosthetic limbs for amputees. At WPI, she stayed on that track, majoring in biomedical engineering and spending the summer before her senior year at an internship with a medical device company. The following spring, she attended the Society of Women Engineers national conference in Chicago, aiming to line up interviews for a post-graduation job in the medical field. But curiosity got the better of her when she noticed

the Toyota booth. "WHO **GETS TO CRASH THE** CARS?" she asked.

"You can!" the recruiter replied.

"So I got an interview," Lenoir says, "and, fast forward, I've been at Toyota for three years. I had no idea the automotive industry had so many opportunities for a biomedical engineer."

Although she had never considered working for an automaker, Lenoir soon realized it was the perfect place to apply the skills and knowledge she had gained at WPI. A thorough grounding in biokinetics, or how the human body moves, is crucial for a researcher hoping to build better medical devices. But it's also key to helping ensure that drivers and passengers can walk away from a high-speed car crash.

"At Toyota, I use biokinetics to control the movement of an occupant in a crash," Lenoir explains. "I can change the way the neck moves, for example, by restraining the head and the chest differently. The littlest thing can change the way your shoulders move, or your hips move, and that can determine how much energy your body absorbs in a crash."

A lot of Lenoir's work takes place in simulation – "e-crashes, for lack of a better term," she says. Many rounds of virtual modeling help her and her colleagues understand how the various components of the vehicles they're working on interact with each other, and to explore their potential to cause or prevent injuries in a crash. But each component she works on, from seatbelt to sun visor, must also undergo physical testing. That usually takes place on a test track inside the vast Toyota facility, with a concrete wall at the end for the vehicle (and its unfortunate crash-test dummy passengers) to smash into. Post-crash, Lenoir and her team pore over the wreck and study detailed, multi-angle videos. If they discover a potential problem – for example, a part of the hood that can penetrate the interior, or an airbag that doesn't meet or exceed the latest federal safety requirements – they work with the car's designers to fix it.

The automotive industry has made great strides over the past decade, a period that saw annual highway deaths decline from about 43,000 to under 33,000 in 2013. Toyota's Sienna minivan, the first car Lenoir worked on, recently earned a 5-star overall crash test rating from the National Highway Traffic Safety Administration. It's gratifying to be on the front lines of vehicle safety, she says, and she's glad to be putting her expertise to use saving lives. But she also loves her job because it doesn't force her to sit behind a desk all day staring at a computer.

"Not only do I watch the car hit the wall, but I get to go out afterwards and look at every part of the vehicle and pare it down to understand what went right and what went wrong," she says. "I don't ever imagine myself being in a career where I'm not hands on -I'm glad I learned that about myself when I was at WPI!"

NAVIGATING LIFE

As a high school student, Lenoir visited WPI on the suggestion of a guidance counselor. Once on campus, she says, it took approximately five minutes to decide it was the place for her. "I was, like, 'I know I haven't applied yet but here's my deposit," she recalls with a laugh. She liked that the classes were small, and that they moved quickly, plunging students deep

into the subject matter.

"You're totally involved in the things you're working on," she says. "And it's not just the classes in your major. I took astrophysics with Professor [Frank] Dick and I loved it. I was completely engaged in my Spanish class. Looking back on it, the ability to drink from a firehose is something that WPI teaches us really well. Without that, I don't think I would have been able to jump into a career that had so little to do with anything I'd ever learned before and be successful."

Beyond learning the fundamentals of engineering and gaining the ability to immerse herself in a subject and learn it inside and out, Lenoir says, at WPI she also had the opportunity to practice working across cultures. And that's something that she does every day at Toyota, a Japanese company where many of her colleagues have a very different approach to work. In fact, looking back on it, the IQP Lenoir completed at WPI's Bangkok Project Center may have been what secured that crucial job offer - even though her work in Thailand had nothing to do with cars.

"It was about what makes an elephant happy," she explains. "How much space does an elephant need? How much companionship? How much food? How much water?"

In Thailand, thousands of captive elephants are used in the tourism industry, providing rides or performing in shows to make money for their owners, who are often impoverished themselves. But elephants often do poorly in captivity, and many of Thailand's pachyderms are overworked and abused. In 2011 Lenoir was part of a team of students, half from WPI and the other half from Bangkok's prestigious Chulalongkorn University, who developed a checklist with quantitative items that, when weighted and totaled, could be used to determine a domesticated elephant's quality of life. The team then surveyed elephants living in different situations throughout Thailand and reported their findings to the government, which had recently passed a set of elephant welfare laws.

"Our hope was that our guidelines would



help the lawmakers make better educated choices about moving an elephant in or out of a certain situation," Lenoir explains.

Through the course of the project, she learned some interesting facts about elephants. "They only sweat through the pads of their feet," she reports. "So if they're dehydrated, you won't see sweat on their feet. We were able to look at how sweaty an elephant's foot is. Wild elephants always had a ton of moisture around their toenails, while the elephants we found working in the tourism industry were out in the sun all day and their feet were super dry."

She also learned about humans. Communicating with her Thai colleagues across a language barrier was challenging. Lenoir learned to appreciate their nonverbal cues, and to create presentations that were clean, clear, and understandable to others who, while they may have a thorough grounding in engineering, don't have a perfect grasp of English.

"That's been directly relevant to what I do today," Lenoir says, explaining that at least once a week, she meets with her Japanese counterparts at Toyota via Skype. Their work culture is very different, she says, and that becomes even more apparent when engineers from Toyota headquarters visit the Michigan facility. "Typically, in America you are given an assignment, you finish your assignment, and when you're done, if you've checked all your boxes, you go home," she says. "The Japanese culture says you stay until everybody's stuff is done. Sometimes they won't leave work until 10 or 11 at night." That's considered a bit extreme in America, Lenoir says, but it's important to appreciate the "different kind of professionalism" her Japanese colleagues bring to the company. And, she adds, "the ability to sensitively communicate across cultural barriers is not something I think I would have ever learned had I not done that IQP."

DRIVING COMMUNITY

Of course, as a woman in engineering Lenoir is not only navigating the cultural barriers between Japan and the United States. As at WPI, the engineers at the Toyota Technical Center are mostly male. Lenoir has no complaints, but she

is doing her part to recruit more young women into the profession, especially by targeting students in local high schools, middle schools, and even elementary schools with the message that careers in science and math are excitingand open to everyone.

She has used eggs to simulate car accidents, guiding children through the use of the scientific method to analyze the accident – and reinforcing the need (for crash-test eggs and humans) to always wear a seatbelt. She also reassures young people that the image of the engineer as nerdy math whiz is outdated.

"You wouldn't believe the number of students who say, 'Well, I don't like math, so I'm not going to be an engineer," Lenoir points out. "Well, computers can do the math. I can set up my computer and very quickly write a program that says, 'Do this math for me.' What people don't realize is that the engineers we need now—and, in my opinion, the engineers that WPI produces – are problem solvers, thinkers, communicators, and hard workers - people who want to learn."

She might be too modest to admit it, but Lenoir is effectively describing herself. And she doesn't shut off those aspects of her character when she leaves Toyota in the evening. She is also a dedicated volunteer, putting in several hours a week at a therapeutic horseback riding facility, teaching people with physical, emotional, and intellectual disabilities to ride.

"It's the greatest place ever," she enthuses. "I go there every Monday night and then every chance I get after that. One of the greatest things about working for Toyota is that they so wholeheartedly support my volunteering. Every year, if I prove that I volunteered over 100 hours they'll make a donation to the organization I'm volunteering for. They want us to be community members, not just people who work in scary buildings that you can't get into."

Lenoir has been working on a new Toyota model-which one, she says, is top-secret-and is preparing for her first trip to Toyota headquarters in Japan as soon as this winter.

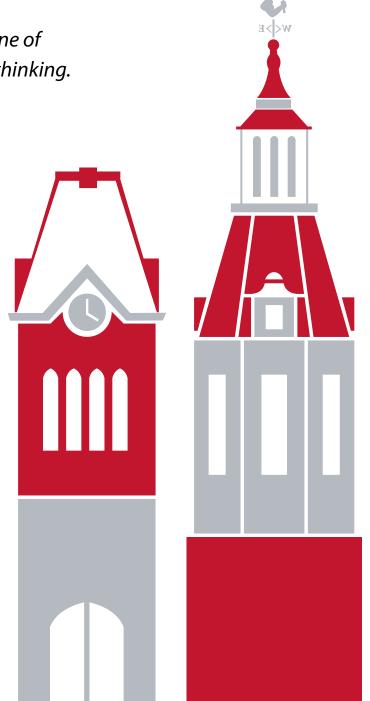
"There's a lot of cool development opportunities in my future," she says. "I'm sure of it!" J

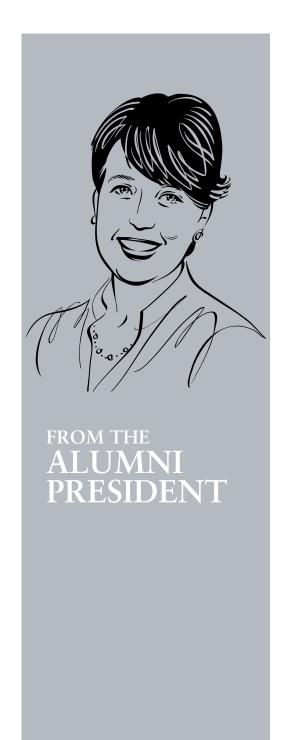
WORCESTER POLYTECHNIC INSTITUTE 150 YEARS: IMAGINE MORE

WPI's sesquicentennial year has been one of celebration, reflection — and forward thinking.

Thank you for launching the university into the next 150 years through the remarkable generosity of our alumni and friends and your steadfast support of if...The Campaign to Advance WPI.

150.wpi.edu





Dear Alumni:

As I pondered all I want to cover in this message, I realized there are two main threads that tie it all together: possibilities and pride. WPI is full of both.

Homecoming gave us a fantastic day and the pride was abundant. Students proudly represented their affinity groups during the float parade; Student Alumni Society members led us in the Alma Mater and the traditional Freshman-Sophomore Rope Pull; past presidents of the Alumni Association were recognized; and affinity groups celebrated anniversaries.

In the past few months we experienced the loss of two members of the WPI community who I was proud to have known. Trustee emeritus Steve Rubin '74 passed away from complications related to ALS on Aug. 28, and the Rev. Peter Scanlon passed away on Sept. 24. The generosity and dedication displayed by both men made many things possible and had a significant impact on a multitude of alumni and current students. You can read more about them in this issue of the magazine.

The Women of WPI came together on Saturday, Nov. 14, to share and celebrate the diverse paths and experiences of our lives. We were inspired by the alumnae and student speakers and President Leshin. I am proud to call these women my peers and I am excited by the possibilities that lie ahead for this talented group, engaging more alumnae in the future.

A very special celebration on Nov. 6 marked the end of WPI's sesquicentennial year and recognized the support our fellow alumni and friends have provided for if.... the Campaign to Advance WPI. Our commitment of more than \$248 million has opened the doors of possibility for thousands of students by providing access to the financial support, facilities, services, activities, and experiences that make WPI so special. This is the time of year that I personally like to remember WPI and make my contribution to the Annual Fund to help ensure that these possibilities continue for the next 150 years. I hope that you will consider doing the same.

All the best – and with pride,

Rachel M. Delisle '96. '06 MBA

[ALUMNI*news*]

ALUMNI WEEKEND SEPT. 25-27, 2015

150 YEARS OF TRADITION Alumni made it their year to come back to the Hill. Who could resist the Rope Pull, the football game, field hockey, alumni athletic events, and the camaraderie? Topping it off were special events marking the Rowing 50th Anniversary, Sigma Pi 50th Anniversary, and SocComm Reunion, plus a celebration of all past presidents of the WPI Alumni Association.













[ALUMNInews]

















[DONORimpact]

NEWIY MINTED

YOUNG ALUMNI KNOW THE VALUE OF GIVING BACK

BY ANDREW FAUGHT

Every year, Jennifer and Neil Schelly, both '03, earmark \$400 of their family income for WPI. The gift is a chance "to make sure others have the same opportunity," says Neil, a software engineer at Dyn, a Manchester, N.H., online traffic management and Internet performance leader, co-founded by fellow donor Jeremy Hitchcock '04.

It was in 1999 that Jennifer and Neil, then freshmen living in Morgan Hall, met through a mutual friend. Six years later, they were married.

But meaningful relationships aside, the Schellys say their gift – made through ongoing payroll deductions at Jennifer's employer, BAE Systems, a defense, security and aerospace company – is motivated by their educational experience.

"I recall touring lots of schools that just seemed to be a continuation of high school, with long general education curricula and very little chance to do anything real." says Neil. "I used Debian Linux for the first time at WPI, which exposed me to the type of work that would become my career.

"I benefited a lot from WPI's financial aid," he adds. "It was the only reason I could afford to go."

For that very reason, every gift -from \$5 to \$400-makes a difference, says Brianne Ross, associate director of alumni relations and annual giving.

"We build a stronger community with each gift that we receive," she says. "It demonstrates that the alumni making the contributions to the university respect and value the place that they once called home. They often think their \$50 isn't going to go very far, but it does, because it's a community of people committed to making a difference."

Kathryn Byorkman '12 recalls making her first gift to the university after graduation: \$50. The Worcester resident and energy engineer for a commercial building optimization firm says she was compelled to give because of her time at the university, and her continuing association with the institution.

"WPI was the first place that I really fit in," she says. "When you're in engineering school, weird is good. There was a feeling of camaraderie that I wanted other people to have."

Byorkman's involvement with WPI extends into her professional life. She helps organize social events in the Worcester and

Boston areas for Graduates of the Last Decade (GOLD). "It's a network, but it's also an excuse to see people you haven't seen in a while," she says.

Jennifer Schelly learned the value of giving while still a student, when she and Neil each donated \$20 for the Senior Class Gift, an annual fundraising effort undertaken by every graduating class. Although \$20 was a stretch for a student budget, WPI by then had provided a wealth of memories and formative experiences. She'd spent countless hours in the IEEE (the world's largest professional association dedicated to advancing technological innovation) lounge in Atwater Kent Laboratories, where students helped one another with classwork.

"The senior gift was a lot for us since we were just graduating and hadn't started working," Schelly recalls. But she and Neil didn't walk away empty-handed. "In return we each got a pint glass that we still use."

For his part, Russ Bozek '03 started making annual gifts of \$100 after graduation, steadily increasing the amount over the years. The director of special projects in the Claims Strategy & Innovation department at Liberty Mutual in Boston says he needed little motivation. Bozek was the recipient of the WPI FIRST (For Inspiration and Recognition of Science and Technology) Scholarship, which covered the cost of four years' tuition.

"I went to school based on people's ability to give, so why not give it back?" he says. "I hope over my lifetime I can maybe repay that. I look back on my experience at WPI and don't regret one thing. I was someone who took full advantage of the opportunity to travel abroad, the academics, and the social aspects. I give back so future students can have those same or better opportunities."

Gift amounts, particularly among newly minted graduates, are secondary to something far more important, Ross says. Alumni giving participation is one factor that helps determine WPI's place on national rankings and is a factor in the university's ability to attract funding from other organizations.

"Young alumni are our biggest advocates," she adds. "That \$50 means they valued their experience at the university and they want to show it."



GLOBAL SCHOLARS ARTHUR KATSAROS '69 HELPS SUPPORT INTERNATIONAL STUDIES

WHEN KATHERINE KOWALCZYK '19 TALKS ABOUT WPI, SHE MAKES ONE THING ENTIRELY CLEAR. WITHOUT A SCHOLARSHIP, THIS BIOMEDICAL ENGINEERING MAJOR WOULD NOT BE ON THE CAMPUS SHE LOVES SO MUCH.

"Getting that scholarship meant the world to me," she says. "It meant I could go to WPI, my dream school." So when Kowalczyk and other recipients of the Denise and Arthur T. Katsaros '69 Global Scholarship had the chance to meet Arthur, who generously established the fund with his wife Denise, at a luncheon in September, the effect was significant for both of them.

Meeting Katsaros thrilled Kowalczyk. "I got to meet the man who helped me come here," she says. "It makes it more real and makes me love it here even more."

As for Katsaros, who graduated with a chemical engineering degree before earning his MBA at Lehigh University, meeting the scholarship recipients forged a personal connection. "I had fun

listening to them and got to hear their stories and learn about their ambitions," he says. "It was gratifying, and I am delighted WPI is able to attract such bright students."

Katsaros, a 2009 recipient of WPI's Robert H. Goddard Award for Outstanding Professional Achievement, now lives in Florida with his wife. Despite having visited campus countless times for Chemical Engineering Advisory Board and other meetings, he had not seen WPI in session in many years. "The campus was alive with students," he says of this visit. "It made a huge difference."

He visited some of his old classrooms and admired newer buildings. "The campus felt both old and new," he says. "It was incredibly familiar yet different." The mixed emotions brought home what Katsaros says underscores his desire to give back. "When it was my time to look for schools, I came across WPI and fell in love with it at first sight," he says. "I liked the size and the focus. All kinds of things clicked. It was

like putting on a favorite pair of gloves."

As an undergrad, Katsaros took in all WPI offered. He played baseball and basketball; he managed football and was a newspaper editor; he was a member of Sigma Phi Epsilon fraternity and Pi Delta Epsilon honor society. "It was a great experience," he says. "I was lucky enough to participate in great activities on campus. I knew if someday I had the opportunity to give back, I'd like to be able to do that."

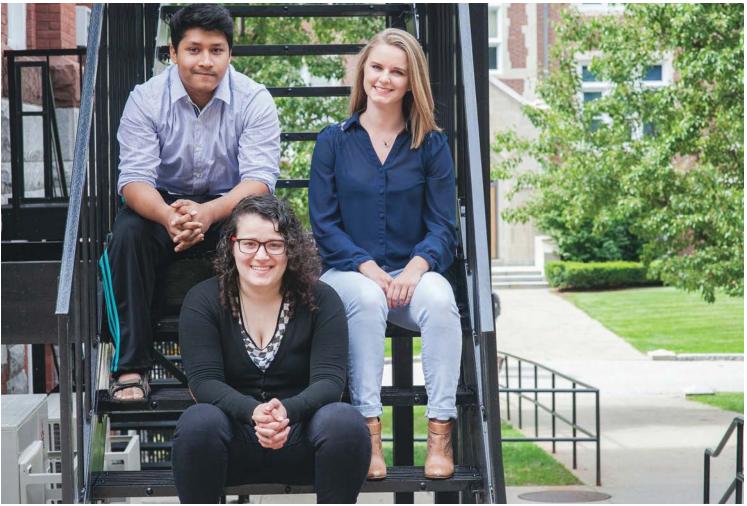
With a decades-long and distinguished career at Air Products and Chemicals, Katsaros says WPI's influence was direct and beneficial. "Looking back, my years at WPI were formative. The education we received drove the importance of turning the theoretical into the practical."

For his part, Katsaros wanted his scholarship dollars to help attract great students and support the key experience of studying abroad. Recipients of his scholarships will use the funds to study off campus.

MECHANICAL ENGINEERING MAJOR SHAMSHUR SAIKAT '18 SAYS HE KNEW WPI WAS THE ONLY PLACE FOR HIM. WHILE CONSIDERING COLLEGES, THE BANGLADESH NATIVE SAYS THE KATSAROS GLOBAL SCHOLARSHIP MADE A HUGE DIFFERENCE FOR HIM BOTH IN HIS ABILITY TO COME TO WPI AND IN HIS DREAM OF STUDYING ABROAD.

"I get to go to another country to pursue my education? That's amazing," he says. "It all fell into place and now I get to pursue a project off campus." Rahman hopes to study in Ecuador or possibly Greece in the future. "I want to go somewhere else. I want to explore," he says. "Mr. Katsaros made such a difference to me."

REGINA REYNOLDS '18 WOULDN'T BE AT WPI WITHOUT KATSAROS'S GENEROSITY. "HONESTLY, THE TIPPING FACTOR FOR ME WAS THE SCHOLARSHIP," SHE SAYS. AND COMING FACE-TO-FACE WITH HER BENEFACTOR WAS "LIKE MEETING A SUPERHERO IN REAL LIFE. IT



From left, Shamshur Rahman, Regina Reynolds, Katherine Kowalczyk

WAS INTERESTING TO ME THAT HE KNOWS HE MADE A DIFFERENCE, BUT I DON'T THINK IT REGIS-TERED THAT THIS IS LITERALLY LIFE-CHANGING."

Katsaros says his dreams as an undergrad were not so different from those of today's students. "These folks want to make a contribution to society just as we did, but today they literally have a world of opportunities open to them and it is so gratifying to see WPI be responsive to those ambitions."

Katsaros was at WPI during the creation of the WPI Plan and has been following the changes and improvements ever since. He admires how WPI managed, despite intense cultural and

educational shifts nationwide, to emerge as a stronger focused university.

He says the students in his era had a great campus life and a rich fraternity culture, but now the opportunities for enrichment are even greater - today's myriad clubs and groups and the added humanities curricula balance the technical classes.

"The core of the Plan remained and became a key part of the educational process at WPI," he says. "I really appreciate that WPI has done a great job at keeping the focus and improving on it to make the place better. The fact that 70 percent of students get to have an off-campus experience – with a goal of 90 percent - is a great example of that."



KERN FAMILY FOUNDATION GRANT ENHANCES IMPACT OF WPI PLAN

WPI HAS RECEIVED A \$488,500 AWARD FROM THE KERN FAMILY FOUNDATION to support the development of new programs aimed at enhancing the impact of the WPI Plan. The award will help the university realize a strategic goal of infusing the undergraduate program with an entrepreneurial mindset, according to President Laurie Leshin.

"The WPI Plan does an exceptional job of educating world-class problem solvers," Leshin says. "We would like to help our students harness their resourcefulness and innovation and learn how to turn their ideas into tangible impact and bring valuable solutions to individuals, communities, and markets. We are thrilled to be able to work with The Kern Family Foundation to advance this shared goal."

Developing entrepreneurially minded engineers who can "support human flourishing by recognizing and acting on opportunities to create economic, personal, and societal impact" is a major focus of The Kern **Entrepreneurial Engineering** Network (KEEN). The Foundation created the network to support colleges and universities interested in developing innovative ways

of instilling an entrepreneurial mindset in engineering students to help ensure that the United States remains competitive in the global marketplace.

The successful proposal to the Foundation was developed by a team of 12 faculty members and two WPI trustees, and was led by Glenn Gaudette, associate professor of biomedical engineering. The proposal review process included a visit by Leshin, Gaudette, and WPI trustees Michael Aspinwall '75 and James Baum '86 to the Foundation offices in Waukesha, Wis. During the presentation to the Foundation Board and staff program team, Baum shared that entrepreneurship-creating businesses-will impact less than 10 percent of WPI students, as most will go on to work in established companies. But raising expectations that students graduate with an entrepreneurial mindset is relevant to 100 percent of students.

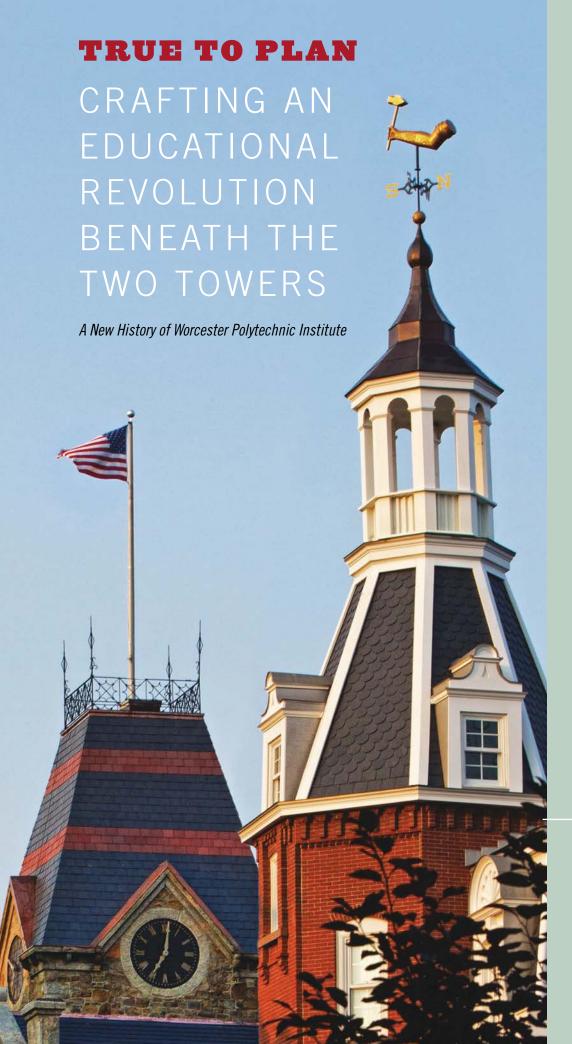
The program, "Developing the Entrepreneurial Engineer," is designed to infuse the undergraduate experience with entrepreneurial experiences, challenges, and opportunities as students develop the skills they need to solve the grand challenges of the world.

"We need to instill an entrepreneurial mindset in our technical courses and as part of our core curriculum," Gaudette says. "Our undergraduates need to experience it during all four years at WPI, and our graduate students need to develop an entrepreneurial mindset, as well." THE KERN FAMILY FOUNDATION GRANT WILL ENABLE WPI TO DEVELOP NEW PRO-GRAMS FOR FACULTY TRAINING AND FOR UNDERGRADUATES, such as a course for first-year students focused on approaching problems with curiosity, insight, and an intent to create value. In addition, extracurricular activities – including the student-initiated WPI Test Kitchen - and an annual team competition designed to reward the entrepreneurial mindset will engage students from first years to seniors. The grant will also support collaboration with WPI's Morgan Center for Teaching and Learning and additional opportunities for curriculum development.

A proponent of the entrepreneurial mindset, Gaudette has provided an example for other faculty members by integrating entrepreneurial thinking and skills

into his courses. He is a 2010 Coleman Foundation Faculty Entrepreneurship Fellow, a designation that recognizes faculty members across the country who are actively incorporating entrepreneurial concepts and activities into their teaching. Gaudette also participated in many of the faculty development opportunities made available through two previous grants from The Kern Family Foundation, which brought WPI into KEEN. The Network currently includes 20 universities from across the country that are collaborating and co-creating tools and resources to promote entrepreneurial engineering. Gaudette has been a participant in and champion of the KEEN approach and says he looks forward to advancing WPI's and KEEN's missions with the support of this latest grant from The Kern Family Foundation.

"This unique opportunity to work with The Kern Family Foundation and KEEN universities will help establish an ecosystem where developing an entrepreneurial mindset in students is the norm," says Gaudette, "and where impact will become an expectation of all WPI graduates."



"This is a wonderful and compelling history of WPI—peaks, valleys, deep realities, disappointments—all of it. So much that I didn't know! Thank you for telling a story that needed to be told and for telling it so very well."

Jack Gabarro '61, trustee emeritus

Published in celebration of WPI's 150th anniversary, **True to Plan** picks up the Institute's story where the centennial history, **Two Towers**, left off. Covering the people and events that shaped WPI between 1965 and 2015, it chronicles WPI's journey from a regional technical institute to one of the world's most innovative technological universities.

The 248-page hardbound book is lavishly illustrated and full of the voices and faces that have distinguished WPI over the past half-century.

Buy a copy for yourself or for that special WPI person in your life.

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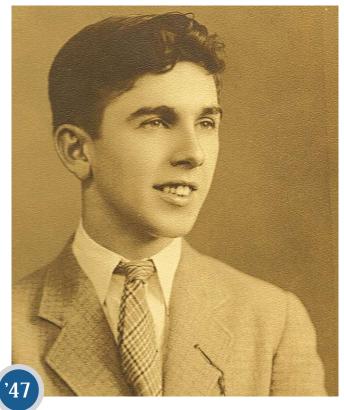
1947

The family of George Broughton shared the news of his passing on June 5, 2015. His daughter, Ruth Broughton Mattson, writes, "My father's graduation from WPI was his greatest achievement. He came from a family of eight children who grew up on a farm in rural Brookfield, Mass. His parents took him out of high school to work, which was customary in the late 1930s after the Great Depression. My father managed to work full-time and complete his senior year at Worcester's Classical High School, living in a single room at the YMCA and getting around on a bicycle with a big basket for his schoolbooks. After classes and work, he would stay awake after midnight to complete his homework.

"It was my father's dream to attend WPI. When he approached the owner of Norton Company and asked for a scholarship, the owner was amazed by my father's 'moxie' and agreed to a full company scholarship, with the stipulation that my father would continue working second shift throughout his entire college career. My father chose to tackle chemical engineering as his major because he had heard it was the most difficult subject. The rest is history. All of my father's five children have gone on to colleges. Our father's graduation from WPI in 1947 was the pebble in the pond that created the ripple effect for all we've achieved. We've all been inspired by him, a proud member of the WPI Class of 1947 who chased his dreams with unfailing passion and courage."

1948

Arthur Pike's family informs us that he died peacefully at home in Provincetown, Mass., on July 7, 2015, with family surrounding him. "Arthur spoke fondly of 'Whoopie Tech' his entire life," she writes. Condolences may be sent to his daughter, Katherine Pike, at 6 Abernathy Road, Lexington, MA 02420.



"Our father's graduation from WPI in 1947 was the pebble in the pond that created the ripple effect for all we've achieved."

- Ruth Broughton Mattson

1954

Milton Meckler writes, "After having authored numerous professional books for McGraw-Hill, Fairmont Press, Prentiss Hall, ASPE Press, and Van Nostrand Reinhold during my prior professional engineering and construction management career, I retired in 2012 and decided to try my hand at publishing non-fiction e-books. These are now available on Amazon's Create Space and Kindle platforms under my pen name, Mel Meckler. My work covers areas of personal interest, augmented by extensive overseas travel

experiences and cited research; it includes Betrayal in Budapest, Sight Beyond Light, Ancient Egypt and Judea, Lincoln's Other Emancipation, Hitler's Physicians, Winning Game Metrics, Defiance at Terezin, Battle at Belleau Wood, and A Golden Age: 711-1066 CE."

Henry Strage writes, "Alberta and I are here in Wengen, Switzerland, where, alas, the weather after a great summer has become cloudy, cold and damp. But the mountains are still here and the air is still CO, free."

1958

Robert Weinberg says, "I am honored to have been selected as Corporate Livewire's 2015 'Most Outstanding M&A Specialist for Mid-Market Businesses' in the USA. This award and others, received and pending, recognize the successful closing of more than \$150 million in merger and acquisition transactions in the past 12 months by my mortgage and advisory firm, First Boca Associates Inc. FBA specializes in the confidential representation of private businesses seeking sale or recapitalization. I have been fortunate to have leveraged the fundamentals of my WPI BSEE degree from engineering to multi-business ownership and M&A advisory services."

1959

Win Wassenar '60 (MS CE) writes, "I'm still living in Williamstown, Mass., and Venice, Fla., in the winter. Vanessa and I took a two-week trip to Switzerland and the Italian Alps in September, ending at Lake Como. Still golfing; call if you're in Florida and we'll play at Venice Golf and Country Club. We now have two grandchildren in college in Boston, and one who graduated from U of St. Andrews in Scotland last June and is about to start his career in Istanbul, Turkey. That's a visit in the making! We see the grandkids in Boston when we go to the BSO. Life is good. If I live long enough, I may score my age in golf."

1960

At age 77, Richard Brewster has been called out of retirement to assume the position of project engineer for the M/V Atlantic Mercy, a 37,000-ton hospital ship under construction in Tianjin, China. He and his wife, Susan, will live there and monitor construction for the international Christian charity Mercy Ships. When completed in 2017, the Atlantic Mercy will have 12 decks, two of which will house a hospital with six operating rooms and 154 beds. As the

world's largest non-governmental hospital ship, it will provide free health care, community health education, and palliative care in developing countries. Medical treatments offered will include cataract surgery, lens implants, tumor removal, cleft lip and palate repair, orthopedics, and obstetric fistula repair. In addition, the facilities will be used to provide training in the latest surgical techniques. The Brewsters previously lived and served on another Mercy Ship, the Anastasis, where they spent months at a time in a number of West African countries. "Mercy Ships is always looking for volunteers," notes Richard.

1961

Swang Lee-Aphon, a standout on the men's tennis and men's soccer teams. was inducted into the Athletic Hall of Fame this fall. "I remember Swang as a very quiet person, but an incredible athlete," notes classmate Morgan Rees. "This is a long overdue honor."

1963

Bob Murphy reports that he and Nancy recently celebrated their 50th wedding anniversary with a trip to Bar Harbor, Maine. ("On our honeymoon we stayed in Ellsworth, which is what we could afford back then. This time was different!") They continue to live in the Baltimore area, where Bob is actively pursuing his (semi-) hobby of photography. "We make annual trips to Hawaii to visit family and friends, and to check on my photography sales there. We also have a daughter and son-in-law in the Annapolis area and a son, daughter-in-law, and two granddaughters near Richmond, Va." Bob retired from NASA in 2004 and (more or less) completely from his aerospace consulting business in 2012. He sends this reminder to classmates and near-classmates. "There is a collection of pictures from our era at scientiaphoto. com/PersonalGallery-7/WPIClassof63 Memories/. You'll find a Dropbox function where you can contribute additional photos for all to enjoy."

"Nancy and I recently celebrated our 50th wedding anniversary"

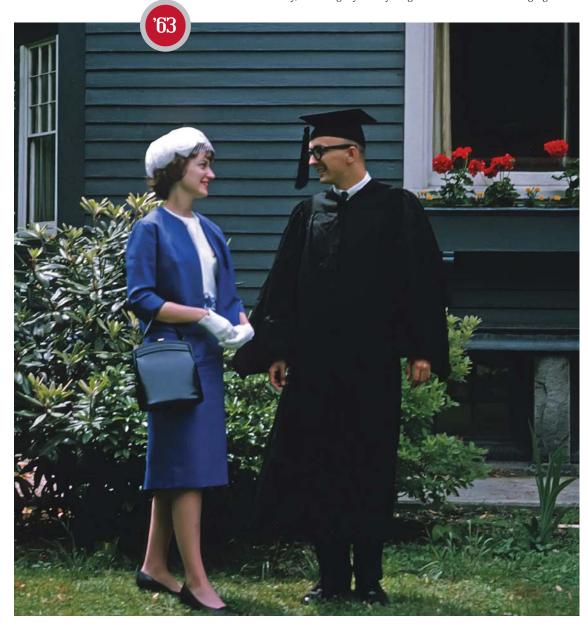
— Bob Murphy '63

Art Pratt retired in May 2013, after 46 years in transportation planning and engineering in the public and private sector. "Celebrated our 50th wedding anniversary on 11 Sept. 2015," he writes.

1964

Pete Fenner and his wife, Suzan, spent almost a month in Australia this spring. He writes, "We welcomed about 28 members of our family, including my

entire New England crowd, to Sydney for our daughter Laura's wedding on May 8, and had time to tour Sydney with them. It was a wonderful to have all but Suzan's 90-year old mom (who decided flying 17 hours is not for her) there for the event. We held a wedding reception here in Dallas in September for those who did not make it to Australia. A number of guests chose to attend both events. My new son-in-law's youngest brother had been dating a girl



[CLASS*notes*]

in Sydney for a year. Like my daughter, she is also an American from Buffalo, N.Y. After our family's Sydney wedding, they decided to get married in Buffalo the weekend after our Dallas event. Since all their family and friends were going to the U.S. anyway, why not piggy-back another event?"

1965

Class members shared their insights and experiences for a 50th Reunion memory booklet. Below are extracts from their entries.

Nick Barone lives in Milford, Conn. He and his wife, Kathryn, have three children and two grandchildren. "I love sailing in Long Island Sound on my cat boat and growing fresh vegetables in my garden," he writes. Nick's favorite memories include Fiji Island parties at Phi Gamma Delta, and being tapped for Skull.

Ken Brown retired from General Electric Co. His work history includes Raytheon, Compugraphic (bought by Agfa Gevaert), Raytheon again, a start-up in Tennessee called Analogic, some contracting, Kaye Instruments (bought by General Electric). "But I now have three pensions," he writes from his home in Naples, Fla., "and don't shovel snow!" Ken and his wife, Muriel, have two daughters, and two grandchildren. "Travel while you can," he advises. "You never know when you can't."

Don Carlson and his wife, Thirzalyn, live in Camano Island, Wash, He is retired from Ingersoll Rand Co. Product Engineering, where he worked in QC, HR, and marketing.

Pete Collette spent 33 years at Con Edison in New York City and eight as chairman of the Northeast Power Coordinating Council before retiring. He and his wife, Sylvia, live in West Caldwell, N.J.

Charlie Durkin shares, "I have had the most interesting and rewarding career, including aerospace, automation, and, for the last 20+ years, medical device technology. As a cancer survivor, the most important thing I have learned is to appreciate and get the most out of every day of my life. I am fortunate to have a close family and wonderful friends." He lives in Sarasota, Fla., where his pastimes include designing and building custom furniture, riding with the Charles River Wheelmen, and competitive age group running. An active Unitarian Universalist, he volunteers at the Concord Prison, where he gives guitar lessons, and works with mentally handicapped people at the Restoration Project. "I always vote, but not for anyone who does not acknowledge global warming and man's contribution to it. Human rights are very important to me," he says.

Dick Fortier retains fond memories of the late professor K. G. Merriam (dynamics) swinging from the classroom door to illustrate concepts. Dick is retired from TDC Medical as chief technology officer and lives in Concord, Mass. He and his wife, Anne, have four children and eight grandchildren.

Joe Gracia went on from WPI to Niagara Mohawk Power in Buffalo, but left after a year to enroll in Officer Candidate School in Newport, R.I. ("Thanks, Bob Cahill, for visiting me in Buffalo and taking me along to the exam for OCS, thus sidestepping the draft. Also, I roomed with Jim Cocci '66 at OCS.") Joe's military career included two years aboard the USS Damato, duty cruises in Vietnam and South America, and a year in charge of an electronic maintenance team at Newport. Next came employment with Cornell Dubilier Electronics (capacitor manufacturer) in New Bedford, Mass., where he worked until 2008, retiring as general manager of the New Bedford Division. "I have been working part-time from home, or wherever I happened to be traveling, as product

manager for the company's mica capacitors. It has worked out well-I spent two months at Hutchinson Island, Fla., this past winter, working from there." Joe lives in Mattapoisett, Mass., with his wife, Beverly.

Ronald Greene reports, "Happily retired on Cape Cod since 2008. I keep active with local Newcomers Club and Retired Men's Club activities, play bridge twice a week, and sing in various groups here, mostly all male, the latest a Welsh choir. I have become an avid birdwatcher and bird/nature photographer, and I have been traveling extensively in recent years, mostly river cruises in Europe, and auto trips in New England and the Canadian Maritimes. Linda and I took our family, who live in the Seattle area, on an Alaskan Cruise for our 40th anniversary last year. I see Jake Jacobson often, and Bradley Gale '64."

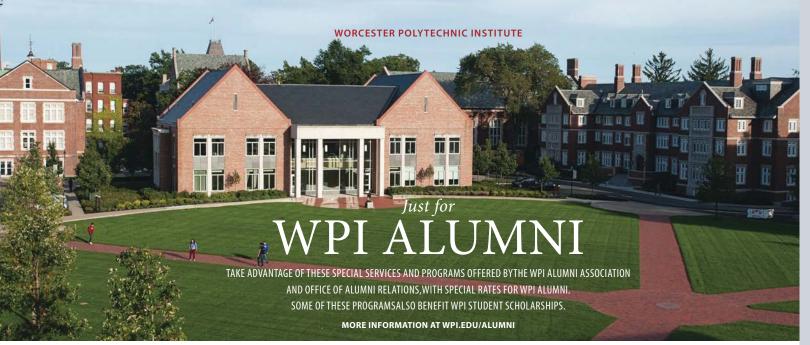
Mordecai Gutman recently downsized to a 55+ community in Southbury, Conn. "Don't miss the shoveling snow at all," he reveals. "I was in the USAF as a B-52 navigator instructor-navigator and bombardier to help win the Cold War, including a tour in Vietnam (65 missions), in support of our troops. I'm now retired from 12 years as a public safety dispatcher. I've found that I was happiest working in public service. I did get an MBA, but never really loved the business world. Not a politician." He served some 25 years as a volunteer firefighter (honored once as Firefighter of the Year) and many years as an EMT, in paid and volunteer positions. "Now I would like to spend time fly fishing and creating stained glass, and getting healthy enough to get back into the air in light planes."

Don Kerr's best WPI experiences were classes with professors Shipman and Wagner. "I remember Dr. Shipman for challenging us with real-world projects and Prof. Wagner for the enthusiasm he put into teaching and the personal interest he took in us, his students." From Webster, N.Y., Don writes,

"Following WPI, I earned graduate degrees in ChE at U of Delaware. In late 1969, I started a 29-year career in the Kodak Research Labs, where I worked on the development of various commercial B&W products for the printing and medical fields. I was awarded 13 patents along the way. I've been retired since 1999. Unfortunately, my first wife, Grace, passed away in 2002 after a two-year battle with ovarian cancer, so retirement didn't start out as planned. Carole and I married in 2004, and we have enjoyed traveling as well as local activities such as book groups, gardening for Carole, and golf for me – once the snow melts!" Don has also volunteered for Habitat for Humanity and an inner-city community center. He and Carole spent a week in New Orleans, working with a church team to repair damage from Hurricane Katrina in the 9th ward.

Sid Klein recaps his life since WPI. "Elaine and I got married three weeks after graduation and two weeks after I started my career as a nuclear electrical engineer at Electric Boat, General Dynamics. I spent the next 11 years in New Haven with IBM, first as a systems engineer and then as a marketing representative. Both positions gave me ample opportunities to visit many corporations, and in addition to doing my job, I became a spectator of what was happening in today's offices. Desks were becoming cubicles, workstations were being customized to the needs of an individual's task, departments were being located as a result of adjacency studies, etc.

"I joined the largest local office interiors firm and became a consultant to architects and interior designers, giving seminars that covered topics such as acoustics, energy distribution, eliminating distractions, privacy, energy conservation, and task-versus ambient lighting. Eventually I left to form my own company, Facility Planning Group. I retired in 2011 for a little over a year and then I joined a manufacturer's rep firm on a part-time basis and now cover Connecticut and Rhode Island."





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Don's favorite memory is when, as social chairman for AEP, "I turned the frat house into a beach one time and into a house of horrors another time."

Jack Lewis is living in Philadelphia after a career with DuPont that involved seven relocations - including two placements in Germany. He and his wife, Joanne, have three children and four grandchildren.

Dave Luber says, "If I learned anything in the 50 years since I graduated from WPI, it is the importance of family, community, and doing interesting and meaningful work." He is retired from Telcordia Technologies after 35 years with Telcordia and its antecedents. Bell Laboratories and Bellcore. "I spent most of my career as a systems engineering manager and systems architect designing telecommunications operations systems and systems solutions. I also led internal/external technical teams on to large

international projects. I completed my career doing technical sales support in Europe and the Middle East. I was named a Telcordia Fellow in 2000. After leaving the company, I worked as an independent consultant through January 2014. By then I had found that volunteering, local politics, grandparenting, hobbies, and travel left little time for compensated work. Now "I have no idea how I ever had any time for a professional career. I find retirement to be just another kind of career with different challenges and different rewards." Dave and his wife, Sylvia, live in Madison, N.J.

Harry Mildonian is retired from Alcatel-Lucent as technical manager. He and his wife, Marcy, live in Hampstead, N.H.

Pat Moran reflects, "Looking back, it surprises me (although it probably wouldn't surprise my WPI professors) how ordinary my professional career has been - no corporate jet, after all. Still it's been great fun. Three terrific companies were gracious enough to hire, train, and reward me: IBM, Digital **Equipment Corporation (remember** DEC?), and JPMorgan Chase. Each provided great experiences and lifelong friends. Before all that happened, while I was a graduate student at Purdue, an Army buddy introduced me to the woman who became my bride, Harriet 'Mimi' Moylan. It was easily the best thing the Army did for me. We became the fawning parents of two smart, funny daughters, Megan and Abigail, who both settled in or near the places they went to college. We now have two grandchildren."

Jerry Morris says, "Dr. Onorato led me out of engineering to business school and a career in finance and administration." After WPI, Jerry earned an MBA from Harvard, worked for Diebold, and retired as executive

vice president and CFO. He and his wife, Sally, live in Florida and Ohio.

MORE INFORMATION, APPLICATIONS, AND ORDER FORMS AVAILABLE ONLINE AT WPI.EDU/ALUMNI OR CONTACT THE OFFICE OF ALUMNI RELATIONS AT 508-831-5600, ALUMNI-OFFICE@WPI.EDU.

Edward Neister writes, "I wear 20+ hats while building my company, Healthy Environment Innovations. and I hope to begin hiring and shedding many of them this year. Key responsibilities are technology development, product design, development and manufacturing, and technology interface with customers."

Paul Pearson lives in Enfield, Conn. He is retired from Hamilton Sunstrand as a software engineer since 1999. He writes, "Susan and I participated in the sport of orienteering for 34 years and have taught orienteering skills to newcomers. We've played duplicate bridge for 42 years. We are certified bridge instructors and have taught contract bridge classes. I have achieved the rank of Silver Life Master."

[CLASS*notes*]

Wayne Ponik recalls dedicating the 1965 Peddler-which celebrated the 100th anniversary of WPI – to Dean Downing. "Dean Downing was a true 'man of WPI' who dedicated his life to the college," Wayne says. "In 1964 Dean Downing suffered a stroke and was still in recovery in the spring of 1965. Editor-in-chief Jack Lewis and I visited him at his home to present him with the first copy of the centennial Peddler and to announce that the book was dedicated to him. He was clearly touched and visibly moved when we read the dedication it to him: 'A student, a teacher, a friend, an administrator, to Dean Donald G. Downing this Peddler is dedicated.' I was proud to have participated in honoring a great man." Wayne is retired from Teradyne, after a career rich in management opportunities. "While objectives, strategies, and tactics were terms I learned in a classroom, I had the opportunity to hone these skills with a team of accomplished professionals. In parallel with my satisfying career, I was fortunate to have a loving family that helped to keep me grounded in the sometimes crazy world we live in. My wife and I have two outstanding children who are married and have provided us with three beautiful grandchildren. It doesn't get any better than that!"

Phil Ryan writes, "Fifty years!!! It's difficult to believe that a half-century has passed since our commencement. I was not destined to be an engineer; business was my passion. I received my MBA from Harvard and started a strategy consulting and investment banking business, which my partner and I spun off as The Bigelow Company. After an amazing 20-year run, opportunity knocked and I left to serve as the CEO of Elliott Health System for nine years. I then became CEO of Merchants Fleet Management, a family-owned company that I helped build into one of the top 10 fleet leasing companies in the country. Over the decades, I served on the boards of many organizations, including WPI. The capstone of my career occurred when I

was asked to serve as WPI's interim president for the 2013-14 academic year. Among our most proud and significant accomplishments: participating in our record-breaking capital campaign (\$245 million and counting), and recruiting Laurie Leshin as WPI's 16th president. Now as chair of our Board of Trustees, I have the special privilege of working closely with her.

David Sawicki, professor emeritus, Georgia Tech, lists his life accomplishments: 1. Taught grad students cityand regional planning for 40 years and produced many leaders in the field; 2. Worked at the Carter Center with President Carter on domestic policy; 3. Directed two graduate programs that now lead the field in the use of computer technology; 4. Helped



"The capstone of my career occurred when I was asked to serve as WPI's interim president for the 2013-14 academic year."

- Phil Ryan '65

Judy and I have been married for nearly 47 years. New Hampshire has been our home since 1970, and it is where we raised our two children, Phil and Kate. We have a vacation home at Bretton Woods, N.H., and now with five grandchildren (ages 3-13), our family continues to take advantage of all of the grandeur that NH has to offer. I must sadly confess that I have stopped trying to keep up with the older grandkids on Cannon's ski slopes."

produce two wonderful MD psychiatrists - my twins, Alexandria and Nadia. He adds, "I live in Truro, on Cape Cod, five months a year, and Atlanta for the other seven. I like jazz, wine collecting and tasting, gardening, kayaking, photography, and swimming."

Charlie Seaver shares, "My wife, Carolyn, points out that I am a serial hobbyist, focusing intensely on one pastime and then moving on to the next new thing. Over the years, I have been a bird photographer, actor in community theatre plays, Hobie Cat sailboat racer, family camper, vegetable gardener, sea master, hosta hybridizer, inventor of improved tools and aids for home gardeners, long-distance hiker, international traveler (especially cruises), duplicate bridge player, and seeker of long lost ancestors. Most recently I have invented an efficient low-cost method to make shredded leaf mulch. I also enjoy every moment I can with my grandchildren."

John Wilson lives in Athens, Ga. His brother, Scott, graduated in the Class of 1968. John says, "I've been with Paul J. Ford and Co. since 1966. I started there while working on my PhD, became president in 1983, and still serve as chair and CEO. Pat and I have two children and four grandchildren. My children were swimmers so, out of self-defense, I started officiating swim meets. I eventually worked my way up to meet referee at NCAA Div. 1 Champs and USA Swimming National Champs, and as the starter for the Women's events at the 2008 Beijing Olympics. Both of our kids, Jeff and Paige, distinguished themselves as championship swimmers."

1966

John Lauterbach writes with news of his company, Lauterbach & Associates LLC. "We began the season with a presentation, 'Chemistry and toxicology of e-liquids and e-cigarettes,' at the 250th National Meeting of the American Chemical Society in Boston. Then at the 69th Tobacco Science Research Conference in Naples, Fla., we presented three papers: 'Harmful and potentially harmful constituents (HPHC) levels in tobaccos and mainstream smoke from cigarillos and filtered cigars'; 'Routine and detailed analyses of some traditional pipe tobaccos on the US market'; and 'Can U.S. FDA substantially equivalent predicates be developed without knowledge of and a sample of the predicate product?'

"In early October, Lauterbach & Associates traveled to Jeju Island, South Korea, to address the CORESTA Smoke Science and Product Technology Groups with an oral presentation, 'Characterization of tobaccos and mainstream smoke from machinemade mass-market cigarillos and filtered cigars,' and a poster presentation, 'An e-cigarette smoking machine for non-routine analyses."

John notes, "My son, Sebastian, is co-author on the latter presentation. He did the equipment construction

and computer interfacing. He is in his senior year at Howard High School here in Macon."

1970

Pat Abbe enjoys life as a bon vivant and professional raconteur - at least according to his pal, Paul Cleary '71, who penned this class note on Pat's behalf. "These are skills Pat honed during his undergraduate days at WPI-which is why he graduated in 1970 and not 1969, as planned. These days he bears an uncanny resemblance to that guy in the Dos Equis ads who advises his friends to 'Stay thirsty' -advice he has been sharing for at least 40-plus years. As always, he is surrounded by beautiful women and an un-heavenly host of friends. Recently, Pat gave one of his famous 'Tell Us Something' talks about a cross-country trip he made after graduating from WPI. (We all knew he was a frustrated stand-up comic.) His talk is available as a podcast. If you can't find it, check with the FBI. Surely they've downloaded it by now. Pat continues to operate his own very successful business, Cabinet-Parts.com, so if - like Pat-you've become a little unhinged, check out his wares. He lives in Florida, but has a weekend retreat in Victor, Mont. Go figure. Geography was never his strong suit. Pat says he is flirting with retirement, but at his age, flirting is about as far as it goes. He's available on Facebook,

> "The 24-year adventure took me around the world."

if you dare."

- Larry Cohen '70

Larry Cohen is now semi-retired, having started Chartwell International, a global supplier of proprietary adhesion promoters in January 1991, and sold the company to a French conglomerate in June 2014. He says, "The 24-year adventure took me around the world, building a business with commercial activity in 15 countries to multi-national (and U.S. domestic) producers of coatings, adhesives, and abrasives. The company grew to become a key supplier of environmentally compliant aqueous products. Along the way my wife and I have crossed the Masi Mara in Kenya on foot, trekked the Himalayas, and slept in tents in the Sahara Desert. The adventure culminated in transitioning the business to the new owner over the last 14 months, including presentations in October 2014 to a corporate global marketing meeting in Paris. The photo shows us during a Sunday afternoon on the Seine. The greatest joy were the friends and acquaintances made around the world."

1971

Pat Abbe '70, ghostwriting for Paul Cleary, sends this update in the voice of Paul: "Having served as a federal judge for the Northern District of Oklahoma since 2002, I am toying with finally retiring. There is an opportunity to run for public office, but the political landscape has changed so much since I first moved to Tulsa that I will probably take my activist leanings and move with my wife, Julie, (my first love), to Moab, Utah (my second love), where I can hopefully follow in the footsteps of Abbey, Foreman, DeChristopher et al. As a lifelong lepidopterist, I look forward to all the new species to discover in the desert. The kids (Caitlin, Conor, and Dylan) are all grown and onto their own adventures. Looking back at my years at WPI I have only one regret: 'Fat Al' never got to finish his tenure as our class president!"

1973

Richard Sliwoski has retired after nearly a decade as director of the Department of General Services for the Commonwealth of Virginia. His career in public service spans four decades. Before becoming director of the department in 2006, he directed its Division of Engineering and Buildings. He previously served as officer in the U.S. Army Corps of Engineers. Virginia Gov. Terry McAuliffe said, "Rich challenged his staff to be innovative and entrepreneurial and to do it in a way that drives down the cost of government. Under his leadership, the Department of General Services created programs that have improved the operation of government while saving taxpayers millions." In a press statement announcing his retirement, Sliwoski said, "No matter how much you love where you are, you come to a place when you know in your heart it's the right time to leave. This is my time."

1975

Bob Fried recently helped set up a new management consulting firm called Global Edge International Management Consulting Associates, where he is now executive vice president. He writes, "I also have my own business called MiDAROME Electronics, which sells semiconductor test equipment and offers consulting services specializing in discrete semiconductors. In addition to this, I'm on the Board of Directors of the Sperry Federal Credit Union."

Jeremy Brown has retired as executive vice president and chief actuary of Mutual of America Life Insurance Co. He recently won election as president of the Society of Actuaries (SOA) for 2016-2017. He will begin serving as president-elect and will take office as president in fall of 2016. "I am honored to be elected to this SOA leadership role, and I look forward to supporting the SOA's mission of advancing actuarial



[CLASS*notes*]

knowledge through research and education," he says. "My focus will be to maintain the SOA's prestigious credentials and continuing education efforts, improve relationships with other actuarial organizations, help grow the SOA on a global level, and support research to find new opportunities for actuaries to improve financial security for the public." Jerry and his wife live in Mt. Kisco, N.Y.

Neal Wright, a vice president and principal with Dewberry, received the 2015 Edmund Friedman Professional Recognition Award from the ASCE. He was honored for his significant contributions to the civil and professional engineering communities, his work to enhance the registration and certification of engineers, and his lasting impact with assisting military engineering veterans. His work as national co-chair of the Warrior Transition Task Force, a program developed by the Society of American Military Engineers that focuses on transitioning military engineers into the civilian workforce, was spotlighted in the WPI Journal. At Dewberry, Neal leads initiatives for delivering services to the Department of Defense, the intelligence community, and the Department of Veterans Affairs.

1979

Kenneth Oriole writes to say he's sorry he couldn't make it to the class reunion, but hopes to in future years. "I'm currently living in Richmond, Va., close to my two grown children and three grandchildren, with a fourth on the way. I am currently a tendering manager for Alstom Power Inc. I recently celebrated my 60th birthday and am enjoying life."

1983

Andy Crosby writes from Ashburnham, Mass., "My oldest son, Daniel, entered WPI as a freshman this fall. He will be majoring in biology and

biotechnology with a focus in microbiology." Andy's firm, ABCrosby & Company Inc., has divisions producing maple wood furniture, OEM products, and marine products.

grads. His oldest daughter, Annie, received her master's in divinity from Garrett-Evangelical Theological Seminary the day before.



1984

Mark Hasso (PhD CE) was honored with the inaugural ENR New England Legacy Award from ENR (Engineering News Record). He was praised for his innovative hands-on teaching at Wentworth Institute of Technology, where he is a professor of construction management. Hasso joined Wentworth's Building Construction Management program in 1989, and served as director from the late 1990s to 2012. His educational approach includes interdisciplinary study of simulated and real projects, and bringing in industry professionals to critique and help grade student work. Mark is also a cofounder of the New England Chapter of the Construction Management Association of America.

Keith MacNeal is proud to announce that his daughter Samantha (WPI Class of 2015) received her bachelor of arts degree in mathematics with distinction, making for two generations of WPI

"Celebrating 32 years of friendship"

Suzanne Palmer '86 and classmates

The second edition of Scott Rudge's textbook, Bioseparation Science and Engineering, was published this year, with qualitative descriptions of unit operations and their scientific application. The text offers the required mathematical theory and descriptions of how it is used in engineering practice, with an emphasis on design and scaleup. There is also a chapter dedicated to bioseparations process design and economics. The second edition includes updated discussions of moment analysis, computer simulation, membrane chromatography, and evaporation, as well as revised problem sets. Scott is COO of RMC Pharmaceutical Solutions, Inc.

1985

Jim Mirabile visited the Kennedy Space Center with his family this past August. "It was hot, but an awesome experience," he says.

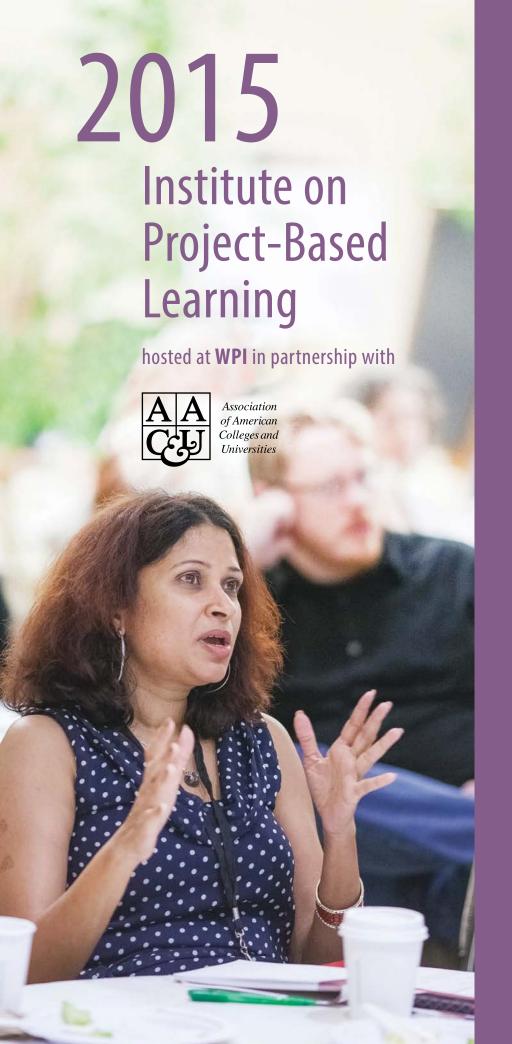
Mike Raspuzzi writes, "Never thought I would be starting over after the age of 50. I have recently gotten engaged to Kathy Cormier. She is a kindergarten teacher and we are planning for our wedding on July 3, 2016."

Susan Woods reports, "I've relocated back to the Netherlands for the second time and currently work in Amsterdam at an international school. I'm training to run my second New York City Marathon in November - this will be marathon #8 for me. Look me up if you are passing through or want to visit beautiful Amsterdam."

1986

In July 2014, classmates Evelyn (Marshall) Flavin, Sue (Padell) Labonte, Suzanne Palmer, and Jeanne (Travers) Stetson celebrated 32 years of friendship with an all-girls weekend in the Big Apple. "It's hard to believe how fast the time has flown by since we met on the 2nd floor of Sanford Riley in September 1982," Palmer relates.

Steve Scarlata sends this recap. "I've lived in Jupiter, Fla., since 2003, married to wife, Cristina, have two daughters, Antonia and Paulina, and stepson, Dylan. Paulina began school at Florida State in engineering this fall. After starting my career at Bose Corp. in Framingham, I co-founded Alto Aviation in 1997. We are now the leading supplier of audio systems for the VIP and business jet market. Our systems are standard equipment in all the Gulfstream, Falcon, Embraer, and Cessna jets, as well as many after-market models of all types. Our main office is in Sterling, Mass., with an engineering office here in Jupiter.



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[CLASS*notes*]

1988

William Noel writes, "After 10 years in consulting, most recently with PwC, I have taken on a new role as vice president, portfolio and offering management, for Tyco's North American Installation and Services business."

1989

Jeff Goldmeer '91 (MS ME), manager of gas turbine combustion and fuel solutions, is featured on GE Power & Water's web pages as part of a new gas turbine fuels capability marketing campaign. A recent award-winning paper written by Jeff is highlighted on the website, along with videos of Jeff introducing GE's gas turbine fuel capabilities and explaining fuel science. He will be taking this message on the road with presentations at Power-Gen Middle East (Abu Dhabi, U.A.E), the International Gas Turbine Conference (Tokyo, Japan), and at Power-Gen International (Las Vegas) later this year.

1990

Dan Russell (MS MG) is senior vice president of manufacturing and operations for Pixelligent, a start-up company in Baltimore that provides zirconia nanocyrstals to the LED and OLED industry. His wife, Judith (Ross) (MS MG) is a project manager for Genzyme Corp. in Northborough, Mass. Their daughter, Lauren (Russell) Eisenhauer '11, is now a process improvement specialist at UMass Hospital in Worcester. Judith notes, "My brother-in-law and niece also graduated from WPI. So it is quite a family affair."

1991

Brian Daly '94 (MS EVE) joined Parsons as vice president and alternative project delivery (APD) manager of the company's Water Division. He will lead and help to identify and position Parsons for design-build, progressive



design-build, design-build-operate, construction-management-at-risk, and other APD opportunities. Brian brings more than 22 years of experience in the water and wastewater, industrial waste, and solid waste markets. Most recently, he was the North American business development manager for the water design-build practice for a global firm specializing in architecture, design, engineering, and construction services. He is based in the firm's Boston office.

Dean Famiano writes, "I have two sons from my marriage with Sandi MacLeod Famiano-Bryce, 19, and Ethan, 16. Bryce starts his sophomore year at URI this fall, and Ethan is a junior at Bishop Hendricken High School."

Steve Kellett writes, "I am completing my second anniversary as a practicing physical therapist in Franklin, Mass. After a 30-year career in engineering and marketing in the medical device/ life science area, I returned to get my doctorate in physical therapy from UMass Lowell. The analytical/problem solving skills gained in the WPI biomed program serve me well in diagnosing and treating patients. The career change has been very rewarding and enabled me to help patients return to activities they need and want to do. Additionally, flexibility in my job affords me more time with family and for other interests. My wife, Lee (Hevey) '81, and I are preparing for some bold new adventures in 2016 when our youngest, Jill

(9/1997), leaves for architecture school. Our older daughter, Amanda (7/1988) lives in Portland, Ore., where she works at a local nonprofit that provides meals and employment training to homeless youth ages 14-24. Fellow alumni Cindy Lozeau '81 and Jeff Dick '81 were invaluable in aiding in her move to the west coast. Thanks, guys!"

1992

Dave Andrade writes, "I have recently changed jobs and am now working for CDW-G in the K-12 EdTech group. I will be working with internal staff and customers on Educational Technology, Google Apps, Chromebooks, and other projects. This change was made after taking time to think it through, and I decided it was the best thing for me and my family. So far, I'm really enjoying it. I also became a Google Apps Certified Administrator last week. I set up and deployed Google Apps to all 26,000 users in Bridgeport, Conn., while I was CIO there, as well as deploying over 11,000 Chromebooks. I've also worked with over 30 other school districts setting up and deploying Google Apps and Chromebooks. The recent career move allows me more time with my family (CIO is 24/7 job!), while opening up a lot of opportunities. My daughter, Abigail, will be two next month, and spending time with her and my wife, Cori, is my favorite thing."

Trou Thompson brought his "No Evil Project" to WPI in September.

Sean Moore works for Jacobs Engineering in Tampa, Fla., as a project manager, leading pursuit efforts and design teams on highway design projects in Florida. He says, "My children thrive in math and science go figure, with my WPI background and my wife's biology/genetics background. My son Jonathan (potential class of 2022) enjoys reading the WPI magazines I regularly receive. We recently enjoyed a trip to Alaska, where we got to get up close with the South Sawyer Glacier."

Michael Voorhis's photo series"The Gargoyles of Alumni Gymnasium" was on display this fall in Gordon Library's Class of 1970 Café Gallery. Inspired by black and white photos he remembers from his undergraduate days, he decided to record them in color, for posterity. He holds the post of lab manager for the Computer Science Department at WPI. Only a sampling of the gym's 34 gargoyles was displayed the library exhibition, but more can be seen on Flickr by searching "WPI Gargoyles."

1993

On Sept. 12, Lt. Col. Edward Diamantis assumed command of the 2nd-108th Military Police Battalion at Fort Jackson, S.C., in the Army Reserve. Ed is a veteran of deployments to Kosovo, and multiple tours in Iraq, Kuwait, and Afghanistan. He was selected for this command following a year of teaching for the Command & General Staff College in the Army Reserve. Ed and his wife, Karen, live in Charlotte, N. C., where Ed is the manager of HSO (high speed online) product field testing for Time Warner Cable's corporate office.

Naomi Carnegie Fields is working as a home health nurse for Amedisys Home Health. She reports that she enjoys spending time with her husband, Chauncey, daughter, Elizabeth (5), and son, Daniel (18). She recently completed her BS in nursing, and within a year or so, will pursue her MS in nursing. Naomi adds, "Our family lives in the south suburbs of Chicago, where activities and sports are a'plenty, winters are windy and cold, but not as fierce as in New England."

1995

Eric Nielsen and Eric D'Entremont

met up in Munich in June, for the first time since graduation. They were sophomore roommates in Founders Hall, met as freshmen living on Daniels 3rd. Eric D. has been living in Munich for about five years, and is currently teaching technical English at a university there. Eric N. is principal reliability engineer at iRobot in Bedford, Mass., and was visiting Munich for a business conference. Traveling with Eric N. was his colleague Jeremy Skorinko '05 '10 (MS BE), an iRobot senior systems engineer who went to Munich for the same conference.

Troy Thompson brought his "No Evil Project" to WPI in September, sponsored by the Student Activities Office and Office of Multicultural Affairs. Troy was on hand to photograph members of the WPI Community posing as the three wise monkeys ("See no evil, hear no evil, speak no evil"). Participants are asked to pick three labels that describe themselves, and to add one good thing they've done to show they're not evil. The goal, according to Troy, is to challenge stereotypes and "to show the world that anyone can do good, no matter who they are." In the past year, Troy has brought the project to several area colleges, as well as Wachusett High School and Friendly House. See faces from WPI and the complete gallery at noevilproject.com.

1996

Enith Morillo '98 (MS EE) wrote an article about herself for irelaunch, a return-to-work blog. Her story, titled "'Late Entrant' Engineer (Re)launches Her Tech Career After 9 Year Hiatus," told of reinventing herself after living overseas and raising a family. Enith joined Thermo Fisher Scientific as a quality assurance manager in 2014, and has been honored for her work as a manager.

1997

Cappy Lau writes from Bloomindale, Ill., "Working as a global channel sales manager of appliance controls. Celebrating life when not traveling for work, and raising my amazing daughter, Isabella Rose, who is now four years old and enjoying Montessori school.

Charles Prescott is a project manager at Munters Corp., located in Amesbury, Mass.

1998

Jef Spaleta has previously been noted in these pages for his Antarctic travels. "But I now have a new gig!" he says. "And it's even better! I've joined a wearable technology start-up. I actually helped found the company and did first prototypes of the technology several years ago, but I finally joined

the company as an employee so I can work on it full-time. You can read all about it at myvert.com. As far as we know, we are the first wearable technology to be endorsed by the NCAA to be used during NCAA games. We also have U.S. Olympic team endorsement for the technology. And we are testing with ESPN now to integrate the data into their TV broadcasts. Really exciting stuff."

2000

Robert Dowding (MS ME), materials engineer for the U.S. Army Research Laboratory at Aberdeen Proving Ground in Maryland, received the Distinguished Service to Powder Metallurgy award from the Metal Powder Industries Federation. He holds two patents and received three R&D 100 Awards for PDS Powders, Nanogen & Plasma Pressure Compaction, as well as an Award of Excellence for Technology Transfer for Lasform, an additive manufacturing technique, and an Army SBIR Phase II Quality Award for the low-cost synthesis of carbon nanotubes.

Seth Flagg is the regimental surgeon for the Marine Corps Wounded Warrior Regiment in Quantico, Va.

2003

Chantal Bichet and her husband, Richard Burdick, write that they welcomed a baby girl into their hearts and home in May 2015. Her name is Aurora Rose.

Chris Cammack and his wife, Jaime, are proud to announce the birth of their third child, Francis Gabriel, on Feb. 11, 2015, in Fairfax, Va. "We are doing very well," he writes.

Turin Pollard '08 (MBA) and Rachel (Nasto) Pollard '05, '07 (MS PH)

have moved to Philadelphia with their two-year-old son, Turin "Jedediah" Pollard II. Turin works for AMSEC LLC. where he leads the Philadelphia office providing consulting services to the U.S. Navy. Rachel works for Booz Allen

Hamilton and currently performs analysis of Department of Defense information environment strategies. Jedediah throughly enjoyed his first visit to campus this summer, they report, leaving no portion of Higgins House gardens unexplored.

Jen (Scheipers) and Neil Schelly welcomed the arrival of their daughter, Aeryn Inara, on March 2, 2015.

Nina Simon, executive director of the Santa Cruz Museum of Art & History was named to Silicon Valley Business Journal's 40 Under 40 list this year. She has been called a "museum visionary" by Smithsonian Magazine, and the Santa Cruz museum has flourished since she took over in 2011, with great increases in attendance and membership, and significant budget growth.

2004

Crystal Caron completed her first Pan-Mass Challenge in August. "It was a truly remarkable and inspiring weekend which will stay with me for some time," she says. Crystal has worked for the Division of Development and the Jimmy Fund at Dana-Farber for more than three years now. She is currently a development officer with the Boston Marathon Jimmy Fund Walk, which is Dana-Farber's signature event.

Justen Garrity founded Garrity Renewables LLC, a veteran-owned business that turns food scraps into organic compost. He strives to provide meaningful jobs for fellow veterans and a high-quality soil amender for gardeners. The cleanliness of his operations was praised in a write-up in Waste360, where he said, "It's basically an eighth-grade science project. We can process all of this food waste and not ruin the neighborhood with a terrible smell."

William Herbert started a new job as a software engineer with Kayak in its

[CLASS*notes*]

Cambridge, Mass., office at the end of August. He had been at Nuance Communications in Burlington since January 2010.

2006

James Norton was promoted to project manager at BVH Integrated Services, where he's been working since graduation. He specializes in the design of HVAC systems for healthcare and higher education facilities. Jim has worked on many successful projects throughout the Northeast, including Quinnipiac University's new School of Law and the Frank H. Netter School of Medicine, and the new Baystate Orthopedic Surgery Center.

Matthew and Erin (Ringer) Regan welcomed baby girl Eloise Claire on June 9. Matt recently started a new role at Shell Chemical in Geismar, La., as a senior reliability engineer.

Chris Werner writes, "I have been engaged since its inception and was one of the principal mechanical engineers/ product designers of the Apple Watch."

2008

Stacie Gutowski earned her PhD in biomedical engineering from Georgia Institute of Technology in 2014. After completing her doctorate, she began working as a biomedical engineer/lead reviewer for medical device submissions at the U.S. Food and Drug Administration. Outside of work she enjoys exploring the greater Washington, D.C., area.

2009

Former Men's Glee Club members Kevin Black, Jesse Herrera, Nate Piper '08, and Stu Webster '07 spent five days hiking the Maroon Bells 4 pass loop in Aspen, Colo., this summer. Although they spent most of their time reminiscing about the days at good ol' Worcester Tech, they were also able to form new memories and see incredible views.



Hiking in Aspen this summer.

- Kevin Black, Jesse Herrera, Nate Piper '08, and Stu Webster '07

Stephanie Carlyle married David Cadorette on June 13, 2015, with many WPI friends attending. "We had a beautiful wedding at the Harding Allen Estate in Barre, Mass., and were able to celebrate with family and friends," she writes. "Eileen Gribouski was our maid of honor, and Liz Carey, Sabrina (Zayas) Carmichael, and Lindsey McKan were bridesmaids. We then had a wonderful relaxing honeymoon in St. Lucia."

Nelson Nogueira writes, "On June 13, 2015, I married the woman of my dreams, and we are currently working on building our very first home together. We are hoping to have it ready to move in by the end of the year. We will be excavating any day now."

Matthew Zagaja shares, "I am spending a year at the Berkman Center for Internet and Society at Harvard University as a Ford-Mozilla Technology Exchange Fellow working on the Chilling Effects project."

2010

Kevin O'Donnell (MS EVE, MS CPM)

sends a comment on a class note from the previous issue. "On page 61 of the Summer 2015 Journal, there is a photograph of a distinguished alumna [Marissa Goerke] leading the way at the South Pole. I was there in 2003 with the NSF, through Raytheon Polar services. I ran a crew of electricians and was the wire inspector. We took it upon ourselves to assist some researchers from Ohio State University in their data collection on continental shift, as they were not present at the station to perform the service themselves. I recently completed an MPH degree at Boston University, after working in a remote oil extraction site in northern Alberta, Canada, as a site superintendent responsible for electrical, mechanical, and environmental compliance."

Hannah Shapiro writes, "I have moved back to my home state of Connecticut to start a new position at Medtronic in North Haven."

Melissa Castle and Chris Chung were married May 10, 2015, in Portsmouth, N.H.. Melissa is a quality assurance associate at Johnson Matthey Pharma Services. Chris is founder/president of Manekoware, which released the "Catlateral Damage" cat simulator in May of 2015. They currently live in Arlington, Mass.

2013

Shelby Miller and Jonathan Marokhovsky became engaged on Aug. 2, 2015. An October 2016 wedding is being planned. They write, "We cannot wait to celebrate our engagement with friends at WPI's Homecoming Weekend 2015."

2014

Air Force 2nd Lt. Tim Grupp is stationed at Fort Gordon, Ga., as a cyberspace officer. Through the local Augusta Row Club, he met up with some fellow alums. Tim's father, Jim, shares the story. "I went down to Augusta, Ga., in July, to help Tim move into a new apartment. When I went with him to rowing practice on the Savannah River, there were nine members there to do an eight-person person rowing work-up on the river. Of the nine, three were WPI grads!" Joining Tim were Will Ramos '13, who coaches the club, and Brandt Bonin '82. "Both Will and Brandt rowed for WPI," Jim reports, "and they are both working as engineers down there. So, WPI is well represented down in Dixieland. Go WPI!"

2015

Loan Chau is serving as a Peace Corps volunteer in Belize, working to improve maternal and child health. "I've never been out of North America - I've only been to Canada-and I am sure adjusting will be a challenge," she stated in a Peace Corps press release in July, when she was preparing for her assignment. Loan expects to learn much about Latin American culture while teaching the Belizean people about diversity in the U.S. "You can only read so much in a textbook, but you will never know something until you experience it firsthand," she said.

Pranav Parchure (MS IT) writes,

"WPI is not just a college but a spaceship to success. The things that I learned during college directly applied to my work, be it be my internship or full-time job. I was always a step ahead of others."

ALDEN SOCIETY

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"Jake loved a party—so reconnecting with old friends was what Jake and I enjoyed.
Together, we hosted the 30th reunion for and with the WPI Committee.... Jake and his fraternity buddies, whom we met at his 25th reunion, had such a great reunion at Higgins House that we all returned every five years thereafter for each event."

When Jake survived his first battle with cancer at the age of 50, we set up two Charitable Remainder Trusts for two Institutions—one of them WPI—that helped us have such a successful lifestyle and yet be able to support us through our retirement."

"Jake passed away in 2008, and at his 50th Class Reunion in 2010 I was honored to accept his Class of 1960 medallion. It's a wonderful reminder of our days at WPI, and it was important for us to give back through our planned gift."

— Joanne Jacobs, remembering her husband, the late Irwin "Jake" Jacobs '60





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FOR MORE INFORMATION

Contact Donna K. Stock Executive Director of Leadership & Planned Giving 888-974-4438 dstock@wpi.edu



HENRY R. POPLAWSKI '39

Henry Poplawski, an avid supporter of WPI, passed away on July 15, 2015, in Dayton, Ohio. He was 101. He came to WPI as a freshman but was forced to drop out before the end of his first year due to financial hardship. A self-taught pilot, he contributed to transport and testing operations during World War II and was later recalled to active duty, retiring in 1966. As a member of the USAF Civil Service, Lt. Col. Poplawski continued to work for the Foreign Technology Division until his retirement in 1977. As a civilian, he worked for Martin Co. as

guided missile engineer. He was predeceased by his wife, Claytrice Mary (Gannon) Poplawski.

Throughout his life, Poplawski never forgot his alma mater, nor the disappointment he felt when he had to leave WPI so early in his college career. More than seven decades later, he acted to help future generations of students facing financial challenges avoid his fate. He committed \$7.8 million through a planned gift for student scholarships at WPI, making his one of the largest gifts the university has received.

The Journal will share complete obituaries, where available, and assist classmates in contacting surviving family members. Email jkmiller@wpi.edu or call 508-831-5998. For information about memorial contributions, call +1-877-974-3863, or email giving@wpi.edu.

HOWARD J. FREEMAN '40

Howard Freeman, a longtime WPI trustee and generous benefactor who is remembered for his many inventions - including a firefighting nozzle that saved thousands of lives during World War II - and for founding Jamesbury Corp., a successful global business based on his own innovations in valve technology, passed away on July 22, 2015. He was 96. Active in his field into the last years of his life, he patented a nozzle for the production of biodiesel fuel from algae in 2011.

Freeman chaired the Board of Trustees from 1984 to 1990. He received the Robert H. Goddard Alumni Award for Professional Achievement in 1972 and the Herbert F. Taylor Alumni Award for Distinguished Service to WPI in 2005. His impact includes the Howard G. Freeman Scholarship and Freeman Plaza, a courtyard near the center of the campus. (Pictured here: Esther and Howard with President Hazzard at the Freeman Plaza dedication in 1977). A \$1 million commitment to the Campaign for Excellence by Howard and his wife, Esther, made Freeman the first alumnus ever to make a seven-figure commitment during his lifetime. Esther died in 2014. Married for 73 years, they are survived by two children.





STEPHEN E. Rubin '74

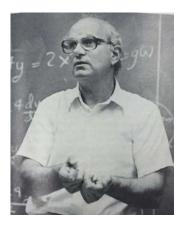
Steve Rubin, former chairman of the WPI Board of Trustees, died Aug. 28, 2015, at the age of 63, from complications related to ALS. He is survived by his wife, Tracy, three children, and two grandchildren. His family notes that his Nigerian dwarf goats will also miss him tremendously.

In 1980, Rubin started a software operation in his basement that grew into Intellution (for intelligent solutions), a global company with customers that included 75 percent of the Fortune 500 companies. After transitioning Intellution into a division of Emerson Process Management, he co-founded Recognisis Inc., a company that records and tracks plaques and other donor recognition items, including the bricks in WPI's Centennial Walkway.

Rubin was a member of the WPI Board of Trustees for more than a decade, where he held the posts of vice chairman and chairman. He also served on numerous committees,

including the Advancement Committee, where he was a prime mover in the strategic goal of achieving better national recognition for WPI. Always a generous donor, he was a major supporter of the Campus Center, which opened its doors in 2001. In 2013, despite his humble avoidance of the spotlight, he graciously accepted the Institute's request to officially name it the Rubin Campus Center.

Steve Rubin embraced his alma mater's traditions, participating in celebrations with the WPI community and as a member of Skull. On Founders Day, he would bring his goats to campus for students to enjoy. At Commencement 2014, he was on stage to accept an honorary doctorate. With Tracy by his side, he played a recording to let the audience know that his battle with ALS had made it increasingly difficult to speak. Then Tracy read his remarks, which expressed gratitude for the many ways WPI had touched his life. "I love WPI," he said. "It helped me have a complete and successful life."



GORDON C. BRANCHE was recruited to teach algebra at WPI in 1959, just after the mathematics department began offering an undergraduate major. He retired in 1997 from a greatly expanded department that had just granted its first PhD degree. Even when serving as assistant or interim department head, Branche remained true to his love of teaching by taking on one freshman course each year. An early

supporter of the WPI Plan, he was active in the Young Faculty Organization, served as secretary of the faculty, and sat on the Board of Trustees as a faculty representative.

Branche was a founding member of the WPI Footpounders running club. He remained active in retirement and kept close ties to his colleagues, faithfully attending weekly meetings of his department's "Fluid Dynamics Seminar," at nearby Tweed's pub. Gordon Branche died Aug. 11, 2015, at the age of 82. He is survived by his wife, Lou Anne (Bell), four sons, six grandchildren, and four great-grandchildren.



ROBERT E. CONNORS.

who taught chemistry at WPI for nearly four decades and maintained an active research program in spectroscopy and photophysics, died July 16, 2015. He was 69. He joined the WPI faculty in 1976, and was appointed Leonard P. Kinnicutt Assistant Professor of Chemistry, an honor he held until 1980.

In his laboratory in Goddard Hall, Connors led a research team that

used the techniques of high-resolution spectroscopy and molecular modeling to explore the physical properties of inorganic and organic molecules by studying the light they emit as they settle back down from excited states to their ground states. He was a member of Sigma Xi: The Scientific Research Society, the American Association for the Advancement of Science, and Phi Kappa Phi honor society. He is survived by Carolyn Delude, his wife of 35 years, and two children. In recognition of his many contributions, WPI's Department of Chemistry and Biochemistry has established the Robert E. Connors Award for outstanding undergraduate student achievement in physical chemistry.



BETTY (BRUENING) HOSKINS was the first female tenure-track faculty member to be hired at WPI.

She graduated from Goucher College at the age of 19, and soon after received a master's degree in embryology from Amherst College. She also held a doctorate in molecular biology from Texas Women's University. She died June 20, 2015, leaving her

daughter, Kathryn Millis. She was predeceased by a son.

Hoskins joined the WPI faculty in 1972 as an assistant professor in the Life Sciences Department, rose to associate professor, and left in 1979, without receiving tenure. She published in the fields of bioethics, reproductive technology, and feminism, and held leadership positions in the Unitarian Universalist Women's Federation and in several groups for liberal religious scientists and scholars. Her experiences as a pioneering woman in the life sciences and at formerly all-male colleges were recorded in an oral history for the Worcester Women's History Project; her papers are archived in WPI's Gordon Library.



ROBERT C. LABONTE '54

was WPI's first Professor of Practice. The post was created in 1996 to bring distinguished professionals to campus to teach and share their expertise. Labonte, who also held a master's degree in electrical engineering from WPI, was a specialist in computer security who worked for MIT's Lincoln Laboratory and then MITRE Corp. before he joined WPI's Electrical

and Computer Engineering Department as a visiting associate professor in 1992. His previous work included developing processing and communications systems for NASA and air defense systems used by NATO Europe.

At WPI Labonte chaired WPI's Space Experimentation Program. In addition to teaching and advising projects, he helped develop courses such as Aerospace Avionics Systems to bring together a broader range of topics that are critical to aeronautics majors. He also served on the ECE Undergraduate Program Committee and the ECE Projects Committee; he was a member of Phi Kappa Theta and Skull. Labonte died Dec. 22, 2014, leaving his wife, Dolores, and a son.



THE REV. PETER J. SCANLON, WPI's full-time chaplain from 1969 until his retirement in 2006, died on Sept. 24, 2015. For 45 years he watched over thousands of college students of all faiths, and helped them discover themselves. Known to all as "Father Pete, he is remembered fondly not only as a spiritual advisor, but as a friend and confidant. He was there for

students night and day, celebrating Mass, responding to crises, and promoting social interaction. In particular, he kept special watch over the women students in the early days of coeducation at WPI.

Father Scanlon, who received the Goat's Head Award at Homecoming in 2011, remained an ongoing presence in the lives of many alumni with his weekly emails, in which he shared his thoughts about matters spiritual and secular, and with his unmistakable presence at Reunion, Homecoming, and other campus gatherings. He kept in touch with his WPI flock after they left campus, was chosen to marry many alumni couples and baptize their children, and, in some cases, watched over those children while they attended WPI. He leaves his sister, Peggyann T. Scanlon.

IN MEMORY

THOMAS FRARY '36, Sigma Phi Epsilon
SAMUEL KAPLAN '39 ME, Alpha Epsilon Pi
WILLIAM SIMMONS '41 CH
ELMER BENNETT '43 CH, Theta Chi
LEONARD HERSHOFF '43 EE, Alpha Epsilon Pi
EDWARD BERNDT '45 EE, Phi Kappa Theta
ALBERT BERRY '45 ME, Theta Chi
GEORGE KENNEDY '45 EE, Phi Kappa Theta
JULIUS PALLEY '46
GEORGE BROUGHTON '47 CM
HAROLD GUERCI '48 EE
ARTHUR PIKE '48 EE, Lambda Chi Alpha

GEORGE CARLSON '49 EE, Alpha Tau Omega CHARLES CHASE '49 ME
LEONARD FISH '49 (MS CM)
JOSEPH DOBRONSKI '49, D.Eng. (Hon.) '03
EDMOND JUDD '50 ME, Phi Gamma Delta
WILLIAM CUNNEEN '51 ME, Phi Kappa Theta
ALLAN PARTRIDGE '51, Lambda Chi Alpha
FOSTER SISSON '51 CE, Sigma Phi Epsilon
ORREN MCKNIGHT '53 CE, Phi Sigma Kappa
ARTHUR NICHOLS '54 ME, Theta Chi
THOMAS WRIGHT '56 EE, Sigma Alpha Epsilon
PAUL JANDA '57 (SIM)
LEON MORGAN '57 EE, Phi Sigma Kappa

CHARLES WHITNEY '57 EE, Sigma Alpha Epsilon
MARWOOD RAND '58 (SIM)

MATTHEW MATZKIN '59, ME, Alpha Epsilon Pi
DAVID WELCH '60, CE, Phi Kappa Theta
FREDERICK VORCK '62, Phi Sigma Kappa
NORMAND WILHELMY '63 (SIM)
ROBERT MORSE '64 EE, Tau Kappa Epsilon
DEAN WHITE '65 (MS CE), Alpha Tau Omega
ROBERT LUNDSTROM '67 (MS MTE)
SUDHIR MEHTA '69 (MS CE)
HOWARD NORCROSS '70 MG
KEITH SIMONS '72 ME
SAMUEL SOTIR '72 (SIM)

RICHARD PECK '73 EE, Theta Chi
ANGELO TSEFREKAS '73 (MS MG)
PAUL LEAHEY '74 (SIM)
ANDREW KOPACH '76 CE
GEORGE OLEAR '77 CH, Phi Sigma Kappa
LINDA WALDEN '78 (MNS)
YEONG CHUNG '82 (PhD CM)
DOUGLAS MILES '85 ME
LORING COES III '86 MM, DSc (Hon.) '91
DANA SOUSA '88 MGE
LEONARD MCGLYNN '89 (MS ME)
JOHN FAHY '91 (SIM)
STEVEN MARSHALL '07 ECE

We donate because we received a lot of help ourselves to get to (and through) WPI, and we want to ensure that opportunity continues to be available to future students, too."

Neil and Jennifer (Scheipers) Schelly, Class of '03

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impactful research, and transformative projects.

Every gift makes an impact.



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