

WP



SCIENCE, DATA,  
AND THE PANDEMIC

MARNI HALL '97, AN AUTHORITY ON REAL-WORLD  
EVIDENCE, IS HELPING THE NATION—AND THE  
WORLD—RESPOND TO COVID-19



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**EDITOR**  
Doreen Manning '19 MBA  
[dmanning@wpi.edu](mailto:dmanning@wpi.edu)

**ASSOCIATE EDITORS**  
Peggy Isaacson  
Joan Killough-Miller

**CONTRIBUTING EDITOR**  
Judith Jaeger

**DESIGN**  
Todd Verlander

**PRODUCTION MANAGERS**  
Brian O'Connell  
Dianne Vanacore

**CONTRIBUTORS**  
Arthur Carlson  
Michael Dorsey  
Lisa Eckelbecker  
Judith Jaeger  
Joan Killough-Miller  
Sharron Kahn Luttrell  
Julia Quinn-Szcesuil  
Allison Racicot  
Scott Whitney

**ILLUSTRATORS**  
ElvisDead  
Javier Ramirez  
Jonathan Reinfurt

**PHOTOGRAPHERS**  
Matthew Burgos  
Matt Furman  
Jeff Mauritzen  
Todd Verlander

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**CORRESPOND WITH WPI JOURNAL**  
WPI Journal  
100 Institute Road - Boynton Hall  
Worcester, MA 01609  
[wpijournal@wpi.edu](mailto:wpijournal@wpi.edu)  
[wpi.edu/+journal](mailto:wpi.edu/+journal)  
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# LETTER

## TO THE EDITOR

Letters to the editor may be altered for length, clarity, and accuracy. We ask that letters offer the reader's opinion without rancor. Letters that mock or insult will not be published. Opinions expressed do not necessarily reflect the views of WPI. Send your letters to [wpjjournal@wpi.edu](mailto:wpjjournal@wpi.edu).

### NEVER AGAIN

Prejudice equals lack of respect for, or in the extreme, hatred of others whose race, religion, nationality, or economic status are different from one's own. What is its source and what motivates its teaching?

It isn't innate at birth, as far as I ever observed. I watched three infants emerge into adulthood and don't know of any prejudice against others who were different from them coming along with the package at infancy.

If this is so, then the prejudice has been taught along the way. Hence, if it can be learned, then it can be unlearned. That needs to be the goal of those who believe living lives in a compassionate society is desirable.

How can prejudice become abolished? Let me sight a personal illustration.

I was 11 years old when war between our country and Japan came to an end, and I had been trained to see the Japanese people as our avowed enemy. I gloried in their surrender that brought World War II to an end and brought my cousins home safely from the Navy.

Forty years later, my wife and I found ourselves in Japan, along with a Japanese woman who had lived with us while a student at Berkshire Community College. She spoke to audiences everywhere about the effects of atomic bombs on the residents of Hiroshima and Nagasaki. She was so effective that we were motivated to go with her to Japan, and to arrange for others, mostly young Japanese, to come to our country and sometimes to Canada, to tell the stories of the A-bomb survivors, while also sharing bits of Japanese culture with largely uninformed audiences. Our effort was called the Never Again Campaign.

We made this journey 10 times and managed to bring 57 volunteers to the U.S. to share knowledge of Hiroshima and Nagasaki survivors with 371,219 individuals in 11,845 presentations. This program lasted for 25 years.

My point is that building friendships across racial, ethnic, religious, etc., boundaries is all it takes to move out of prejudice or unfamiliarity and into respect, admiration, and even mutual love. No one needs to go halfway around the world to unlearn one's prejudices. One only needs to develop friendships across boundaries once defined by disrespect or at least unfamiliarity and things will take care of themselves, all to the good.

—DON LATHROP '56



Producing an issue of the *WPI Journal* in the time of COVID-19 has been a rewarding challenge. Like everyone, we've had to find new ways to live and work, and we've had some fun using our phones and iPads in new ways to bring you this issue. While the look is somewhat new, we're still excited to tell you stories that make WPI the amazing institute where theory continues to meet practice.

—DOREEN MANNING



## President Laurie Leshin talks with Philip Clay, Vice President for Student Affairs

TO SEE A VIDEO OF THIS INTERVIEW IN ITS ENTIRETY, VISIT [WPI.EDU/+JOURNAL](http://WPI.EDU/+JOURNAL)

**LL** Philip, It's great to have you here. As one of the leads of the Coronavirus Emergency Response Team [CERT], you've been working night and day, getting our campus community ready to return for fall. Tell us a little bit about CERT and who's involved.

**PC** CERT is a cross section of members of the university community representing not only academics, but health services, student life and activities, campus police, and more. A true cross section of the community has been working on this problem.

**LL** There are more than 200 people across the campus who have been working on this and on the various sub-teams. Is that right?

**PC** Yes. Since the very beginning, we've reached each critical venture of decision-making for the university, bringing in experts—both internally and externally. As we've gone through this process, I can see how it really mirrors our WPI experience of theory and practice. Much like a student project, where you research, get new information, pivot, bring in experts—whether that's an epidemiologist or a team to look at our physical campus set-up and how do we get the appropriate supply of things like PPE and cleaning products to be able to function.

**LL** On July 1st we announced our intent to bring people back to the campus. What are we hearing from folks about what their concerns are—and are we confident we're addressing them?

**PC** We recognize that there are members of our community who are in a high-risk category, or may be living with someone who's high risk. Therefore, many of our core plans are focused on the appropriate steps we need to take to help ensure (per EBM) safety, which is why we're approaching the reopening with a blended approach. For the educational delivery, we have a remote option ... so if a student who feels, for whatever reason, that they cannot come to campus, they can access their education remotely. We've learned over the

course of the summer that even with student clubs and organizations, we can pivot and figure out how they can function safely and remotely.

**LL** Again, I'm so impressed with CERT because it has left no stone unturned. ... We've recently signed on with the Broad Institute to conduct testing on campus. People should feel confident that when we have a case [of someone with COVID-19], we'll find them quickly and isolate them. Talk a little bit more about the level of safety provided by testing.

**PC** We have taken a very aggressive approach in terms of our testing, because with asymptomatic spread, it's important to be able to identify a potential positive case as quickly as possible. By testing regularly, we're able to implement our plans for both isolation and quarantine based on that individual, but also within the circles of people that individual has come in contact with. We can then identify impacted individuals, separate, and support them with regular check-ins and healthcare, and also bring them meals, make sure they have what they need to continue classes while recovering—all so they can rejoin campus life as quickly as possible.

**LL** It's all about those safety protocols, such as always wearing your face coverings. I'm really confident we can keep each other safe if we're willing to just do simple things like this. I am so glad that CERT has been doing such an amazing job planning, and I'm looking forward to welcoming our students back. Thank you for all you're doing.

**PC** Absolutely ... my pleasure.

## MARK BRAY '21

# INSIDER

A natural tinkerer who defies the stereotype of engineers as ineffective communicators, Mark Bray heads into his senior year as a double major in Biomedical Engineering and Professional Writing.

The Shrewsbury, Mass., native and Two Towers Prize winner seems almost too good to be true. So good, in fact, that when Glenn Gaudette, William Smith Dean's Professor of Biomedical Engineering, wrote a recommendation for Bray's Two Towers nomination, he said, "In my 14 years at WPI, I have been fortunate to know many past Two Towers Award winners and I can honestly say that Mark surpasses them all."

Gaudette went on to praise Bray as a once-in-a-lifetime student, with a kind demeanor and genuine smile. "In addition to having great academic and leadership skills," he says, "he seems to bring a smile to everyone's face when he meets them. He is very well known on campus; it seems like everyone is familiar with his warm and inviting personality."

In turn, Bray says that working as a volunteer in Gaudette's lab, researching cardiovascular tissue regeneration the summer before his freshman year, influenced how he would succeed at WPI. "The experience strongly affirmed my conviction that I had chosen the right school—and major—for my undergraduate career," he recalls. "I got the opportunity to work with and learn from incredible people, and I cannot overstate what a positive learning experience it was."

For his IQP, Bray headed to Albania, where he helped residents better prepare for climate change, including increased heat in Tirana and flooding in Shkodër.

He served as Academic Excellence Chair for the National Society of Black Engineers at WPI, where he was responsible for developing and implementing innovative programs and workshops to help members of the club excel academically. "I compiled a small library of textbooks generously donated by alumni of color for current students to use on a termly basis free of charge," he says, "and I frequently sent out announcements of scholarship and employment opportunities that were relevant to NSBE's membership." He also assisted in organizing an alumni panel to connect generations of WPI students of color and to give everyone a chance to learn from each other's experiences.

As a resident advisor, he often has one-on-one conversations with students who need help with personal issues. "Thinking back to my freshman year, it was often the little things my RA did—like having an open door policy, or being approachable—that stuck with me; I try to do the same thing for my residents."

He worked to inspire middle school students' interest in science and engineering as an Engineering Ambassador for WPI's Pre-collegiate Programs and helped problem solve technical issues at the WPI Helpdesk. He is a tutor in the WPI Writing Center, and—for a design project in his major—he helped develop an anxiety-reducing addition to an MRI machine. Even through the COVID-19 campus closures, he was one of the BME undergraduates who volunteered to provide virtual office hours to prospective students.

In addition to being a double major, Bray is a pre-med student and has served as a hospice volunteer at the Jewish Healthcare Center outside of classes. "I started volunteering because I wanted to explore different parts of medicine to better understand the role played by physicians and other members of a healthcare team in providing care," he explains. "I've found that it's a rewarding experience and I have gained an important perspective into that field of healthcare."

But wait, there's more ... Bray was also on the Varsity Track & Field team. He admits that it was a challenge to balance the fast-paced nature of classes and his athletics. But he says the experience taught him to manage his time more efficiently, and provided an invaluable structure and support system. "I don't think being an athlete has taken away from my experience at WPI; if anything, it has improved it!" he says.

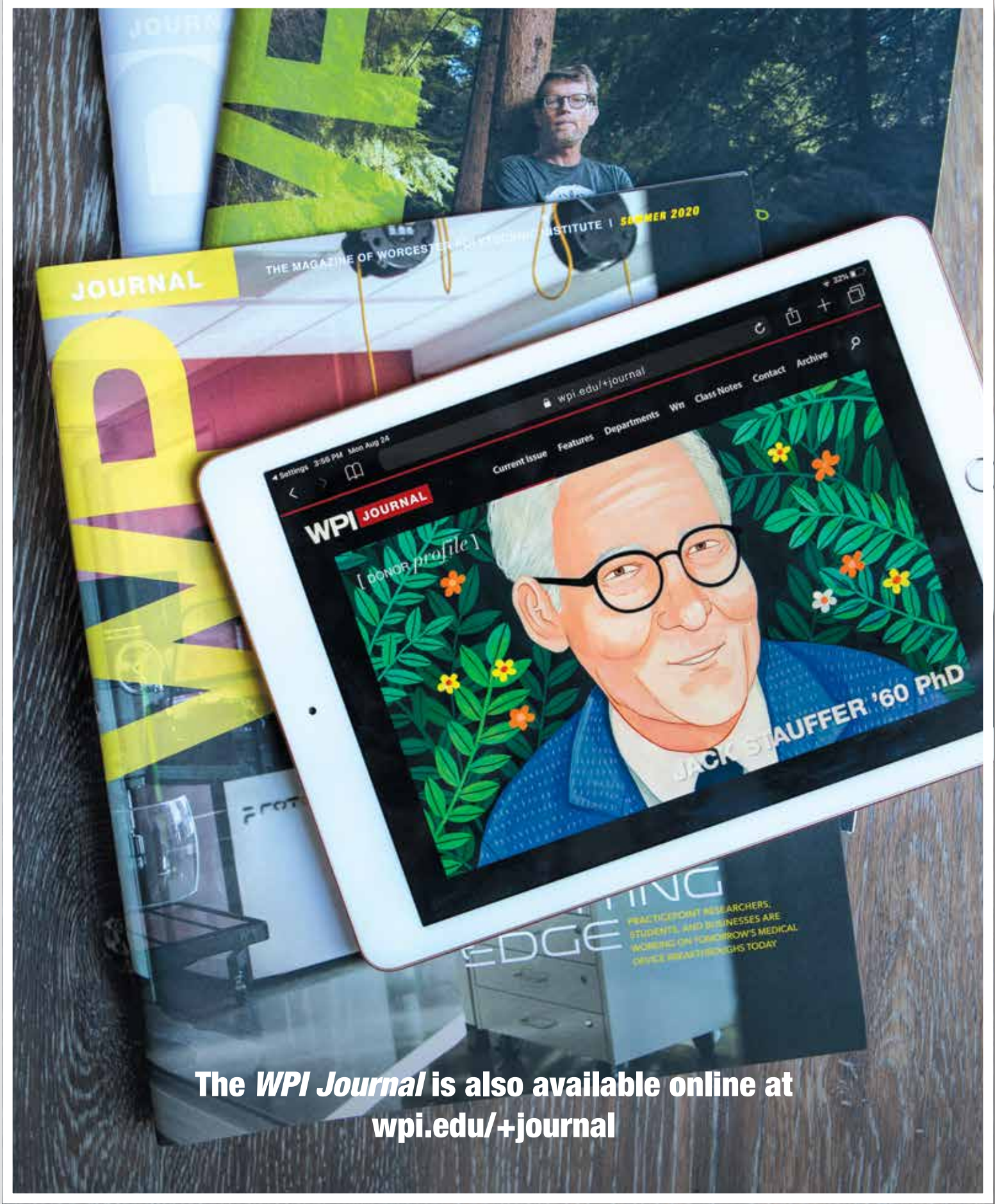
Gaudette says that Bray truly exemplifies Theory & Practice. "He excels in the classroom, in the research laboratory, and in projects, while also giving back to society and making the world a better place."

We at the *WPI Journal* couldn't agree more.

—DOREEN MANNING



PHOTO TODD VERLANDER



**The *WPI Journal* is also available online at [wpi.edu/+journal](http://wpi.edu/+journal)**





# Ecuador

QUITO



## GLOBAL IMPACT

The IQP immerses WPI juniors in the unfamiliar, and while each project center has something special to offer, many of those students have one thing in common: a foreign language challenge.

Completing immersive project work in a new country or community is challenging enough; add in a language barrier and you've got something that can be intimidating at best or daunting at worst.

For many who choose the Ecuador Project Center, that challenge is all part of the center's appeal.

**QUILLYN SMITH '21** is one of them. "One of the reasons I wanted to go to Ecuador was the language component," she says. "I wanted the opportunity to be immersed in the language and to talk with native speakers."

The same is true of project center co-director **COURTNEY KURLANSKA**, assistant teaching professor in Interdisciplinary & Global Studies. Fluent in Spanish herself, she had been working as a mentor and advisor for WPI's Engineers Without Borders group during its trip to Ecuador when she approached the center's founder, Lauren Elgert, and offered her services for the upcoming year as the project center prepared to expand to two full terms.

"I was thrilled," Kurlanska says of Elgert's decision to take her up on her offer. "I think finding and advising projects that expose students to the realities of everyday life in Ecuador—the struggles and the joys—is the most important thing we do."

The center is relatively new (established in 2013), but it has grown quickly. It was open for one term a year when Elgert was the sole director—students now complete their IQPs there in B-, C-, and D-Terms.

"Our projects tend to be on the more social side of the IQP," Kurlanska says. Take Smith's project, for example—she and her team worked with a local soup kitchen, creating a guidebook of available resources

and tips for the kitchen's primary patrons, Venezuelan refugees. Their meetings with patrons and representatives from migrant support organizations were usually conducted in Spanish, an experience she describes as "extremely challenging, but something that improved my Spanish and made me a more confident leader."

Being able to see that change and growth firsthand is something **JOHN-MICHAEL DAVIS**, first-year projects advisor, carries with him. "A lot of these projects can change pretty drastically based on sponsor needs or updates, and that can be overwhelming for students," he says. "You're never moving in a straight line. To see them be flexible, adapt, and grow along with their projects ... it's very cool."

Like Smith, **BRITTANY BOLSTER '21** chose Ecuador for the chance to improve her Spanish skills, but she also wanted her work to have an influence on the community. Her team's project, which involved working with Casa Maria Amor, an organization that helps women and children who are victims of domestic abuse, made it easy for her to achieve both. "There will always be problems facing the world, and we as humans have a responsibility to help solve them," she says. "That's why I'll be seeking an engineering job that allows me to have a direct impact on a community in need."

From strengthening community outreach through museums and improving public transit to promoting community-based tourism, the projects completed in Ecuador are just as varied as the students responsible for them. At the end of each experience, their efforts and relationships fostered with members of the local community are making a difference that transcends barriers—both linguistic and geographic.

—ALLISON RACICOT

# WTT

The latest in university news, research, and commendations





# LEARNING DURING A PANDEMIC

Researchers with expertise in fields ranging from psychology to architectural engineering will use a \$199,999 grant from the National Science Foundation (NSF) to study how the novel coronavirus global pandemic is affecting stress in college students and their ability to learn in remote settings.

The research is notable because it will be done during a real pandemic and will gather data about the real strains felt by students, said Shichao Liu, assistant professor of civil and environmental engineering, who is the principal investigator of the one-year project.

The NSF awarded the grant through its Rapid Response Research (RAPID) process, which focuses on proposed projects that need quick access to data and resources, and research that responds to disasters and unanticipated events.

Co-PIs on the grant are Soroush Farzin Moghadam, assistant teaching professor of architectural engineering; Angela Rodriguez, assistant professor of psychology and neuroscience; Steven Van Dessel, associate professor of architectural engineering; and Jacob Whitehill, assistant professor of computer science and of learning sciences and technologies.

"This project will provide insights into how college students are coping with a purely distance-learning format, without immediate contact with or support from their peers or professors," Whitehill says. "It will shed light into how students' emotional trajectories and academic outcomes are affected by the short- and long-term effects of the novel coronavirus."

—LISA ECKELBECKER

## DRIVEN BY SCIENCE. ENGINEERED FOR WPI.

On July 1, **PRESIDENT LAURIE LESHIN** announced a plan to welcome the WPI community back to campus for the new academic year. Driven by science, WPI engineered a plan that adjusted for academics, research, projects, work life, residential life, dining, clubs and activities, athletics, and events in order to reopen the campus in a safety-focused, socially distanced manner.

Continuing a slow, deliberate, and careful process that began in late May, researchers and staff moved back to campus in phases and welcomed more faculty and students with a move-in that began August 23, and classes that began August 31.

In order to keep our global community safe, all domestic, international, and Massachusetts-based IQPs, MQPs, and GQPs are being conducted remotely or on campus at WPI in A- and B-Terms. WPI is working with faculty advisors and project center directors to continue to host meaningful and fulfilling project experiences despite this travel restriction.

- Students were allowed the option to engage remotely in classes through a newly developed TechFlex program. Then again, this highly flexible approach to teaching and learning was already in WPI's DNA.
- Priority for in-person academics was given to labs, projects, and discussion sections.
- Faculty and staff who can accomplish their work effectively from home have continued to do so, with accommodations for those with high-risk factors.
- Students, faculty, and staff on campus were required to attend health and safety training sessions and be tested for COVID-19; ongoing testing will be a part of campus life.

More info: [wpi.edu/we-are-wpi](http://wpi.edu/we-are-wpi)

# NOT ONE MORE

**IN JUNE, AMONG THE NATIONWIDE WAVE OF PROTESTS AGAINST RACIAL INJUSTICE THAT FOLLOWED GEORGE FLOYD'S MURDER, Rita Bagala '18, Veda Booth '18, Anne Harris '16, Nde Nkimbeng '18, and Lailah Thompson '16** brought a group of WPI alumni together with the goal of supporting WPI in its efforts to take clear, sustainable actions to address and advocate against racism. The narrative was from alumni of color, joined by other alumni who wish to stand against racism, with hope of using their voices as alumni who have both experienced and represent WPI.

Calling upon WPI to institute substantive change to improve the experience of its Black students and help all WPI students and faculty excel as compassionate members of society, the group conducted an independent survey with responses from 175 WPI alumni with graduation years ranging from 1985 to 2020. Next they held a Zoom meeting for all interested alumni to join the conversation, to gather stories and suggestions to present to **President Laurie Leshin**.

Thompson then met with President Leshin, trustee **Debora Jackson**, and Vice President of Talent & Inclusion **Michelle Jones-Johnson**, bringing forth the experiences and a set of suggested actions gathered from alumni. She says that President Leshin was aligned and receptive to partner with the alumni group as the university makes its own plans to increase anti-racism on campus. The president and board chair Jack Mollen have since issued statements acknowledging, addressing, and apologizing for systemic and personal racism experienced by anyone in the WPI community, and committing to significant additional work by all at WPI to foster an inclusive community where all can thrive.

In the wake of these and other discussions happening all around the campus community, President Leshin spoke about racial justice on campus in a series of Town Hall meetings with students, staff, faculty, and alumni. She also worked with the Board of Trustees to articulate WPI's values and commitment to stand strong on these ideals.

## **Mollen committed WPI to advance these collective goals:**

- Reflection on and acknowledgement of institutionalized practices that have perpetuated marginalization
- Demonstration of commitment and accountability for change through statements of support, deep listening to community members, and active learning plans
- **Creation of a strategy** to drive cultural and structural change
- **A specific plan** to dedicate the resources needed to execute said strategy

## **While these plans are being created, the Board and campus leadership will advance several near-term actions, including the following:**

- Listening circles with students, faculty, and staff of color
- **Launch of a bias reporting system**
- **Anti-racism education and training** for all community members
- **Launch of a Diversity, Equity & Inclusion Student Council**
- **Launch of an Alumni of Color chapter**
- **Learning and development with senior leadership** on racism, power, and privilege
- **Creation of a Board Task Force on Racial Equity and Justice**

## **Today, President Leshin reports significant progress on all these actions.**

"I think proper execution of these changes will have a major impact," says Harris. "It brings to mind the chants at many of the protests of 'not one more.' Not one more name. We don't want any other students to come out with a traumatic experience that could have been avoided."

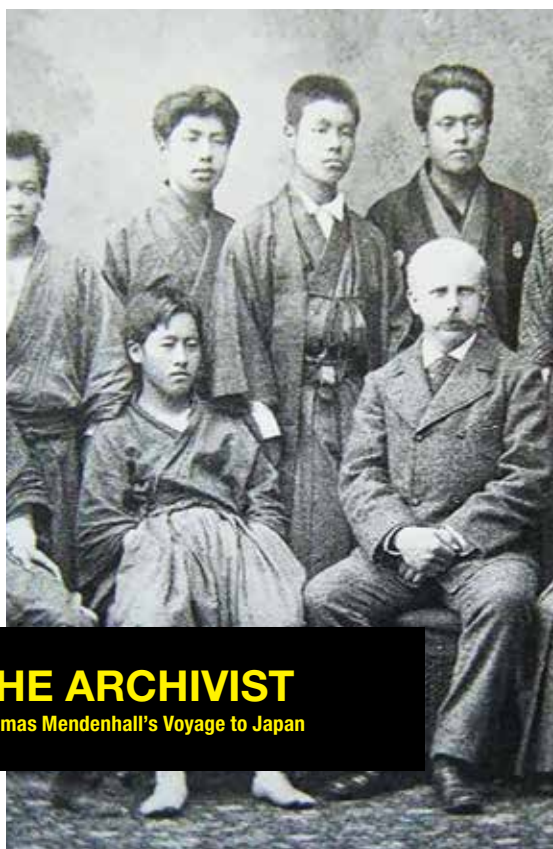
Booth says she became involved because she always knew there was room for improvement at the university. "WPI gave me so many opportunities. No other school really lets you study abroad in the same way, and I think that's one of the highlights that definitely helped me a lot as a person. But I know there are things that we can do better to make everyone stand up and say, 'You know what, this is a great place. I want to support WPI.'"

"I think one of my main goals is to see an increase in representation of people of color on the campus, just like WPI has increased the number of women on campus," says Thompson, who is set to get her MBA from Harvard Business School next year.

Of the ideas raised by the group of alumni, top were requests for concrete changes in the WPI curriculum, extracurricular activities, staff, and policies. In the group's letter to President Leshin, they wrote, "We are advocating for a radical transformation of our curriculum and policies. Combined, these efforts should help address and reduce interpersonal and institutional racism. Since cultures and policies that create racism can be learned, they can be unlearned."

As director of Diversity & Inclusive Excellence **Rame Hanna** explains, this type of action and commitment is needed for transformative change. "We need to work together to blend diversity, equity, and inclusion into the full fabric of the institution," they say. "This means everyone must play an active role in this effort. It starts with deep critical reflection and a commitment to building one's self-awareness and individual capacity."

—DOREEN MANNING



## THE ARCHIVIST

Thomas Mendenhall's Voyage to Japan

### In 1868 the last shogun of Japan stepped down, restoring the emperor's power over the island nation.

This event, known as the Meiji Restoration, sparked the rapid modernization of Japan. Foreigners were recruited from around the globe as government agents to assist with the transformation of society—among them was a brilliant scientist and educator from Ohio, Thomas Corwin Mendenhall (1841-1924).

Mendenhall was the first faculty member appointed at what is now The Ohio State University and was later awarded the school's first honorary PhD in 1878. That same year, he was recruited by the Japanese government, accepting a position at the newly founded Tokyo Imperial University. In his diaries held in the WPI Archives, Mendenhall described his experiences and observations—including a cholera epidemic in 1879 during U.S. President Ulysses S. Grant's state visit.

Upset over the cancellation of events and performances, Mendenhall wrote:

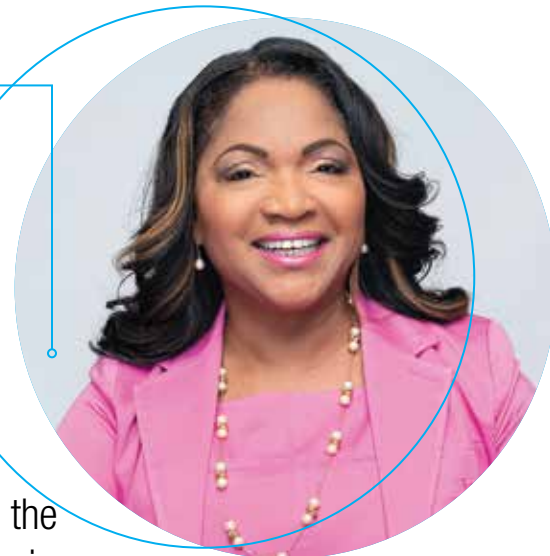
"... there was an epidemic of cholera in the country during the same summer; the government—well advised by competent sanitary authorities—was exceedingly strict in the enforcement of quarantine and sanitary regulations and in this way, doubtless, saved many thousands of lives."

Mendenhall returned to the United States in 1881 and continued to make several important contributions to science. In 1894 he was selected as the third president of WPI. During his seven years on campus, academics continued to expand and flourish in conjunction with the growth of the campus, including the construction of Stratton Hall and the Power Plant.

—Arthur Carlson, assistant director of Archives & Special Collections at the George C. Gordon Library

## STEM Advocate Joins Board

**Pamela McCauley**—world-renowned industrial engineer, entrepreneur, university leader, and STEM advocate—has joined the WPI Board of Trustees. The U.S. Fulbright Scholar is the Associate Dean for Academic Programs at North Carolina State University in Raleigh, where she also serves as a full professor in the Department of Textile and Apparel, Technology and Management. She is the author of *Winners Don't Quit: Today They Call Me Doctor*, focusing on the call for leadership, particularly among minorities and women, in STEM fields. McCauley is known for her significant work in human engineering, ergonomics, and biomechanics, particularly with research into the best personal protective equipment, or PPEs, for healthcare workers.



# OPEN-SOURCE DESIGNS SPEED CREATION OF LOW-COST VENTILATORS

A team of researchers created designs to turn inexpensive and readily available manual, hand-held, bag valve mask (BVM) resuscitators into automated ventilators to help fill the gap between the number of lifesaving ventilators available and the much larger number needed when COVID-19 peaked this past spring.

The WPI researchers made designs of multiple devices and their components publicly available so anyone with a 3D printer and a background in electronics and mechanical engineering could use them to produce ventilators for their local hospitals.

"I just wanted to do something to help," says **Gregory Fischer**, professor of robotics engineering and mechanical engineering, and director of PracticePoint, who spearheaded the idea. "A lot of people are trying to contribute, and this is an area where we can make an impact. We're taking things that are used every day in emergency medicine and finding a way to turn them into safe, reliable, and readily replicable ventilators that can save patients' lives. And we're sharing those designs with the world."

The team, who worked remotely to develop their designs, includes **Marko Popovic**, assistant research professor in physics and robotics engineering; **Cagdas Onal**, associate professor of mechanical engineering; **Dirk Albrecht**, associate professor of biomedical engineering; **Chris Nycz**, a research scientist working with WPI's PracticePoint; **Paulo Carvalho**, a robotics engineering doctoral candidate, and **Hamilton White**, a PhD student in biomedical engineering.

A commercial ventilator costs anywhere from \$25,000 to \$50,000. A complete ventilator converted from a manual resuscitator with the WPI designs is expected to cost less than \$500 and be made with readily available components.

"This is what we do at WPI," says Popovic. "Given the current situation with COVID-19, the need for oxygen concentrators and ventilators is growing exponentially. This is a very unusual situation for our healthcare system. We can help, so we're helping."



## Targeted drug shrinks breast cancer tumors in mice, without side effects

To fight cancer, it helps to go right to the source.

That's exactly what **Provost Wole Soboyejo** and a team of researchers are doing as they seek targeted drugs that aim to tackle hard-to-treat breast cancer cells.

The researchers reported in an article published by *Scientific Reports* that they had identified targeted drugs that reduced the size of "triple-negative" breast cancer tumors in mice, without toxic side effects.

The drugs used luteinizing hormone-releasing hormone, or LHRH, to deliver chemotherapeutic agents—the drug Paclitaxel and the natural substance prodigiosin—directly to breast cancer cells.

"When injected into the bloodstream, only a small fraction of traditional chemotherapeutic drugs reaches tumors," Soboyejo said. "It usually takes relatively high concentrations of conventional cancer drugs to have therapeutic effects on tumors. Hence, such concentrations are often toxic to other cells. In our case, the targeting drugs were more effective at shrinking and eliminating triple-negative breast tumors in mice."

WPI co-authors are **John Obayemi**, assistant research professor of mechanical engineering; **Ali Salifu**, assistant research professor of mechanical engineering; **Vanessa Uzonwanne**, doctoral student in materials science and engineering; and **Jean King**, dean of arts and sciences. Other co-authors are from the University of Massachusetts Medical School, Nnamdi Azikiwe University, and the African University of Science and Technology.

The key to targeted therapy is a cellular structure known as a receptor. Triple-negative breast cancer cells are harder to target because they lack receptors commonly over-expressed on other breast cancer cells for the growth factor HER2 and the hormones estrogen and progesterone.

About 10% to 17% of all breast cancers are triple-negative. Such tumors are more prevalent in younger women, African American women, and African women.

Inspired by a relative's battle with breast cancer, Soboyejo previously studied LHRH as a targeting mechanism to deliver magnetic imaging nanoparticles to breast tumors in mice. More recently, he began studying LHRH as a targeting mechanism for chemotherapeutic drugs. His work has been funded by WPI and the World Bank.

His team hopes to continue work on LHRH-targeted nanoparticles and therapeutic drugs and to identify other targeted drugs and nanoparticles for the detection and treatment of other tumors.

"The fact that we could target triple-negative breast cancer in mice models is important," Soboyejo says. "However, I think this method has major implications for targeted cancer treatment in general."

—LISA ECKELBECKER







# DIVERSITY

## Meet Rame Hanna, WPI's Inaugural Director of Diversity and Inclusive Excellence

### Tell us a bit about yourself.

My family emigrated to the States when I was six years old, seeking asylum during the Gulf War. Being the first in my family to go to college was especially challenging, not only as a first-generation Arab-American, but also being both gay and Muslim. My life has always been at the crossroads of intersecting identities.

The struggles of navigating the experiential realities of academics and social life on- and off-campus led me to pursue a BA in Law and Society and an MS in Student Affairs in Higher Education. Professionally, I have always worked in higher ed in spaces of diversity and social justice education.

### What do you do in your role?

As director of Diversity and Inclusive Excellence I am responsible for guiding and leading university-wide efforts to advance diversity, equity, and inclusion. This involves actualizing a strategic vision that embraces intersectional identities, promotes diverse critical knowledge, and centers the lived experiences of marginalized communities to ensure that all belong and can thrive. In

essence, I strive to champion organizational change and blend a culture of inclusion and belonging into the full fabric of WPI.

### What is your vision for Diversity, Equity, and Inclusion at WPI?

To create a community of inclusion and belonging, it is important that we design spaces for ongoing education around self-awareness, identity development, and cultural proficiency. In my time at WPI I hope to accomplish two goals: create a welcoming environment where anyone can come to WPI and feel that they truly belong, and promote cultural proficiency and critical consciousness in our community so that every facet of WPI can incorporate a framework of diversity in its work.

### How have the recent events in our nation affected your approach for the coming year?

I've always believed that it is not about resolving the challenge, but rather living amid the challenge. To create transformative change, we need to address systemic and structural oppression in all its forms. There is no quick fix solution. By center-

ing the voices of our communities most impacted, we can work as authentic partners to create transformative change toward sustainable inclusive excellence. Through universal design principles and a socially just approach to our work, we can transform our campus community and foster a culture where all can feel a greater sense of belonging and can thrive.

### Is there anything else you'd like to share with the WPI community?

I have often shared with colleagues and students that diversity is not a final state, but rather an ongoing process. It takes a village and requires that we work as a collective to elevate the voices of those who are marginalized and underrepresented. This includes leading with a social justice lens to better address the social determinants of inclusion and belonging.

By creating equitable policies and educational opportunities, we can transform social interaction to positively impact all areas of the WPI community. So many collaborations and partnerships to look forward to!

**THE JEW AS OTHER**

This poster represents my research on Jews in early modern English literature, especially Shakespeare's *The Merchant of Venice*. My book *Reading the Jewish Woman on the Elizabethan Stage* (Palgrave) is considered a major contribution to the study of gender and Judaism in English literature.



**CERAMIC APPLE**

This was given to me by my students the first time I taught in a literature course, as a college student working as a teaching assistant for the Johns Hopkins Center for Talented Youth summer program.

**SHAKESPEARE, NOT STIRRED**

These are the North American and UK editions of my book, *Shakespeare, Not Stirred: Cocktails for Your Everyday Dramas* (Penguin and Scribe publishers), which I co-authored. This project was all about my commitment to bringing Shakespeare out of the Ivory Tower, and offering up some humor as a vehicle to teach his work.

**CAT WEARING FOOTBALL HELMET**

This photo of my cat Robert (RIP) is the first thing you see when walking into my office. It's important for my students to know I have a sense of humor.

**AUDELS MARINE ENGINEERS HANDBOOK**

The Engineers Handbook belonged to my late father, who was an engineer. He loved that I work at WPI!



**FOLGER SHAKESPEARE**

This poster of Shakespeare with aviators and an unbuttoned shirt conveys a message that with regard to sexuality, gender, class, and race, Shakespeare is modern, provocative, and relevant.

# FACULTY

SNAPSHOT

## SHAKESPEARE TOYS

I keep these in my office for my four kids when they visit the campus.



## WOODEN SWORDS

I bring these to class for my students to use as props when they act out a scene. One's a dagger and the other a longsword. For example: Two student groups act out the first scene in *A Midsummer Night's Dream*, when Duke Theseus tells his prisoner/fiancée, the Amazon Queen Hippolyta: "I woo'd thee with my sword,/And won thy love, doing thee injuries;/But I will wed thee in another key,/With pomp, with triumph and with reveling." Each group picks a sword, and then decides how Theseus will use the prop in the scene. Then we discuss their different interpretations.

PHOTO TODD VERLANDER



Michelle Ephraim

ASSOCIATE PROFESSOR OF ENGLISH,  
DEPARTMENT OF HUMANITIES AND ARTS

# QUINT POINT

WPI was on **TOM ROCKWOOD'S '79 (ME)** radar from an early age. He attended football games with his father, Albert Rockwood '46, and his grandfather, Douglas Howes, taught electrical engineering here in the '60s. With his family's influence, and an inclination toward math and science, attending WPI felt like a natural path to take.

Now, after a 30-year career with Procter & Gamble, Rockwood is turning onto a new path—one that is similar yet wholly different in scope—as COO for The Aruna Project ([arunaproject.com](http://arunaproject.com)), a nonprofit helping sexually exploited women in India.

Its mission is to ensure lifelong freedom through sustainable employment for previously sexually enslaved women. Committed to providing quality products that are handmade in an environment marked by holistic care, there are currently 66 artisans in their production unit in Mumbai. Rockwood shares that they have impacted the lives of over 200 women and their extended families, providing an alternative income in a world where alternatives often do not exist.

With 12 brands of accessories such as backpacks, duffels, totes, and headbands, Rockwood says that each item is hand-crafted in freedom and named after one of the artisans who work with The Aruna Project. "We are now a half-million-dollar brand after a little over a year of direct marketing," he shares, "and our business has increased tenfold in just the few months since COVID-19 hit."

Rockwood oversees the development and ongoing management of all operations, including sourcing, manufacturing, fulfillment, shipping, and inventory management.

At The Aruna Project, he brings a vast wealth of knowledge from years of manufacturing third shifts, interfacing with virtually every segment of the grocery retailing industry, ownership of P&G's go-to-market logistics solutions, to product design and integration of new transportation management software. These have provided Rockwood a deep understanding of and appreciation for a very diverse set of players and business drivers—each of which is vital to the supply chain.

"I suspect I bring the most value in seeing how everything connects, which allows us to make better choices and minimize the number of rabbit trails we go down," he says.

"In virtually every business I've been a part of, we constantly seek to improve productivity and one of the chief outcomes is a reduction/reassignment of staff," he explains. "Aruna's business is upside down, in that we gauge our success on the number of women we free, employ, and empower."

In looking back at his time at WPI, Rockwood says there are four major takeaways that come to mind:

- **LEARNING AS A DISCOVERY PROCESS:** "WPI armed me with a bias toward purposeful learning, aimed at solving a problem. In the process, it has created a curiosity that has made me a lifelong learner."
- **PLAYING WELL WITH OTHERS:** "My experiences on project teams and in my fraternity taught me not just to value others, but to see others as vital to solving problems."
- **PERSUASIVELY SELLING IDEAS:** "WPI taught me to see how seemingly disconnected things actually impact each other. In business, this meant not only being an expert in my field, but knowing a lot about how other systems are impacted."
- **HUMILITY:** "Professor Hal Corey taught me a valuable lesson in my freshman Drawing class. We were to design a simple vise for a woodshop. My design was outstanding (in my mind), until he asked me how it could be manufactured. It couldn't ... in its current form. I learned about humility, but I also learned from the caring/non-judgmental manner in which the professor pointed out my error. That lesson remained with me as I worked with others throughout my career."

Rockwood admits that each day at The Aruna Project tests the fiber of his supply of connected knowledge, but he is often reminded that they are changing the trajectory of lives and families. "We hired our first artisan in January 2015 and we are grateful to say that over 90% of the women who started with Aruna have stayed with Aruna and are thriving."

—DOREEN MANNING



**ON THE WALLS OF THE ARUNA PROJECT HEADQUARTERS IN CINCINNATI ARE PHOTOS OF THE TEAM IN INDIA, INCLUDING THE 75 ARTISANS THEY SERVE, AS WELL AS INDIGENOUS INDIAN STAFF. "THOUGH WE ARE 8,000 MILES AWAY, THE PICTURES REMIND US EVERY DAY OF THE REASON WE EXIST," SAYS ROCKWOOD. "WE ARE BUT A SMALL INSTRUMENT HELPING EACH OF THESE WOMEN RE-DISCOVER AND LIVE OUT THEIR GOD-GIVEN WORTH AND PURPOSE."**



EDITOR DOREEN MANNING'S WORKSPACE TELLS A STORY SIMILAR TO THOSE OF BILLIONS OF STAY-AT-HOME WORKERS WORLDWIDE. GETTING COZY WITH A CUP OF TEA, A WPI JOURNAL, AND AN EVER-PRESENT MASK.





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FIND A DEGREE PROGRAM

MacBook Pro



Sunday, July 5, 2020 at 09:20:5

**Subject:** Returning to campus, academic calendar and more updates  
**Date:** Friday, June 12, 2020 at 3:38:41 PM Eastern Daylight Time  
**From:** WPI President Laurie Leshin  
**To:** Manning, Doreen

**Worcester Polytechnic Institute**

June 12, 2020  
 Dear WPI Colleagues,

This week I have had the privilege of engaging in four Town Hall sessions with members of the WPI community: returning students and parents, current faculty and staff, and WPI alumni. In total, we have gathered for the past two days! It's been energizing to hear your thoughts and ideas that are critical to the core of our mission and bring our community back to campus.

Our sessions were tailored slightly for each audience, and yesterday's session for faculty and staff was particularly impactful. Our nation is in a time of crisis, and the critical thinking and leadership skills of our community are more important than ever. We have more work to do, and it's a long-term problem. We are coming days and weeks of collaboration if we are to unpack and ultimately address the issues on our own campus, and I have heard all too real stories from students, alumni, faculty, and staff of how they are beginning to reopen, and so we are also continuing our work through the Crisis Response Team (CERT), to bring members of our community back to the work to become the community we all want to be.

SENSE OF PLACE







# SCIENCE, DATA, AND THE PANDEMIC

**MARNI HALL '97, AN AUTHORITY ON REAL-WORLD  
EVIDENCE, IS HELPING THE NATION—AND THE  
WORLD—RESPOND TO COVID-19**

BY MICHAEL DORSEY AND JOAN KILLOUGH-MILLER  
PHOTOGRAPHY BY JEFF MAURITZEN

FOR OVER HALF A CENTURY, THE RANDOMIZED CONTROLLED TRIAL HAS BEEN THE GOLD STANDARD OF BIOMEDICAL RESEARCH. COMPARING HOW A CAREFULLY SELECTED GROUP OF SUBJECTS RESPONDS TO A NEW DRUG OR THERAPY TO THE RESPONSE OF A COMPARABLE GROUP GIVEN A PLACEBO IS THE MOST RIGOROUS WAY TO FIND OUT IF AN INTERVENTION WORKS, AND IF IT IS SAFE.

But as valuable and essential as these trials are, particularly for the regulators who must decide whether to allow new interventions on the market, they have important limitations. “They take a long time and they are expensive,” says **MARNI HALL '97**, vice president of clinical evidence and head of U.S. regulatory science and strategy at IQVIA, which uses data, technology, and advanced analytics to help its clients advance medical research and healthcare. “And they don't tell you what happens in the real world when a drug is on the market, when it's used by patients who were excluded from trials due to other medical conditions or those who are taking other medications, or due to other criteria that make potential participants ineligible. The results are typically not generalizable to the public.”

Hall has spent a lot of time over the past two decades thinking about how to study the risks and benefits of medical products outside of traditional clinical trials, ways that better capture how people, broadly, actually respond to such products. She is part of a movement that advocates for employing a wider range of data in research and regulation, data that can help predict and track the performance of medications and other products in the real world, and even augment and accelerate traditional clinical trials.

The movement is focused on what is known as real-world data, which can come from a variety of sources, including electronic health records, insurance claims, product and disease registries, self-reports from patients, and even health-tracking apps on smartphones. Gathered with care and properly analyzed, real-world

data can yield real-world evidence, which can play a vital role in research and public health.

Real-world evidence, Hall says, could also create a bridge between clinical trials and clinical care (treatment by health care providers). Traditionally, data from a patient's involvement in a trial has been held apart from any other data about that patient. “But this means the process doesn't benefit from the context and insights that may be gleaned from a more holistic view of a person's health,” she says.

“These approaches help advance precision medicine: getting the right medicine, to the right people, at the right time,” she says, “The idea is that in our healthcare system, the current models don't always work, for a variety of reasons, and even when they do they are not efficient. We should be able to learn more, faster, and to have patients benefit from the process. We should also have the outcomes be those that are of interest to patients while also being more generalizable.”

The need for greater use of real-world data and real-world evidence has gained increasing support in recent years, including on Capitol Hill. The 21st Century Cures Act, signed into law in 2016, and the sixth reauthorization of the Prescription Drug User Fee Act, passed in 2017, both require the Food and Drug Administration (FDA) to develop frameworks for making greater use of real-world data and evidence in regulatory decision making.

And if the real-world data community needed a case study to demonstrate, unequivocally, the value of this new way of looking at medical research and regulation, the COVID-19 pandemic has



provided it. Hall, who sits on a national task force charged with developing infrastructures and methods for managing the pandemic and preparing for future disasters, says the global health emergency has shown that real-world data and evidence can help us understand a rapidly changing public health crisis and speed decisions about testing and treatments in ways that conventional research alone cannot.

### EXTRACTING MEANING

One of the principal challenges with using real-world data, Hall says, is that it can be messy and unreliable. There is also a pressing need to bring greater rigor to its collection. She spends a great deal of her time on efforts to establish standards for real-world data to assure that different data sources can be harmonized and made more interoperable.

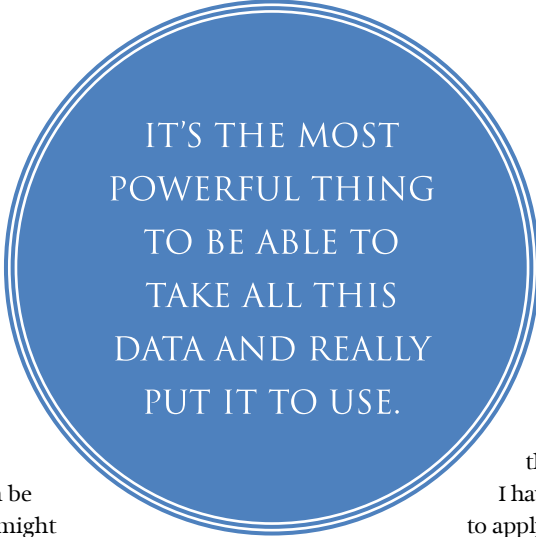
Electronic Health Records are a case in point. “Initially, electronic health records were electronic versions of filing cabinets,” Hall says. “They were not designed to contain relational data that could be easily linked, and the systems are highly customized. So the lack of interoperability provides an important challenge toward making this kind of real-world data a reality.

“In addition,” she notes, “there is a tension between the idea that we have this data and should be able to learn from it and data privacy concerns. But as the data quality improves and as better mechanisms for anonymizing integrated data are developed, use of these data will become more routine”

Hall first encountered the messiness of real-world data at the FDA, where she worked for more than seven years, first as senior program director and then as director of regulatory science in the Office of Surveillance and Epidemiology. At the FDA, she was responsible for the Adverse Event Reporting System, which collects reports from manufacturers, healthcare professionals, and patients themselves of adverse reactions to drugs—more than 15 million reports dating back to 1969, with nearly two million added each year.

“I spent a great deal of time when I was at the agency figuring out how to extract meaningful information from what is truly one of the messiest, most challenging data sets,” she says.

One of her challenges was finding innovative ways to separate signals from the noise—or put another way, to find the needles in this massive haystack. The adverse reporting system contains a combination of structured data where users choose from a limited number of options (for example, by using pull-down menus) and unstructured data (for example, a text box in which one writes a narrative describing the adverse event). Missing information, inconsistent terminology, and even bad grammar make the unstructured data almost impossible to comb through with a computer.



IT'S THE MOST  
POWERFUL THING  
TO BE ABLE TO  
TAKE ALL THIS  
DATA AND REALLY  
PUT IT TO USE.

Starting in 2015, Hall began sponsoring undergraduate MQPs (a disciplinary project all undergraduates must complete) and master's and PhD research projects at WPI that have applied machine learning and other advanced data science tools to make sense of the written responses. The projects, co-advised by Elke Rundensteiner, professor of computer science and founding director of WPI's Data Science Program, seek to turn those responses into searchable data that can be mined for dangerous drug interactions that might previously have been hidden.

Working with the adverse event system, Hall says, made clear not just the challenges of working with untidy data, but the importance of building data sets the right way from the start. "That work prepared me well to think about what sort of innovations you need to either create a data source, if you don't have one, or to figure out how to use the data that you have.

"And that includes having data standards, reporting requirements, and methods and tools to deal with data as it is. That may sound boring, but it's the most powerful thing to be able to take all this data that's being generated and really put it to use."

### AT THE INTERSECTION

While much of Hall's work revolves around data, she is not a data scientist by training. At WPI, she completed two majors, one in chemistry and one in science, technology, and policy studies. She went on to earn a master's in public health from Columbia University's Mailman School of Public Health as well as a master of science in biochemistry and a PhD in toxicology from Columbia's Graduate School of Arts and Sciences, where she has taught for several years. "I'm a bench scientist and an epidemiologist." She says. "I don't mess around with data. My interest is in *what can be done* with data."

Her career has taken her from Pfizer, where she was program director in the Public Health Group of External Medical Affairs, to the FDA, and then to PatientsLikeMe, where, as senior vice president of research and development, informatics, and policy, she helped shape an agenda for the use of patient-generated health data in clinical and regulatory decision making. She joined IQVIA in 2018 as vice president of clinical evidence in the Center for Advanced Evidence Generation. In February 2020, just after the first cases of COVID-19 emerged in the United States, she launched a regulatory

strategy team to focus on the science involved in using new data, methods, and tools where there is little or no regulatory precedent.

"The work I am doing today with COVID-19 came from my WPI training," she says. "WPI prepares you to work in multidisciplinary teams to define and solve complicated problems, to address things that don't go the way you expect them to, and to figure out how to contribute.

I have a lot of technical expertise, but my ability to apply that to a multidisciplinary problem—a problem that isn't just science, but also data and policies—and to deal with the uncertainties involved, those are things the Plan prepared me well for," she says, referring to WPI's project-based approach to education.

A member of the WPI Board of Trustees since 2016, Hall has also served on the university's Life Sciences Advisory Board and WIN (Women's Impact Network). She met her husband, [EDWARD HALLISSEY '98](#), in a thermodynamics class at WPI; both went on to work at the FDA.

Another asset she gained at WPI, particularly through her double major, is her ability to navigate problems that sit squarely at the intersection of science and policy. "Most scientific problems today don't live in a pure discipline," she says. "And often, the place where multiple things intersect is where you can have the most impact. That's not something everyone can manage, but it's exactly what WPI trains you to do."

### AN EVOLVING CRISIS

The COVID-19 pandemic is the epitome of a multidimensional, multidisciplinary problem, one that sits at the intersection of science, technology, public health, policy, politics, and at least a half dozen other disparate disciplines. It has led Hall to draw on every bit of expertise she has gained in her distinguished career. Arriving home from an international trip in January, she was quickly caught up in a swirl of activity as IQVIA and her professional colleagues tried to keep up with a rapidly evolving and escalating public health crisis.

Early on, Hall joined several internal working groups. Some worked to establish COVID-19 health data codes, so scientists could accurately measure who had the disease, as well as track patient symptoms and outcomes. This made it possible to look back at data from the first quarter of 2020 to identify patients who did not receive a COVID-19 diagnosis, even though they might have been infected by

the virus. This work informed predictive models that are able to anticipate infection rates and supply chain needs.

Other working groups focused on clinical trials that clients were preparing to run or already had started. With hospitals overrun by COVID patients, doctor visits shifting to telemedicine, and research labs shuttered, the pandemic put many trials, including those for new cancer treatments, in jeopardy. “At first, there was a very quick assessment of how clinical trials were being affected and possible mitigation strategies.”

Those strategies included turning to real-world data to keep trials going. “One of the ways that’s applicable is to say, if there is a trial that has been disrupted, maybe you can use real-world data to supplement the evidence you were going to generate through clinical trials,” Hall says. “You can design a way to collect it, whether it is self-reported patient data, data from their electronic health records, or data from mobile devices. All of those things are actually happening right now in response to COVID-19.”

Learning from those activities is one of the goals of two sessions Hall will chair this year at the annual Real-World Evidence Conference sponsored by DIA, a global organization that focuses on issues at the intersection of science, health care, and regulation. She has been on the planning committee for the conference for several years. The two sessions will focus on the impact of real-world evidence on health care and research during the pandemic. Hall also regularly gives webinars to her clients, which include pharmaceutical and biotech companies, regulators, and the FDA, on real-world evidence and COVID-19.

As the winter waned and the pandemic took hold, Hall found herself confronted with a constantly shifting set of issues as a member of the national Pandemic Response Emergency Preparedness Taskforce (PREPT), a public-private partnership composed of regulators and professionals from industry and academia. The group’s charge includes scaling up COVID-19 testing to address the needs of vulnerable populations and evaluating the impact of the virus on health care delivery and patient outcomes. One of the early challenges the task force took on was the supply chain.

“In some ways,” she says, “that is a data science problem—just figuring out where things are. At first it was personal protective equipment and ventilators, then we turned to reagents for tests, and then the pipette tips to deliver the reagents. The standard protocol for one test requires 19 pipette tips. One indication of how fast-moving this crisis has been is that the things that consumed us a few months ago are totally different than the things that consume us today.

“We’re learning so much, and so fast, on the fly. We’re collaborating in ways that we never have before. And we’re already doing



“WE’RE LEARNING SO MUCH, AND SO FAST, ON THE FLY. WE’RE COLLABORATING IN WAYS THAT WE NEVER HAVE BEFORE.”

things to assess how many of these different approaches can be used in non-COVID scenarios.”

The acceleration of learning made possible by the sharing of new approaches to using real-world data is one outcome of the COVID crisis that Hall says she hopes to see continue beyond the crisis. Another is the collaboration of multiple stakeholders and multiple interests toward reaching a common public health goal.

“There is so much that is tragic about COVID-19,” she says, “and this crisis has taken people away from other important activities, but it is also hopeful, in a way. It may prove to be a force function or an accelerant to advancing precision medicine and the use of real-world evidence, and it may teach us how to collaborate in new and different ways that will ultimately improve public health. To me, that is encouraging.” [J]





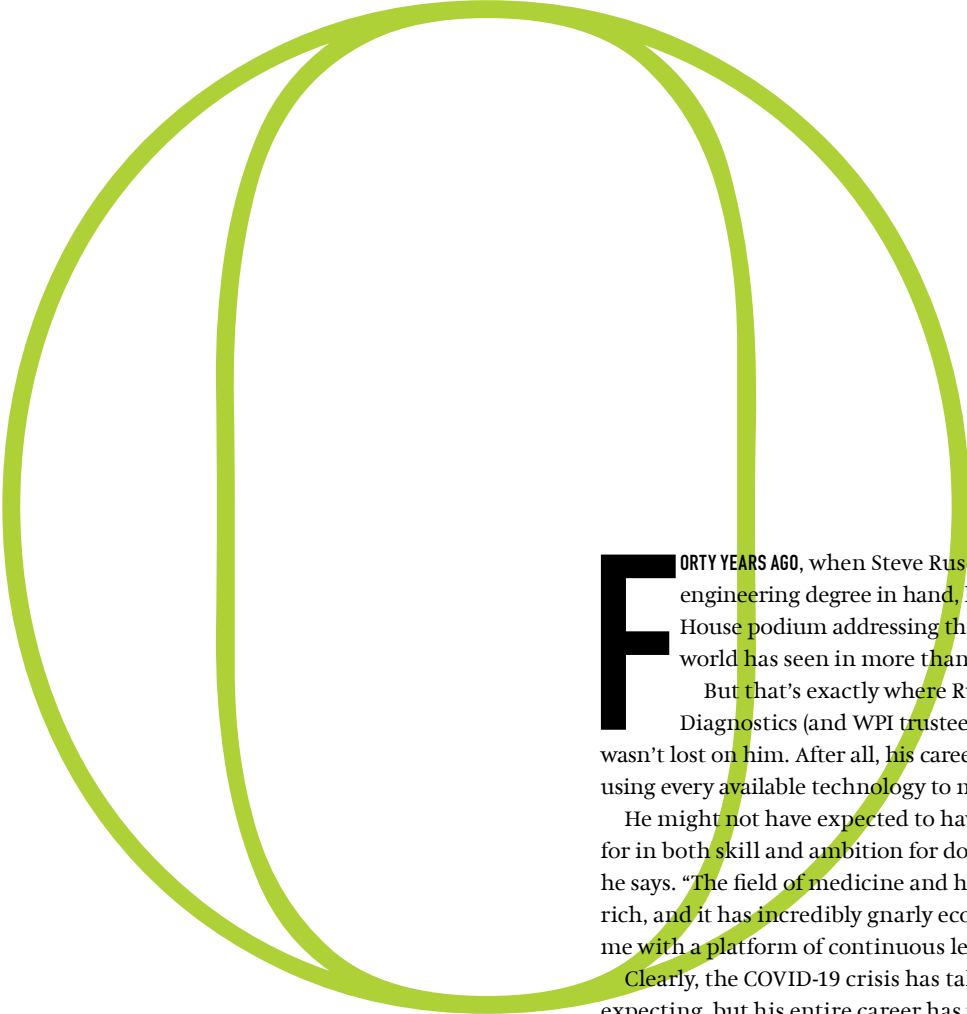
# Stephen Rusckowski '79

LEADS QUEST DIAGNOSTICS  
THROUGH THE COVID-19 PANDEMIC

By Julia Quinn-Szcesuil  
Photography Matt Furman







**F**ORTY YEARS AGO, when Steve Rusckowski had his freshly awarded mechanical engineering degree in hand, he never envisioned himself standing at a White House podium addressing the nation about testing for the worst pandemic the world has seen in more than a century.

But that's exactly where Rusckowski, chairman, CEO, and president of Quest Diagnostics (and WPI trustee), found himself in mid-March. The significance wasn't lost on him. After all, his career is driven by the very topic he was discussing—using every available technology to make human life better.

He might not have expected to have a career in healthcare, but it is one he is suited for in both skill and ambition for doing good. “It’s the best thing that ever happened,” he says. “The field of medicine and healthcare is incredibly complex and technology rich, and it has incredibly gnarly economic and business considerations. It’s provided me with a platform of continuous learning.”

Clearly, the COVID-19 crisis has taken Rusckowski’s role in a direction he wasn’t expecting, but his entire career has prepared him for the challenge. His passion for healthcare and his conviction in Quest’s role in diagnoses and the resulting healthcare decisions, propels every decision he makes. Each step he took along the way to Quest’s top spot offered an astute ability to weigh business decisions and technological advances with the needs of people who use Quest’s products to make some of life’s most significant health choices.

Since the White House tapped him for his knowledge, life has run at warp speed, he says. Within days of an initial phone call from Vice President Mike Pence, Rusckowski sat with members of the White House Coronavirus Task Force (including White House Coronavirus Response Coordinator Debbie Birx and director of the National Institute of Allergy and Infectious Diseases Anthony Fauci) to discuss how to tackle this problem and how to work together to ramp up desperately needed coronavirus testing for the American public.

“It’s been a wild ride,” he says of his time since that early March phone call. The pandemic, however, has highlighted exactly what Rusckowski has championed all along—the importance of low-cost, high-accuracy diagnostic tests.

"It goes back to that simple notion that diagnostic tests are a very small fraction of cost," he says, "but are such an important part of healthcare." He frequently discusses how the low-cost value of testing (approximately two or three percent of healthcare costs) has an impact that informs about 70 percent of patients' next decisions about their healthcare. For some, it's as simple as taking an antibiotic to clear up an infection. For others, test results could chart cancer treatments. And in the case of COVID-19, the results of that diagnostic test set in motion a domino effect on personal health choices and then ripples into individual lifestyle and potential community spread of anyone with whom that person has been in contact.

The humble diagnostic test has shown its superpowers. Rusckowski isn't surprised.

#### ROUTINE TESTING TO GLOBAL REPERCUSSIONS

Even for a professional immersed in healthcare choices and how they shape the lives of people, Rusckowski never imagined that testing and the diagnostics industry would be propelled to front page news and an oft-discussed topic for people who never gave it a thought before COVID-19. While Quest's COVID-19 test is getting the most attention right now, its products range from routine bloodwork to cancer markers to genetic tests.

Quest first started testing for COVID-19 on March 9 and within three months, Rusckowski reports, it was running more than 750,000 tests a week. In Massachusetts, where the coronavirus hit hard early on, Quest formed a fast partnership with the state to increase testing at the company's Marlborough facility, where capacity skyrocketed to thousands of tests from Massachusetts patients daily.

#### LIFELONG LEARNING AS A HABIT

A commitment to lifelong learning keeps Rusckowski always thinking ahead, imagining healthcare options of the future. But his ability to be agile and to think critically is what has helped him move so quickly and surefooted on this COVID-19 part of his career. A lot of that, he says, was mastered at WPI.

"I am perpetually learning," he confesses. The university's approach to problem-solving offered him a conceptual framework of how to tackle problems. "It brought home how you are going to approach things that are not black and white. You had to deal with

**"I am perpetually learning. . .**

**It brought home how you are going to approach things that are not black and white. You had to deal with ambiguity, and the problem solving at WPI created a great framework for doing that."**

ambiguity, and the problem solving at WPI created a great framework for doing that."

Rusckowski grew up in Torrington, Connecticut, a leading location of manufacturing bearings, and its industrial environment left a big impression on him. The thriving Torrington Company occupied a large space in the town's daily life—he says mechanical engineering seemed a logical course of study to pursue.

He applied to several schools, but WPI rose to the top of the list for a couple of reasons. "Engineering was the path I thought would work for me," he says. "And WPI had a good reputation in my town." While his sister was a scientist, his older brother was an engineer, and his cousin a WPI grad. With a generous financial aid package, and his parents' encouragement of higher ed, WPI was his decision in the end.

"Clearly going to college and getting a degree was an ambition they had for us and we had for ourselves," Rusckowski says. When he arrived on campus, he saw there were lots of students in the same position. "I had a very humble background," he says. "Getting into upper social mobility was what going to college was about. I found a student body that was a lot like me."

The newly introduced WPI Plan helped him thrive. "It gave you the freedom to study what you wanted to do," he says, "but you had to apply yourself. You had guidance to get there, and now you needed to apply yourself and get skills. You had to learn the subject matter to be a functioning engineer."

Even Rusckowski, who champions tenacity and hard work, says the process was hardly like a lightbulb going on. "I remember Professor Zwiep, head of the Mechanical Engineering Department, saying the school was preparing us for lifelong learning," he says.

"I was an 18-year-old kid and was wondering what he was talking about. It didn't become clear to me until I got out. There was always the tension to take the easier path. You know, for an 18-, 19-, or 20-year-old, not all of us wanted to work very hard, including me. But that was part of the learning process and a helpful part of those four years was to figure out, in a clear and definitive way, what you needed to do to become a professional engineer."

The experiences of taking control of his path crystallized with his independent study in physics, a progressive approach at the time. It gave Rusckowski a foundation for a career and a motivation to take the hard classes and to push himself. “Doing that really taught you to learn and gave you the discipline for doing that,” he says. “When I took physics, I understood how algebra, trigonometry, and calculus were applied, and it became useful. I struggled with the theoretical and had an easier time with the practical. Bringing it to real life was helpful to me.”

#### BALANCING ACADEMICS AND SOCIAL LIFE

Life at WPI was rigorous, but it was also a lot of fun. “I quickly developed friendships that extend to this day,” says Rusckowski. He joined a fraternity for a while but, he says, “it didn’t stick.” Instead, he became friends with people across all the fraternities. He was a familiar and friendly face behind the bar or as doorman at the Goat’s Head Pub when it was tucked into the basement of Sanford Riley Hall. He developed friendships through his mechanical engineering major, and became close to the late Bill “Tuna” Trask, whose decades-long leadership of career services guided students to their next steps and whose lasting friendships left an even more indelible mark.

“I had a pretty broad group of friends over those years,” he says with obvious fondness. “I had a great experience and learned a lot about life.” To this day, about a dozen of those same friends stay connected and still get together about once a year. In fact, when Rusckowski received that call from the White House in March, he initially thought it was one of his WPI buddies pulling a prank on him. “That wouldn’t have been unusual,” he says with a laugh.

#### MOVING FROM DRAFTING BOARD TO CORNER OFFICE

Rusckowski’s rise through the ranks started with summertime work at the drafting boards of engineering-manufacturing companies. While he was able to apply his skills, those summer jobs also opened his eyes to something else that interested him much more—management. Seeing all the work that went on in corner offices intrigued him and motivated him. “I wanted a job where I could run things,” he says. “I was interested in the role of business and management.”

Procter & Gamble hired him after graduation and put him in charge of managing a team of tradespeople who were twice his age. “It was a pretty maturing experience,” he says, and it helped shape his next steps. He knew that the management path was his calling and with



that came a whole new set of skills he needed, so he went on to earn an MBA from the MIT Sloan School of Management.

“My career ended up in healthcare and medicine, but I never thought 40 years ago that would be the case,” he says. “I’d like to be able to tell you I had a desire to save the world, but when I came out of business school, I wanted to work with a company that was high tech. Hewlett-Packard was progressive for the time and had a medical division in Massachusetts. I joined the company and wanted to stay in Massachusetts.”

That was in 1984, and Rusckowski has been in medical tech and the healthcare field ever since. He eventually moved through roles at HP, becoming the SVP and GM of the Healthcare Systems Group in 1999. The instrumentation businesses of HP then spun off to create Agilent Technologies in 2000, where he continued until he led the management team to sell the healthcare business to Philips in 2001. There he had a number of roles until he became CEO of Philips Healthcare in 2005. He left in 2012 to become CEO and President of Quest Diagnostics; he was elected chairman in 2016.

#### CIRCLING BACK TO WPI

Rusckowski says the process of the work he did at WPI resonates today—and it’s probably stronger than ever before. “You were doing work with other team members so you felt there was more of a team-oriented approach with your classes rather than competitive,” he says. “It was a feeling of ‘We’re all in this together.’”

In the midst of a global pandemic, the “in this together” theme is pivotal for Rusckowski. “I knew nothing about medicine, healthcare technology, or diagnoses in 1984,” he says, “and I have done nothing but learn since then. I was able to apply what I wanted to do: be in business, and do good in the world. Eventually, this has become more than a life occupation—it has become a life vocation.” [1]



**Y**

**ATAO LIU '08 (PHD)  
SUPPORTING THE  
GLOBAL FRONT LINES**

By Allison Racicot  
Illustration ElvisDead



It's difficult to describe 2020. We've tried—with words like "unprecedented," "trying," and "extraordinary" topping thesaurus search sites since March—but one of the most effective (and scariest) ways to do so is by the simple fact that, as of this writing, everything we're trying to find the words for is still ongoing.

**T**he majority of the year has taken place six feet apart as the world's top experts continue to grapple with COVID-19, the respiratory virus responsible for hundreds of thousands of deaths around the world while continuing to run rampant with no cure in sight. It's an unnerving time, one where we don't know what things will look like tomorrow, let alone three months from now.

With so many unknowns still in play, one thing's sure—we've got to keep going, something **Yatao Liu '08** and his teams at Envista Holdings Corporation understand all too well.

"They've been working overtime," he says. "We all have. Every night I get on my computer and remind them to stop working, to take days off and rest. That's how motivated they are. They know what's at stake."

Liu is Vice President and General Manager, Infection Prevention Business Unit, at Envista, a medical supply company that recently separated as an independent entity from science and technology conglomerate Danaher Corporation. Envista houses a handful of other companies—one is Metrex, which focuses on infection prevention and control in healthcare environments. Its mission is simple: creating a world without preventable infectious diseases, especially healthcare-associated infections—a huge ask even in the best of times. But it's up to the challenge, and has been since well before day one.

"When China first started reporting cases [of COVID-19], we thought this could be something big," Liu says. Envista treated it as such, working quickly to figure out how it could help. And help it did: its products (everything from intermediate- and high-level disinfectants and hand hygiene to protective barriers, eye shields, and other forms of personal protective equipment) were centralized to ship to Wuhan to aid frontline healthcare workers in the fight against the pandemic. It began to closely monitor the virus's spread, and soon sent products and support to South Korea, Italy, and dozens of other countries in need of assistance. To date, Envista has supported more than 80 countries, including the United States, with its products.

With these efforts and more, its research and development group has shown to continuously have its finger on the pulse of a rapidly evolving global situation in more ways than one—something that's not only impressive, but necessary as days and months continue to go by without a vaccine.

"This is where time is testing us," Liu says, "but we're doing the right thing, and I'm proud of us."

## 26 EDITS LATER

Liu's education and experience—publishing dozens of papers on infectious diseases that have been cited hundreds of times, his expertise being featured on major news networks—makes him perfectly suited to his current position, but this wasn't always the endgame he had in mind when he began his studies.

Originally from Huainan City, Liu had studied chemical engineering at East China University of Science and Technology, earning bachelor's and master's degrees. That course changed in 2003 when his uncle was hospitalized for what should have been a routine surgical procedure—but he contracted a healthcare-associated infection and succumbed to it.

"He spent most of his life living with us," Liu says of the man he grew up with. "His death led me to pivot and change my focus."

That desire to change course is what led Liu to WPI and, in particular, to dean of graduate studies Terri Camesano, a chemical engineering professor who, coincidentally was working on infection prevention research that interested Liu. That fact is what ultimately led to his attending WPI for his PhD, choosing Camesano as his advisor, and making a lifelong friend and mentor in the process.

Liu spent five years in Worcester [his favorite place to hang out in the city? "The lab," he says, without hesitation] working with Camesano and his fellow PhD candidates, lab mates, and collaborators on extensive infection prevention and bacterial adhesion research. His breakdown is simple: "The first step of a microbial infection is adhesion. If you can stop this—prevent the pathogen from latching onto something—then the infection can't occur."

After earning his master of public health in epidemiology from Harvard and serving as a postdoctoral research associate at NYU's Polytechnic School of Engineering, he eventually worked his way up through Danaher to his current position.

"He has so many qualities that make him exactly the right person to work on COVID-19 response and prevention," says Comesano, citing not only Liu's technical expertise, but his concern for and desire to help others. "He gained valuable experience and held increasing leadership roles in industry, so now he also understands how to get the solutions into the hands of people who need them. He's truly an example of WPI's 'theory and practice,' and has taken that with him in the years since he graduated."

"I try to carry the legacy of what I learned from WPI and Professor Comesano and use it to amplify positive work for society," he says. He also has something tangible to remind him of the effect Comesano had on him: their first scholarly article.

"I think she edited the first draft 26 times," he says. "It would have been easier for her to take the data and write it herself, but she didn't. She asked me to write it, revise it, and track all the changes. I listened, I learned, I sent her a second version. And she did it again. I still have that first version, 26 edits later."

"Not only did I earn a PhD, but I got a lifelong lesson on how to be a meaningful, true, useful leader in society. That I learned from working with Professor Comesano."

### **"IT'S COMPLICATED, BUT IT'S OUR JOB"**

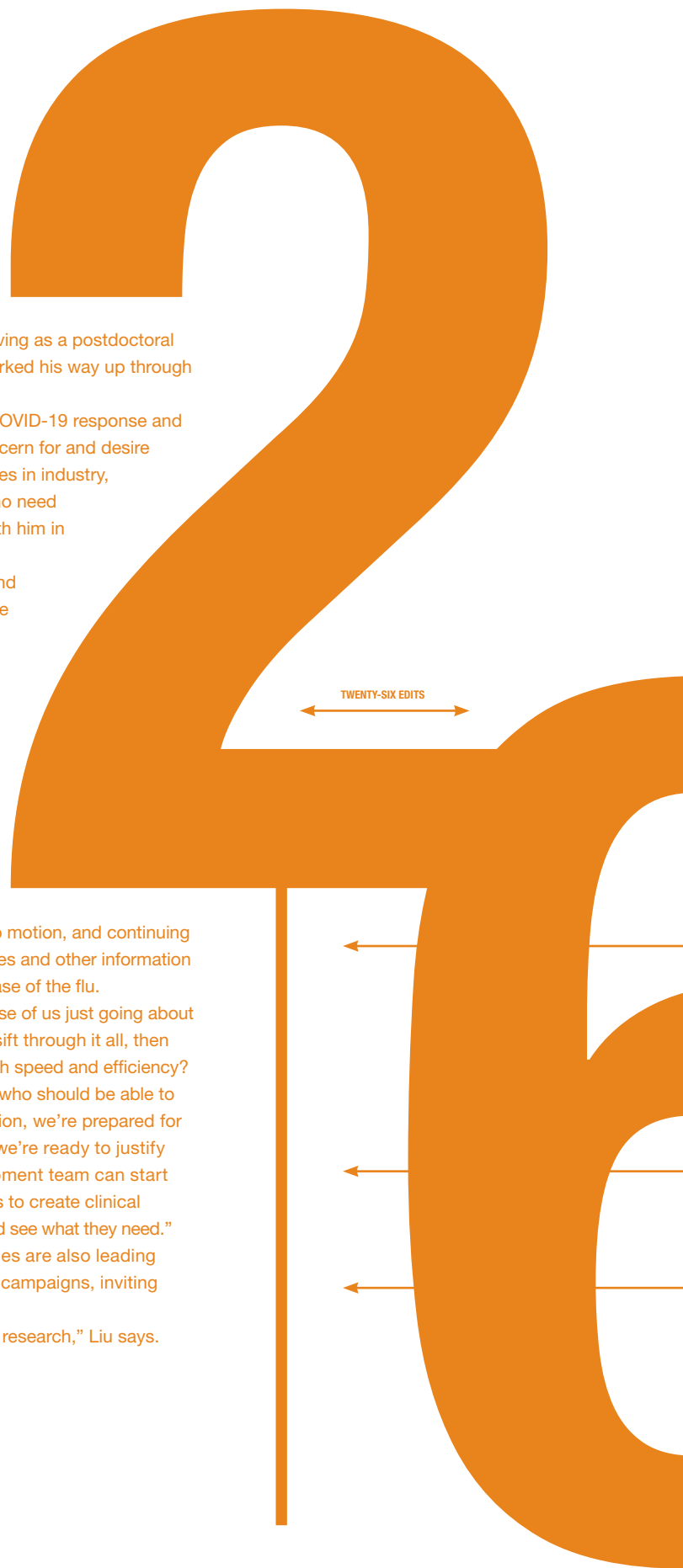
Time is of the essence, and Liu's teams wasted none of it in setting their plans into motion, and continuing to research and share their expertise—often providing updated preventive measures and other information weeks ahead of other outlets, including the fact that COVID-19 is not just a bad case of the flu.

The sheer amount of information surrounding COVID-19 is overwhelming to those of us just going about our daily lives—which begs the question: How did such an expansive company sift through it all, then proceed to create an impact that not only spanned continents, but did so with such speed and efficiency?

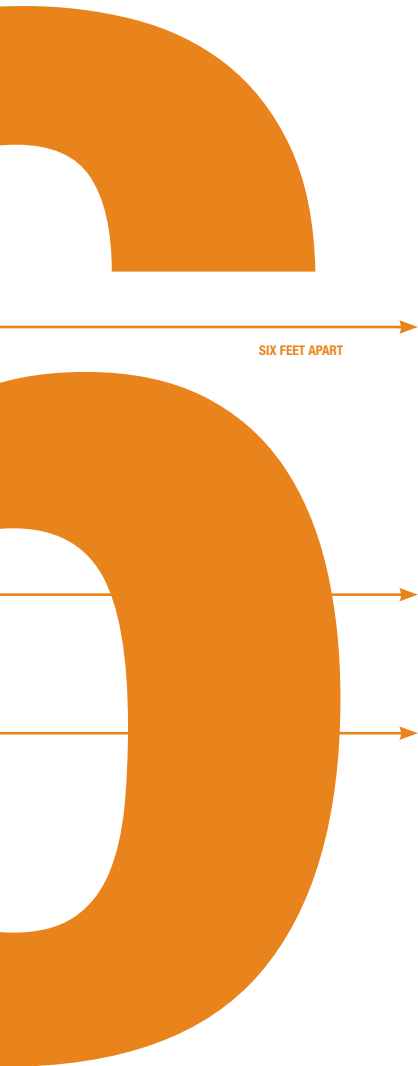
"It's complicated, but it's our job," Liu says. "Having to say, 'I know I'm the one who should be able to help you, but I can't right now,' is the last thing we want. We've built the foundation, we're prepared for tough situations all the time, so once a challenge like this one actually arrives, we're ready to justify resource allocation and ramp up production. It's why our research and development team can start testing on commercial efficacy, why the marketing team can work with educators to create clinical studies, why our sales and distribution teams can reach out to regions hardest hit and see what they need."

In addition to their work distributing PPE, Envista and its respective companies are also leading community initiatives and educational series through webinars and social media campaigns, inviting experts to speak on COVID-19 fundamentals and prevention.

"We're going to continue to invest and focus on the education piece as well as research," Liu says. "We need to help our communities through this."







*"Not only did I earn a PhD, but I got a lifelong lesson on how to be a meaningful, true, useful leader in society. That I learned from working with Professor Camesano."*

#### **THE RIGHT THING FOR THE RIGHT REASONS**

As for Liu and his teams, their work continues against a backdrop of a global work in progress, identifying and addressing unmet needs by creating what Liu refers to as “meaningful innovations.” While experts are working on a cure for COVID-19, Liu says it’s important to remember that infectious diseases as a whole won’t be going away anytime soon, which is why they need to continue being prepared for what’s to come.

That notion is what’s driving the research and development team’s latest project, something Liu refers to as a next-generation disinfectant with an optimization of short contact time (the amount of time a surface should be wet with cleaner for it to be effective against viruses) broad spectrum (bactericidal, virucidal, and fungicidal) efficacy, and good material compatibility. The goal is for the disinfectant to be effective against a broad spectrum of pathogens while still being safe for humans and the environment. Packaging is also a factor, with a focus on creating a container with the least amount of waste as possible.

They’re not just continuing their work, but looking for people whose passions align with theirs—because to Liu, it’s important to not only do the right thing, but to do it for the right reasons.

“The younger generation isn’t incentivized by fancy titles or fancy offices,” he says, adding that he strives to treat his direct reports exactly how he was treated by Camesano—with respect, understanding, and listening. “What they’re really looking for is how they can make an impact in society. We question how we can provide a platform for them to do so. We really work for the next generation.”

It can be tough to get Liu to talk about himself and only himself; he often goes back to discussing his team and their collective talents, something that, in a way, says more about him than what could be described in a simple paragraph. He’s proud... of their work, of their passions, of their successes.

“We’re proof,” says Liu, “that if we’re unified and can work together, we can create lots of synergies, all leading up to something big, something meaningful.” [4]

# DID YOU KNOW THAT IN 2019, GIFTS TO THE WPI FUND UNDER \$500 TOTALLED \$621,585?

## *The WPI Fund...*

*helps boost a financial aid package to allow a first-year student to come to WPI*

*provides stability for a student life organization to support a student's success*

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See how WPI students put theory into practice through projects.

# PROJECTS

## THE BIG IDEA:

Scientists utilize Functional Near-Infrared Spectroscopy (fNIRS) to discover how much of the brain is activated during certain tasks. For this Provost's MQP Award-winning project, fNIRS data was studied to detect issues such as broken sensors or head motion, which must be factored into research conclusions. Algorithms were developed that can accurately predict motion artifacts (head movement) in fNIRS brain signals; and a software platform was created for users to easily apply these algorithms to their own data.

## PARTICIPANTS:

Petra Kumi

## ADVISORS

Rodica Neamtu, Computer Science

Erin Solovey, Computer Science

Suzanne Weekes, Mathematical Sciences

## HOW IT WORKS:

- A set of labeled anomalies was created to determine the accuracy of methods
- A measure of accuracy was determined
- A previously published anomaly detection method was investigated
- Three new anomaly detectors were created
- Algorithms were gathered into a toolkit for researchers

## WHAT'S NEXT:

To make these methods available to others, a digital anomaly detection platform was created where users can begin anomaly detection jobs, view jobs previously submitted, and visually analyze them.

## BONUS: VIRTUAL SHOWCASE

Petra Kumi '20 and Ally Salvino '22 worked with associate dean Suzanne Weekes and the Office of Undergraduate Research to create the Virtual Undergraduate Research Showcase D2020. Since COVID-19 shut down the physical campus in the spring, preventing sharing ideas in person, undergraduates from virtually all majors submitted slide and video presentations of their MQPs and other research to this site.

Visit <http://virtualresearchshowcase.wpi.edu> to witness *Lehr und Kunst* (Theory and Practice) unfold before you.



# Plan A

According to **James (Jim) Hoey '84 CE**, it's a given in his family that civil engineering is the career of choice, and that and that WPI is the only logical path. With two years left before retirement as a Massachusetts Department of Transportation assistant construction engineer for district two, Jim recalls how his father, **Frank Hoey Jr. '49 CE**, discouraged him from applying to other schools.

"He said if I didn't get accepted at WPI, I might as well just go get a job and not waste my time and his money attending another institution. In the Hoey family, attending WPI for civil engineering was always Plan A."

With older brother **Mark '76 CE** and younger brother **Fran '89 CE** to follow, the WPI tradition easily shifted gears into the second generation. But it wasn't always easy for Fran III, senior vice president at Tighe & Bond. He admits that he, like most undergrads, found it challenging to seek a balance between a social life and a heavy course load in a competitive environment during his first two years – never mind the reputation of his own family to uphold.

"During my junior and senior years, I was able to focus a bit more and was recognized with the Carl F. Meyer Award for my efforts," he says.

Two of Fran's three children are also following in the WPI tradition – **Connor '18 CE** works with Stantec on heavy infrastructure design/construction projects, and the youngest, **Lindsay '24**, is entering her freshman year.

When asked for highlights from his time at WPI, Connor replied enthusiastically that there were too many to count – but his IQP in Melbourne, Australia, was definitely a high point. "My dad came to visit at the end of my term, and I got to share my home for the past three months with him and show off everything I had done on my

IQP," he says. Other highlights include seeing his family in the stands at Homecoming football games, earning the Provost's MQP Award, and spending time as a member of Sigma Phi Epsilon fraternity.

As the first female Hoey to attend WPI, Lindsay's decision wasn't automatic. "Originally, I had only applied to WPI because my family had urged me to," she admits. More than aware of her family's fondness for the school, her uncertainty was around attending a school so focused on STEM. "However, the more I thought about it, the more I realized that this is the stuff I like. I have always enjoyed my science classes and I took all the math classes I could. When I thought about what I wanted to do, what I liked, and where I pictured myself, WPI just made sense."

The Hoey WPI Legacy goes beyond immediate family, as Fran Jr.'s grandson **Sean '05 CE, '06 MS CE**, met his wife, **Elizabeth '05 CE, '06 MS CE**, at WPI, and **Mathew Brook '03 ME** married granddaughter Amber Hoey. Fran Jr.'s grandson **Christopher Keenan '96 CE** also carried on the tradition, bringing the WPI Hoey heritage to 10 alumni in all.

But beyond the family lineage, Jim says he'd recommend WPI to anyone, for its reputation goes beyond the family table. Last year, while attending a seminar in Boston with a fellow employee in his twenties, the co-worker asked where Jim attended college.

"When I told him WPI, he said, 'that explains a lot.' I asked him what he meant by that, and his response was 'everyone I've met that attended WPI tends to be a notch above.'"

The Hoeyes are a living testament – 10 times over – that sometimes no Plan B can get you a notch above.

—DOREEN MANNING



# Supporting the next generation and beyond

From the time she was a child growing up in northern Minnesota, **Bettina Tuttle Potter '78 CE** has been an independent thinker who eagerly follows her interests wherever they may take her. She studied in Belgium as a high school foreign exchange student, attended a pre-collegiate engineering program in North Dakota, and in 1973 traveled with her younger sister to Worcester to check out this great polytechnic school she'd heard about from her high school guidance counselor.

Less than 24 hours into that visit, she knew it was the place for her. She turned down a track-and-field scholarship at another school to major in chemical engineering at WPI. If not for financial aid, Potter says she wouldn't have been free to choose where she went to college.

That's one reason she feels strongly about removing barriers to opportunities. She recently bequeathed the largest gift yet to WPI by any alumna, creating endowments for Men's and Women's Crew, the Great Minds/COMPASS Scholars program, Pre-Collegiate Outreach, and the STEM Education Center.

"I feel it's my responsibility to provide in whatever small way, shape, or form that I can, something for the next generations," she says. "If I could have a conversation with my younger self, I would say, 'give back more often, give back earlier in your life, because personal fulfillment is tremendous.'"

Potter's early experiences drive her volunteer and philanthropic efforts. It was the pre-collegiate program that allowed her to expand her vision of herself as an engineer and introduced her to the adults who would steer her in the right direction. Three of the four WPI programs her gift supports reach students at that same pivotal moment when they're beginning to think seriously about their futures.

Crew? ... that's a different story.

Back in 1973 during that first campus visit, then-Dean of Students Bernie Brown enlisted two students, Anne Madara '76 and Terry Cirone '76, to show Potter around WPI. Both were enthusiastic about crew, then a club sport. Potter returned to Minnesota, studied up on crew, and joined the women's team in her freshman year at

WPI. Her friend Erik Hedberg '78 convinced her to become coxswain for Men's Crew.

Potter also played cornet in WPI's marching band and was the manager for both the swim and track teams, and a Zeta Psi sister. Those activities and others at WPI balanced out the hard work of studying and led to friendships that endure today. Crew, in particular, was life-changing, she remembers.

"That's where I first began to learn leadership skills," she says. At the stern, she came to trust the rowers' strength and focus on "working between their ears," as coach Dave "Floyd" Ploss '70 taught her. When they hit their rhythm, it was magical, she remembers.

"There's nothing in the world that compares to getting in the boat and having those oars click on time and sailing through the water. It's an amazing, amazing feeling," she says. "And you know it when it's right."

Potter brought those leadership skills with her into the working world, which took her from General Electric to Exxon, where she met her husband, Jeff, and on to positions at other manufacturers. Along the way, she has made it a priority to mentor young women and men. She also volunteers for nonprofits that focus on community and food insecurity.

In each of her endeavors, she calls upon the knowledge she gained at WPI, both in the classroom and on the water. Whether it's solving an intricacy of distribution, helping end a child's hunger pangs, or connecting with a mentee, she aims for that moment when the oars plunge neatly into the water and propel her team forward.

Last year, Bettina and Jeff traveled back to Worcester for the dedication of a crew boat in her honor.

"My husband came along and I think he got an eyeful. He said, 'I was just in awe. I didn't think you were a big deal,'" she remembers. "And I'm really not. I just think it's really important that we take care of our kids. Our students need us as alumni. We have a responsibility to help in whatever way we can."

—SHARRON KAHN LUTTRELL

## Northeast Construction Firm Sees Giving Back as a “Win-Win”

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This year's baseball season may fall short of expectations, but a less official farm system is still thriving in Massachusetts. Each year, **Consigli Construction Co., Inc.**, a Northeast and Mid-Atlantic construction management firm, makes it a point to seek out and hire WPI grads, creating an annual pipeline of highly qualified talent starting from internships with the hope to hiring after Commencement to the job site. The company currently employs about 70 WPI grads—accounting for nearly 10 percent of its full-time staff.

Consigli recently deepened its support to WPI, providing a generous donation to the university's Civil Engineering programs where many of their employees learned their trade. According to **Jeff Navin '98**, vice president of project management at Consigli, his employer's commitment to giving is a recognition of the role WPI has played in the company's success.

"We have so many WPI grads who have risen in the ranks here to make this company what it is," says Navin. "The reality is that Consigli has done well, in part, because of some really great people coming from WPI."

As a fourth-generation family business that recently became employee owned, fostering a positive culture through philanthropy and community involvement is nothing new. However, the Consigli team sees its support of WPI as a “win-win” on both sides.

"We definitely see the value in a WPI education. Every year we make it a point to get on campus to find the best talent there," he says. "And those graduates come to Consigli well prepared with real-world experience, so investing in WPI is also an investment in our company's future."

Beyond financial giving, Consigli staff stay well engaged with WPI students and faculty, providing internship opportunities to students and helping the university keep its programs anchored in current practices in the field. Navin serves on WPI's Civil and Environmental Engineering Advisory Board, where he hears firsthand the department's plans, aspirations, and challenges. He also notes that many Consigli staff, including those at the

executive level, have brought their practical experience back to the WPI classroom, serving as guest lecturers and instructors.

"When WPI graduates start at Consigli, it's a passing of the torch to us, in terms of mentoring and coaching," says Navin. "So, if we can partner with WPI to help their programs—whether through advising and internships or financially—then we feel the program improves, we improve, and the overall industry improves."

Navin also notes that WPI grads are integral in helping Consigli discover and implement emerging technologies. One team of students recently used their Major Qualifying Project (MQP) to test new technologies at one of Consigli's active job sites, including lift-assist exoskeletons, layout robots, and augmented reality software that allows the user to see a planned build through digital goggles before construction begins.

"Supporting MQPs often helps us identify emerging technologies that we can use in the field," says Navin. "If there's one thing I can say about WPI students, they're incredibly innovative and creative."

With such a robust commitment to giving back through internships and academic opportunities, why did Navin and the Consigli team feel that making a financial gift was also important?

"We can teach, mentor, and train, but we also need to re-invest and support WPI financially—especially during this time of need," says Navin. "I personally owe a debt of gratitude to WPI, and [as a group of WPI alumni], we asked, 'What more could we be doing?'"

Consigli's ongoing support of WPI's civil and environmental engineering programs has another important effect—stirring the pride that many of their employees feel toward their alma mater.

"I'm not surprised that Consigli is grateful to WPI for how well they prepare students for the real world," says assistant project manager Caroline Meyer '17. "And I'm really proud to work for a company that recognizes that."

—SCOTT WHITNEY

LEARN MORE ABOUT GIVING AT [WPI.EDU/GIVE](http://WPI.EDU/GIVE)





JEFF NAVIN '98, VICE PRESIDENT OF  
PROJECT MANAGEMENT AT CONSIGLI

"I'D LOVE TO PLAY A PART IN STUDENTS GOING TO WPI, IN KNOWING THEY'LL MAKE A MAJOR IMPACT, ENABLING THEM TO HAVE A BETTER LIFE IN MULTIPLE WAYS."

—JEAN SALEK CAMP '84



Camp established the Jean Salek Camp '84 scholarship, which provides first-gen students like herself with financial support. Through a bequest, she aims to provide generations of students the opportunity to experience WPI like she did.



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# ALUMNI NEWS

ON JUNE 9, 1915, BOOKER T. WASHINGTON, A FOUNDER OF THE FAMED TUSKEGEE INSTITUTE, HELPED CELEBRATE THE 50<sup>TH</sup> ANNIVERSARY OF WPI'S FOUNDING. AT THE INVITATION OF PRESIDENT IRA HOLLIS AND THE WPI BOARD OF TRUSTEES, WASHINGTON SPOKE AT MECHANICS HALL DURING COMMENCEMENT EXERCISES.



## From the Desk of

**MARK MACAULAY '89, '94 MS**  
ALUMNI ASSOCIATION PRESIDENT

Goat Nation has embraced this moment of change to strengthen the connections of our global community of alumni, parents, and friends like never before!

### 30

First-Year Virtual Welcome Events, hosted by the Alumni Association and Office of Alumni Relations

### 300+

Incoming students registered for the Welcome Events—from all over the world!

### 200+

Alumni attended the online Alumni Association Annual Meeting and keynote with President Leshin

### 207

Alumni, parents, and friends supported the #TechCares Challenge in June

### \$144,000+

Gifts from generous alumni, parents, and friends to the #TechCares Challenge

### \$59,000+

Generous gifts from alumni and friends for the Goat Nation Giving Challenge in August—postponed from March—to support Athletics and WPI's varsity teams

### 1

Week of virtual events and opportunities during our first-ever global Homecoming

### 3

Number of things all great alumni do

**PARTICIPATE IN EVENTS**

**GET INVOLVED**

**GIVE TO WPI**

Another number that matters: Students seeking financial aid as their families come to grips with the economic consequences of the COVID-19 pandemic. Your gift to WPI, of any amount, helps these students close the gap between their dream of a WPI education and making it a reality. Consider also a gift to the WPI Emergency Assistance Fund, which helps students and WPI community members who have had direct negative financial impacts of the pandemic.

[wpi.edu/+alumni](http://wpi.edu/+alumni) | [wpi.edu/+give](http://wpi.edu/+give)

# crimson crew

Earlier this year, Alex Forti '09, MS'10 was approached by Brianne Ross, associate director of Alumni Relations, with the idea for an initiative aimed at reconnecting alumni with the university, called Crimson Crew. He knew immediately they were onto something that alumni could relate to.

Forti, who currently volunteers with the Alumni Association Board of Directors as one of its members-at-large, explains that Crimson Crew will be an opportunity to create a strong bridge between students and alumni. From a common mission of helping students succeed through mentoring, guest lectures, and advising to events and fundraising, Crimson Crew will be a united assemblage with one ambition—to further the goals of WPI through alumni engagement.

“My time at WPI was a deeply personal experience,” says Forti. “I was supported and inspired by so many great people—professors, students, and alumni. I think I owe it to the school and to the next generation to be someone who gives back and provides the same level of support.”

Ross often hears stories of mentors who helped navigate schoolwork or offered career advice. She says Crimson Crew will be a way to align the passions of alumni with those of current students.

“Oftentimes you hear about building connections,” she muses, “but this is more than that—I think people should be building relationships. Through Crimson Crew, alumni will build stronger relationships with and within WPI—and, potentially, with students. This is a win/win for everyone involved.”

With a personalized approach to engagement, Crimson Crew will align alumni with other alumni and students with shared interests. As Ross explains, “I think anytime you can create a strong personal connection for someone, you can keep them engaged for years to come.”

Ross shares that the goal was to host a training event for all volunteers on campus, but given COVID-19 closures, this has been delayed. “Still, it would be ideal to host it each year during Alumni Weekend, when we welcome so many of our alumni back to campus over the course of several days,” she says. “It would be wonderful for alumni to get to know one another better in a casual and fun setting, with the common mission of being passionate about *their* WPI.”

Learn more about Crimson Crew at [wpi.edu/alumni/community/volunteer](http://wpi.edu/alumni/community/volunteer)

## **Crimson Crew are the alumni volunteers who take great pride in WPI through their involvement and support of the institution.**

Crimson Crew encompasses opportunities such as:

- Reunion Committees
- Panelists
- Guest Speakers
- Alumni Admissions Ambassadors
- First-year Welcome Event Hosts
- Alumni Association Board of Directors
- Great Problems Seminar (GPS) Judges
- The Women of WPI
- Corporate and Professional Education Liaisons
- And much more!

Interested in getting more involved with your alma mater?

Contact Alumni Relations at [alumni-office@wpi.edu](mailto:alumni-office@wpi.edu) or 508-831-5600.

## [ CLASSnotes ]

From adventures  
to staycations, promotions  
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CLASSNOTES@WPI.EDU



## WIN AND WINCORPS: EXPANDING THE IMPACT OF WOMEN IN STEM

The WPI Women's Impact Network (WIN) continues to make a significant difference for women in STEM. Formed from a model that President Laurie Leshin encountered at Arizona State University, the group is composed of alumnae, friends, parents, faculty, and staff. WIN is determined to ensure that women and girls have opportunities to participate in STEM fields and make a positive impression in their professions, their communities, and beyond.

Since its inception in 2017, WIN's impact has expanded far beyond the initial collaboration and community building benefits experienced by members. The 85-member organization has raised over \$900,000 and funded 53 grant requests, including 20 grants to diversity, equity, and inclusion initiatives and 12 grants in support of K-12 STEM pipeline programs.

A recent example of WIN's impact is found in this year's WINCorps Leadership Development Conference. Conference developers—dean of graduate studies Terri Camesano, WPI Forward fellow Rachel LeBlanc, and associate professor of biomedical engineering Marsha Rolle—communicated deep gratitude for their WIN grant, which (with precision-like frugality) has supported three annual conferences.

This year's conference was attended (virtually) by 45 participants. With its mission to keep alumnae connected to WPI support systems, the program provides tools for growth and learning beyond campus. "Students feel supported at WPI; they have access to many experts and resources while on campus, especially when it's time to secure their first job. However, as support may also be needed at future career pivot and jump points, we work to ensure that alumnae receive resources they need, beyond the campus borders," said Rolle.

Program developers acknowledge that WPI has a wealth of knowledge and experience to share. The challenge, however, has been securing the operational capital needed for programming. LeBlanc shared, "... the conference is outside of what we'd normally be able to build into our operating budget, so the WIN grant served as a powerful motivational vehicle for our team to turn our thoughts and dreams of a leadership development conference into a reality."

The conference featured experts in strategic planning, mindfulness, negotiating, and diversity, and included an alumnae panel featuring **Joyce Kline '87**, **Pamela (Glasson) Lynch '05**, and **Maureen McCaffrey '86**. By all accounts the conference was a tremendous success. **Grania VanHerwade '15** noted, "I attended WINCorps virtually yesterday, and it was an incredible event!" **Corinne Linderman '07, '08** said, "This [conference] came at the perfect time for me, as I'm needing to do some redirection at work—for my team and myself."

Both WIN and the WINCorps Leadership Development program are multiplying impact as they help forge a path for the future of all women in STEM.

—SIRA NARAS

[wpi.edu/+win](http://wpi.edu/+win)

# CLASSNOTES

submit yours to class notes [CLASSNOTES@WPI.EDU](mailto:CLASSNOTES@WPI.EDU)

**R** CLASS REUNION YEAR

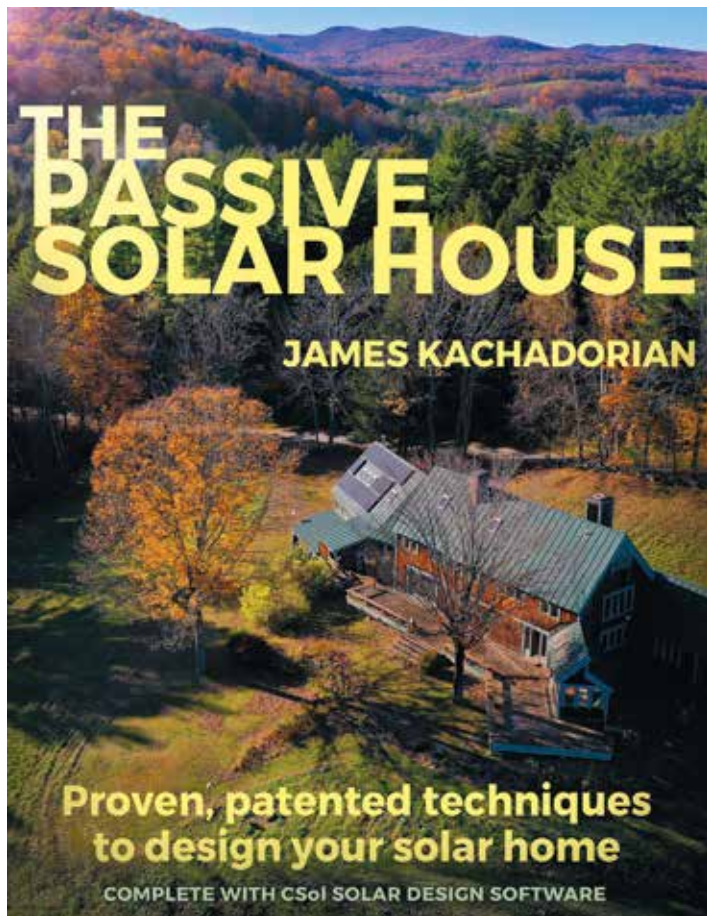


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## 1961 ▶ R

*The Passive Solar House*, by **James Kachadorian**, has been published in an updated and revised edition, complete with worksheets, sample plans, and Jim's proprietary CSol software. First published in 1997, the book has been used by countless home builders and architects to incorporate timeless solar principles into their designs. It's also been used by professors as the text for their solar design courses. His new e-book version brings his 38 years of hands-on experience and proven knowledge to the screen. The cover shot (by his son, George) is an aerial view of his solar home in Vermont, showing the 5.2 kw PV solar array on the 45-degree, south-facing roof of the garage. The new edition includes a droll

introduction by George, which tells us, "Jim's impetus to start designing passive solar houses in the 1970s was not based in ideology or doctrine. As a graduate of Worcester Polytechnic Institute and MIT, and having served overseas for the U.S. Army, Jim had learned a highly effective method for solving problems of all kinds: logic."

Noting Jim's work as head engineer for the Killington ski area on everything from buildings to ski lifts to pipeline logistics, George writes that "he earned the nickname 'God' from his colleagues for his definitive answers to seemingly unsolvable questions."

Jim reports that he now heats his home with  $\frac{3}{4}$  of a cord of dry hardwood burned in the cook stove, and 617.7 gallons of propane consumed by a new high-efficiency

propane warm air system. "We keep our home at 72-plus degrees in the daytime and evening, and we set it back to 55 degrees at night. Also, as predicted in *The Passive Solar House*, the unoccupied home has never reached freezing temperatures."

## 1968

Judy Maher, wife of **Frank Maher**, writes to share the sad news of his passing in February. "Frank was very proud of his accomplishment as an electrical engineer, especially his time at Perkin-Elmer, where he earned four patents. He loved sailing to Martha's Vineyard, listening to jazz, and especially being with his family." He leaves two sons and six grandchildren.

## 1971 ▶ R

**Stan Sotek** recently completed 35 years as an engineer at Raytheon. He continues to work full-time for the newly created Raytheon Technologies Corporation.

## 1978

**Mike Ahern** contributed an article to *Energy Central*, titled "Cybersecurity at Utilities: 2020." He writes, "Working from home can introduce additional cybersecurity risk (e.g., loss of data). To meet this increased cybersecurity risk, now is a good time to refresh people on basic cyber hygiene." He is director of WPI's Academic and Corporate Engagement Group.

**Wes Wheeler**, president of UPS Healthcare, is addressing the COVID-19 pandemic on many fronts. The company works with healthcare companies, payers, and providers across key sectors: lab and specimen logistics, implantable medical devices, clinical trials and precision medicine, home health and wellness, specialty pharmaceuticals, and healthcare logistics. With billions of people

around the world working remotely to help slow the spread of the virus, he says logistics have reached a new level of importance. "Patients don't want to leave their homes to get their medicine right now," he says. "It's important that we continue delivering drugs to people in their homes."

Wheeler and UPS Healthcare are also part of the President's Coronavirus Taskforce and the council for reopening the country, including Project Airbridge, with several flights per day bringing personal protective equipment from Asia into the United States. The company is involved in clinical trials for leading drugs for treating COVID-19 and is working with three companies developing vaccines.

## 1981 ▶ R

After 10+ years of working on technology solutions for marketing and advertising professionals, **Ernie Cormier** is now CEO and president of Zylotech, where he seeks to evolve the company's presence in the Customer Data Platform (CDP) space, building on its expertise in data quality, personalization, and deriving actionable insights from mountains of disparate data.

## 1982

**Mike Iassogna** was interviewed by *The Newtown (Conn.) Bee*, on the start-up of Tier One Machining and Assembly, the company he co-founded to manufacture machined parts and assemblies for the medical instruments market, as well as some aerospace parts. He proudly noted that the company was started in a time of outsourcing to other countries, and it partners with vocational programs at high schools and community colleges, as well as organizations that provide opportunities to trainees with special needs. Mike and his wife, Linda, married in 1983 and have two children. In the Q & A piece, he named Eric Clapton as



▶ JOEL KEARNS '83

his favorite artist, listed his hobbies as carpentry (restoring old houses and furniture), and working out—he also admitted to being a huge baseball fan. (“Go, Yankees!”)

## 1983

**Joel Kearns** was promoted to director of Facilities, Testing, and Manufacturing at the NASA Glenn Research Center in Cleveland. He directs all of Glenn's activities in facility infrastructure, aerospace system testing, fabrication, environment management and sustainability, and aircraft operations. He recently contributed to the successful space environmental testing of the first NASA Orion spacecraft, which will fly an unmanned test flight beyond the Moon on the Artemis 1 mission next year.

## 1984

**Jean Salek Camp** has a challenge for the Class: “Please give some or additional money to WPI now—as

neither the school, nor the students can wait.” She adds, “If you are like me, you probably have more than what you need, and even a small donation can help during these extraordinary times. I have recently funded an endowment and will be adding to it over time. You don't have to wait until you die to make a positive difference in someone's life.”

Jean shut down her Hawaii-based project and construction management firm in 2013, and relocated with her husband, David, to California, so that they could assist and care for her aging parents. Skills learned at WPI, including project management, and cell- and microbiology, came in very handy when dealing with the medical system in support of her parents' senior and then critical medical needs. Additional training in interior design, along with her contractor's license, enabled Jean to design and renovate her parents' home so that they could continue to live safely at home and in comfort



▶ DAVID AND JEAN CAMP '84

until they both passed away. “I attribute my personal and professional skills and success to the sound education and the project-based team experiences that WPI provided.”

**Jim “Pouli” Pouliopoulos** is director of the professional sales program and a senior lecturer in marketing at Bentley University. In TEDx talks, he explores the question of what drives inner motivation and professional success. He is also a certified trainer for The Art of Brilliance, a UK-based firm that specializes in training and development to make people be more positive, motivated, and brilliant. He has worked as an executive coach, trainer, facilitator, and consultant for a number of organizations in a variety of industries. His book, *How to be a Well Being: Unofficial Rules to Live Every Day*, was released in August 2020. Learn more at [Pouli.com](http://Pouli.com).

## 1985

The passing of **Ernie Capozzi** in June was shared by Chloe Emery '13, a family friend, along with a vintage photo of the WPI Golf Team. Apart from his successful career in sales, the newspaper obituary notes, “Ernie was an avid sailor and golfer and was happiest spending time with his family by the ocean. His easygoing disposition and kind heart made him a friend to all.”

## 1986

**Paul Torcellini** was named a fellow of ASHRAE (the American Society of Heating, Refrigerating, and Air Conditioning Engineers). He is a professor of environmental earth science at Eastern Connecticut State University.

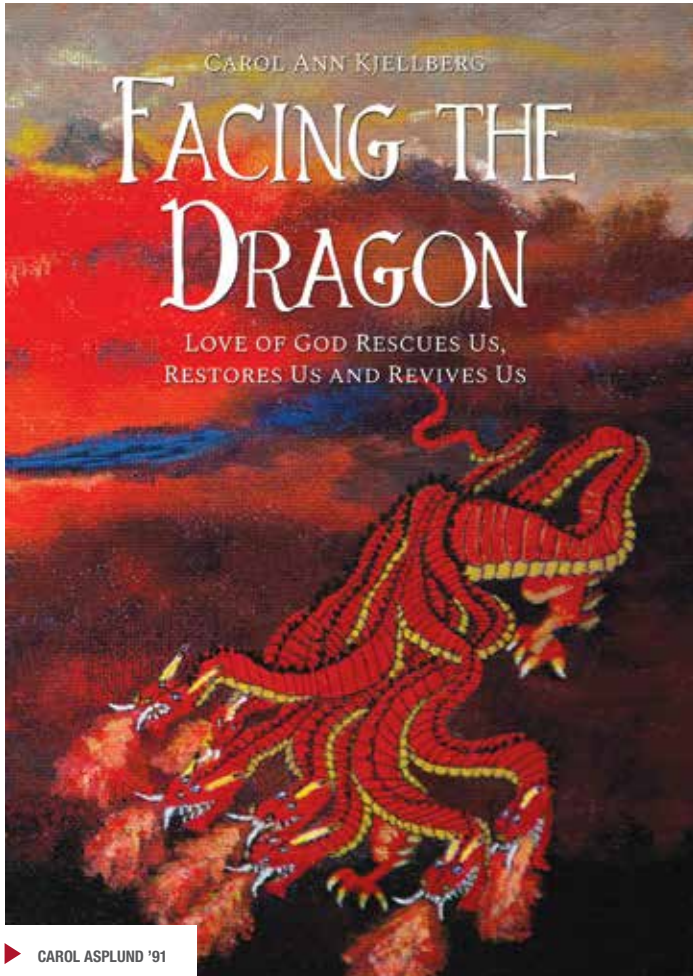
## 1989

**Lori Clark** is senior director, IT Portfolio & Project Management, at Karyopharm Therapeutics, an oncology-focused pharmaceutical company.

## 1990

**Kyle Brenner**, previously principal of Worcester Technical High School (that other “Worcester Tech”), is now superintendent of Bay Path Regional Vocational Technical High School in Charlton, Mass.

**Paul Dombrowski** was recognized at the New England Water Environment Association's Annual Conference in Boston in January. He received the Clair N. Sawyer Award for outstanding service to the water industry related to research, the application of innovation to improve the water environment, and the development of technical publications that advance the knowledge of clean water practitioners. Paul is a senior principal and chief



technologist with Woodard & Curran in Northampton, Mass.

**Michael Plourde** was appointed vice president, global engineering and programs, at Comtech Telecommunications Corp.

## 1991

*Facing the Dragon: Love of God Rescues Us, Restores Us and Revives Us*, is the title of a novel by **Carol Asplund (MS CPM)**, writing under the pen name Carol Ann Kjellberg. Her heroine, Kristine, is a married mother of three sons, who loves her husband dearly. While she is challenged by her husband's unfaithfulness and the trials of a straying son, her faith is never challenged. In her Facebook

description of the novel, Carol writes, "She feels these are a struggle with Satan, the Dragon. She hopes for a return of the prodigal son, knowing the result is not within her control. Follow along to see if her Heavenly Father can in fact rescue, restore, and revive Kristine." Carol has worked as a construction project manager, as a regional transportation planner, as a city planner for Worcester, and as a teacher of children and young adults with learning disabilities.

## 1992

**Diana Hart** has joined Westinghouse Electric in Cranberry Township, Pa., as vice president, environmental health & safety.



## 1995

**Kristin Kotopoulos Garland** writes, "I have been working as a consultant for Safety Partners for the past 17 years and recently became a certified industrial hygienist (CIH). I love how WPI prepared me for the many twists and turns my career has taken. I am also very excited that my oldest daughter, Paige, will be a freshman at WPI this fall (we hope!), majoring in environmental engineering and playing on the volleyball team. Watching her play in Harrington will be a dream come true for both of us!"

## 1996

**Jennifer Healy-Anderson** was promoted to managing director at PwC. She is now serving as the global human capital leader for PwC's Acceleration Centers, driving off-shore service delivery for the company.

**Teri Brehio ('97 MS BME)** writes, "I have been working as a family medicine physician at the New Hampshire Dartmouth Residency program in Concord, N.H., since I graduated residency there in 2001. After spending the past eight years as education director, in March I was

promoted to medical director of the Family Health Centers."

## 1998

**David Bowler (MSEE)** is senior director, advanced research engineering, at CommScope, based in Lowell, Mass. For his achievements, which included adding 28 patents to CommScope's portfolio, he was honored with the company's 2020 Lifetime Achievement Award—Innovator. A company press release noted, "Bowler's creativity, insights, and passion have led him to design innovative products and solutions for cable network service providers in the areas of optics, radio frequency (RF), digital signal processing, high-speed digital, video, software design, and more." Highlights of his career include developing 622 megabits per second passive optical network (PON) transceivers in PON's early days and creating a diagnostic tool for debugging the RF network portion of DOCSIS (Data Over Cable Service Interface Specification).

**Rick Savoia** is director, software engineering, at EditShare, where he helps design tools for clients in the media and entertainment industry to power the workflow for media management and network shared storage systems.

## 2000

**Keith Berard** pitched in to solve a vexing problem for firefighters in Middleborough, Mass. The fire department had masks and filters, but no way to connect the two. Using his 3D printer and his CAD skills, he created a connector to join the components. Keith is a software architect for MCG Health in Seattle, where he helps develop evidence-based care guidelines for better patient outcomes. He notes that the COVID-19 pandemic hasn't caused too much disruption for his daily life, aside from

managing three kids at home and keeping them focused and engaged in learning—a challenge shared by many families, he notes.

**Jason Gleghorn** is an assistant professor of biomechanical engineering at the University of Delaware. He received an NSF Early Career Development Award to develop a new class of microfluidic devices to culture an entire lymph node outside the body and study the cells' behavior in real time. The work will increase scientific understanding of chronic infection and inflammation, and metastatic cancer to the lymph node. It also could inform drug delivery strategies for chemotherapy and antiretroviral therapies for HIV.

**Daniel Stroe (MS CS)** remains in Worcester, as a real estate developer with Wallachia LLC. A recent profile in *Worcester Business Journal* described his work toward converting a former razor factory into a complex of 47 apartments called Stamp Factory Lofts. The 130-year-old building once housed one of the city's prosperous businesses. "They were producing straight razors," Stroe told the reporter. "They thought they would never go out of fashion. That was a mistake." Speaking in mid-March, when awareness that the COVID-19 pandemic might change construction prospects was just beginning, he said, "The site had been vacant for more than 10 years before we started to develop it, and the entire economics in Worcester have shifted a little recently to allow this project to be feasible."

## 2002

**Frances-Feliz Kearns** writes, "I wanted to share that I was recently elected to the District School Committee for the Old Rochester School District for the towns of Mattapoiset, Marion, and Rochester, Mass. As a woman of color I am excited to provide

representation on our local school board that has previously been lacking representation in this area."

## 2004

**Jeremy Hitchcock** was appointed executive chairman of the board of Zoom Telephonic in April. He had served as the company's board chair since February, and as a board director since May 2019.

**Ann Mariano (MS IT)** was written up in the *MetroWest Daily News* in April for her role in getting computers into the hands of some 2,000 students as fast as possible. In January she became the new technology chief for the Framingham, Mass., school district. In March, schools closed due to the COVID-19 pandemic, leaving many students without the technology needed to continue learning. Mariano and her staff swiftly distributed thousands of Chromebooks to students who otherwise would have been shut out of online learning. The paper reported on "the whirlwind of action," as "masked and gloved teachers, principals, translators and others fanned out to schools within 12 hours to hand off technology to families, who waited in cars." Mariano said, "Everyone wanted to engage more. There were a lot of air hugs. I think that was the challenge of that day." Her previous posts include director of education technology at Foster-Glocester Regional Schools in Rhode Island, and deputy technology director for the schools and town of Stoughton, as well as director of technology for the Winsor School, Ursuline Academy, and the Central Falls School District.

## 2005

**Alejandro Castano** is vice president of marketing for the Greater Naples (Fla.) Chamber of Commerce.



▶ JESSICA ROSEWITZ '07 AND NIMA RAHBAR

## 2006

**Alison Hart, MD**, joined Rhode Island Medical Imaging as a radiologist. She completed a radiology residency at Rhode Island Hospital/Brown University in Providence, as well as an internship at St. Vincent Hospital in Worcester. She earned her MD at the George Washington University School of Medicine, in Washington, D.C. She was previously a biomaterials technician at the Massachusetts General Hospital Center for Regenerative Medicine, in the Tissue Engineering Laboratory. She lives in East Greenwich, R.I.

## 2007

**Kelly Finzel ('09 MS FPE)** is a senior fire engineer at Arup. She serves as an alternate on the NFPA 101 technical committee for Building Service and Fire Protection Equipment. She recently published an article, "Building Code Trade-Offs for Automatic Sprinkler Systems: Understanding the impact of sprinkler systems on building design" in *PHCPro*.

**Ashley Mossa Lindeman** is a senior technical leader, Nuclear Sector – Fire Probabilistic Risk Assessment, at the Electric Power Research Institute. She developed, led, and delivered on an aggressive two-year research plan to improve realism in nuclear plant assessments. For her work, she was recently recognized in *Public Utilities Fortnightly's* "Fortnightly Under Forty 2020" list as a rising star in the power/utility industry.

**Jessica Rosewitz** completed her doctorate in civil engineering in May—her third diploma from WPI. "I knew that I wanted to teach at a college, and that meant a PhD," she said. While earning her master's degree (awarded in 2016), she had the unique opportunity to work on the restoration of Tulio Lombardo's 500-year-old sculpture, Adam, a life-sized Renaissance-era marble statue at New York's Metropolitan Museum of Art. Her work on determining the structural properties of materials to pin the pieces of stone back together got national press. The success of the Met project paved the way for continued work on

developing a process to create self-healing concrete using enzymes.

“Jessica was quite brave to work on a PhD project that lies right at the intersection of biophysics and mechanics/materials science,” says her advisor, Professor Nima Rahbar. “I believe her PhD is among the most outstanding doctoral theses in WPI Engineering.” After teaching undergraduate courses and completing the final phases of dissertation work remotely (“I hardly used any paper—save the trees for the toilet paper, I say—and really came to appreciate a digital stylus pad and pen,” she jokes), she looks forward to landing her first position in academia—in front of a class, whether in person or online.

## 2008

**Cheryl (Boquist) Ingram** writes, “We celebrated Lidia Jean Ingram joining our family June 5, 2020! We can’t wait to bring her to Alumni Weekend next year!”



▶ LIDIA JEAN INGRAM

## 2012

**Lillian Carrasquillo (MS, IM)** is a product insights manager at Spotify. Her work involves developing metrics for the company’s personalization platform.

Her team’s mission is to make sure that the recommendations delivered in a user’s daily mix, discover weekly, and year-end wrap stories are spot on.

## 2014

Basketball standout **Samantha Meyerhoff** was inducted into the Section IV Hall of Fame in Ithaca, N.Y. A graduate of Charlotte Valley Central School, she earned 14 varsity letters—five each in basketball and soccer and four in softball. She is a civil engineer in Washington, D.C., now working as a project manager on the renovation of the National Air and Space Museum of the Smithsonian Institution.

## 2015

**Tanishq Bhalla** is an MBA candidate at Harvard Business School. He has written about the COVID-19 pandemic and the economic fallout from the perspective of the HBS Class of 2021. Essay titles include “COVID-19 Becomes Our Real-Time Case Study” and “Lessons I’ve Learned from the COVID-19 Pandemic while at Harvard Business School.” Before he entered the business program, he worked for Cisco Systems, specializing in

▶ CASSIE GRACA '20



cybersecurity and cloud computing technologies.

## 2016

**Kevin Ackerman** writes, “I graduated from Weill Cornell Medical College on April 15, 2020, with an MD degree with Honors in Service. I joined New York–Presbyterian Hospital with other early graduate physicians to assist in the hospital’s pandemic response. I will start my residency training in combined Internal Medicine–Pediatrics at the Hospital of the University of Pennsylvania and Children’s Hospital of Philadelphia.”

## 2020

Football captain **Sam Casey** was tapped as the defensive coordinator at Fitchburg State University. His original plans included helping out his high school football team, “... but then this opportunity came along,” he says, “and I couldn’t envision myself doing anything else. Football is what I do.” Noting that he’ll be using much of what he learned at WPI, he added “I’ve always said football is my favorite class.” He was recruited by Fitchburg’s head coach Scott Sperone, who served as defensive coordinator at WPI for

three seasons. Sperone says “I trust Sam and I know he’s going to work hard. He was an outstanding leader on the WPI team and led by example. He did everything he was supposed to do to be a better football player.”

“To make it feel like graduation,” writes **Cassie Graca**’s mother, Diane, “our family ventured to campus to take pictures on what would have been Commencement Day. It helped us celebrate Cassie’s BS in Civil Engineering. The campus was the perfect backdrop. Cassie is studying to achieve her MS in Civil in the fall and, even though she lost the 2020 softball season to COVID-19, she will play in the spring of 2021.”



▶ SAM CASEY '20



**John Busada '39 CHE**, Charlottesville, Va.  
**Roger Corey '42**, LAMBDA CHI ALPHA, Ashland, Mass.  
**Nelson Calkins '43 ME**, Rutland, Mass.  
**Irving Goldstein '45 EE**, Framingham, Mass.  
**Edward Zieve '45 ME**, ALPHA EPSILON PI, Eikhart Lake, Wis.  
**Edward Swierz '47 CE**, ALPHA TAU OMEGA, Manchester, N.H.  
**David Stowe '49 ME**, SIGMA ALPHA EPSILON, Shrewsbury, Mass.  
**Paul Curran '49 ME**, PHI KAPPA THETA, Leominster, Mass.  
**Leo Lynch '50 EE**, PHI KAPPA THETA, Belvidere, Ill.  
**Robert Proctor '50 CE**, SIGMA PHI EPSILON, West Bath, Me.  
**John Reid '51 CHE**, PHI SIGMA KAPPA, Juno Beach, Fla.  
**David Kujala '52 CHE**, Clayton, Del.  
**Edward Olson '52 PH**, Rio Rancho, N.M.  
**Henry Sundberg '53 ME**, SIGMA ALPHA EPSILON, Franklin, Mass.  
**Charles McDonough '55 CHE, '57 MS CHE**, Ewing, N.J.  
**John Calhoun '55 ME, '81 SIM**, PHI KAPPA THETA, White Horse Beach, Mass.  
**Donald Olsen '56 EE**, PHI SIGMA KAPPA, Paterson, N.J.  
**Winford Nowell '57 ME**, Groveland, Mass.  
**Robert Sundheim '58 EE**, SIGMA ALPHA EPSILON, Solon, Ohio  
**Robert Dahill '61 MS CH**, Manalapan, N.J.  
**John Orciuch '68 CHE**, PHI SIGMA KAPPA, Wareham, Mass.  
**Stephen Rogers '69 ME**, SIGMA PHI EPSILON, Deland, Fla.  
**Eric Nickerson '69 ME**, PHI GAMMA DELTA, Milford, N.H.  
**Irving Engelson '71 PhD**, New York, N.Y.  
**Raymond Fish '72 PhD**, Sun City Center, Fla.

**Stanley Czernel '74 CH-Interdisciplinary**, Orange, Conn.  
**Lee Peterson '75 SIM**, Stow, Mass.  
**Aimo "Kal" Hyyrynen '76 MS EE**, Shrewsbury, Mass.  
**Dana Homer '77 CHE**, Haverhill, Mass.  
**Brian Gow '77 CS**, Auburn, Mass.  
**Richard Garstka '77 CS**, Rutland, Mass.  
**Frank DeBonis '80 CE**, PHI KAPPA THETA, La Porte, Texas  
**Tom Fawcett '80 CS**, San Jose, Calif.  
**David Barrows '80 MGMT**, TAU KAPPA EPSILON, Charlton, Mass.  
**Carl Gates '80 ME**, SIGMA ALPHA EPSILON, Lewes, Del.  
**Brian Stoffers '81 EE**, North Billerica, Mass.  
**George Geisser '82 MS CE**, Riverside, R.I.  
**William Fay '82 MS ME**, Ware, Mass.  
**William Parretti '82 SIM**, Worcester, Mass.  
**Robert Bunzick '83 Plant Eng. Certificate**  
**Joseph Capua '83 CHE**, PHI KAPPA THETA, Tewksbury, Mass.  
**Ying Sun '85 PhD**, West Warwick, R.I.  
**Ernest Capozzi '85 MGE**, PHI GAMMA DELTA, Walpole, Mass.  
**Kenneth Packard '93 ME**, South Hamilton, Mass.  
**Stephen Davis '98 CE**, Smithfield, R.I.

The WPI community also notes the passing of these friends of the university: **Debra Amend, Virginia Baer, Mavis Bailey, Jan Bialonozka, Nedra Biliouris, Carolyn Chapell, Ellen Capua, Cheryl Conron, Richard Duquette, Madeline Horan, David Mainville, Joseph Policelli, John Quinlivan, and Samuel Rankin.**

Complete obituaries can usually be found online by searching legacy.com or newspaper websites. *WPI Journal* will assist classmates in locating additional information. Contact [wpjournal@wpi.edu](mailto:wpjournal@wpi.edu).

*“THANK YOU SO MUCH  
FOR AWARDING ME  
THIS EMERGENCY  
ASSISTANCE FUND  
GRANT. I WILL  
FOREVER BE GRATEFUL  
AND NOW HAVE THE  
ABILITY TO PAY OFF MY  
MEDICAL BILLS.”*

—WPI student impacted by the  
Emergency Assistance Fund.

Did you know that over \$60,000 was donated during the spring and summer to the WPI Emergency Assistance Fund? This fund helped students in need with grants to support various emergency needs such as rent, groceries, medical bills, and transportation (including flights) home.

• **Over 50 students received assistance** • **Average grant amount \$88**

WPI has no shortage of people who care.  
Thank you for caring about WPI and its students!

**GIVE TODAY AT [WPI.EDU/+GIVE](https://wpi.edu/+give)**





# WPI

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WP



SCIENCE, DATA,  
AND THE PANDEMIC

MARNI HALL '97, AN AUTHORITY ON REAL-WORLD  
EVIDENCE, IS HELPING THE NATION—AND THE  
WORLD—RESPOND TO COVID-19