

W
P
JOURNAL



CAN HISTORY REPEAT ITSELF?

The Transformation of Alumni Gym

WPI student Marissa Goerke '14, a former level-10 gymnast, was spotted doing a handstand atop the Proud Goat statue on the Quad. The statue was a gift from the Class of 2009. (No goats were harmed in the taking of this photo.)



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COVER ► Transforming Alumni Gym

Alumni started their own fundraising initiative back in 1915 and dramatically changed the WPI campus when they built Alumni Gym. Can history repeat itself, this time on behalf of innovation? Alumni leaders like George and Karen Oliver '82 are counting on it.

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Space(weather)man

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John Carnevale '05 brings the meaning of philanthropy back home to his native Providence, R.I., after establishing a hospital and guesthouse in Uganda. *The Journal* sits down with Carnevale to find out what motivates this young alumnus.

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To date, 2,241 legacy families have passed through WPI during its nearly 150-year history. The lineage is broad reaching, creating a lasting impact upon both the Institute and those who attend.

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A pediatric cardiologist and assistant professor of pediatrics at George Washington University's Children's National Medical Center, Laura Olivieri '99 uses 3D models to improve cardiac surgery—a technology she helped research and develop.

BY AMY CRAWFORD



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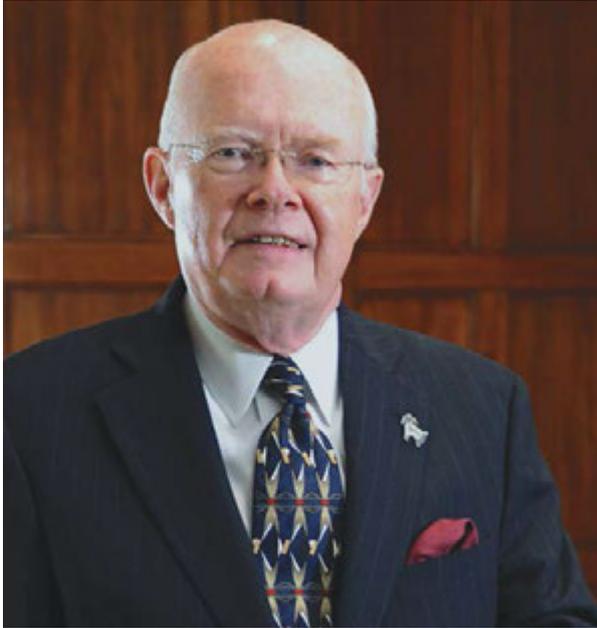
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WPI



Built by Alumni

write to you today not as interim president of WPI, but as a fellow alumnus eager to share what I believe is a game-changing opportunity for our alma mater. Allow me to explain.

When ground was broken for the new Sports and Recreation Center a few years ago, it was obvious that WPI should repurpose Alumni Gym to provide more space for our students and faculty. Serving as a trustee at the time, I viewed the decision as an easy one. Though Alumni Gym is nearly 100 years old, it has a storied past, is a solid structure, and is located in the heart of our campus. It is also a registered National Historic site, so it obviously has merits that we should preserve and protect.

The vision that has emerged for repurposing Alumni Gym is nothing short of inspirational. It has tremendous potential to transform the campus in a dramatic way. The planning committee, chaired by WPI Provost Eric Overström and composed of faculty, students, alumni, and staff, started with the idea that the repurposed gym should “embody the WPI Plan.” That is, it should be project-based, collaborative, team-oriented, and designed to enhance multi-disciplinary approaches to complex problems. In short, it should be the ethos of *Lehr und Kunst*.

While some details still need to be finalized, I can share some aspects of the repurposed gym to give you a sense of our vision. The repurposed Alumni Gym begins with a 1,400-square-foot Atrium Showcase that rises three stories, creating an expansive entryway. The atrium will display many

WPI innovations, including alumni accomplishments, current student projects, and real-time updates from project centers around the world.

The Gym will also be home to WPI’s first-in-the-nation Robotics Engineering program, including a robotics gallery that will display cutting-edge work, and home to WPI’s pioneering freshman program of societal engagement, the Great Problems Seminar, which challenges entering freshmen to tackle one significant problem confronting our world and move us closer to a solution.

The building will also contain what we are presently calling “Maker Space,” a 3,000-square-foot area designed to encourage collaboration and creativity. Adjoining the Maker Space will be an Instrumentation Lab, allowing project teams to quickly build and characterize prototypes. Projects that have strong commercial potential can take their ideas to the Business Incubation Center, which is located just upstairs on the third floor.

The Gym’s fourth floor will feature a large open collaboration space and smaller project rooms tailored to enhance MQP, IQP, and humanities projects. This will be space where project teams can interact with industry, project sponsors, government agencies, and other project teams.

However, for this transformation to take place WPI must raise the needed funds—and the university is looking to us alumni to take the lead. Some alumni and WPI supporters have already made generous gifts toward this project, such as trustees George and Karen Oliver ’82, Joan and David Szkutak ’79, Mike Dolan ’75, and Neil McDonough. But if this vision is to become a reality, WPI will need many more alumni to join the cause—just like we did 100 years ago.

You’ll be hearing more about this exciting project in the months ahead, but I encourage you to review the current floor plans, which appear in our cover story on page 20. I think you’ll agree that the repurposing of Alumni Gym has the potential to dramatically elevate WPI’s heralded project-based curriculum.

Putting back on my presidential hat, I am pleased to tell you that the search for WPI’s 16th president is proceeding on plan. A search committee, chaired by trustee Jack Mollen, has met several times, and is working closely with our search consultants from Spencer-Stuart. You can learn more about the search, the profile specification for our next president, the committee leading the search, and how it is progressing by visiting the Presidential Search web page, which can be found at www.wpi.edu/presidentialsearch.

This is an exciting time at WPI. I encourage you to become an active participant in our alma mater. The opportunity to bend history and create the future of WPI is in our hands.

Phil Ryan '65
Interim President

JEREMY HITCHCOCK '04

GIVING BACK & STAYING CONNECTED

The User Experience and Decision Making (UXDM) Research Laboratory at WPI opened in March 2012, thanks to a generous contribution from Dyn. The UXDM Lab features state-of-the-art eye-tracking technology that records a person's gaze when using a computer or hand-held device such as a smart phone or tablet—valuable information in investigating and improving the user experience.



I half-jokingly call myself an accidental entrepreneur. When I started Dyn I was trying to solve a problem, not start a company. But because of the exposure, resources, and guidance I received at WPI, I was able to form a lasting company that has solved the needs of customers and impacted the Internet. I have not forgotten my lessons at WPI and that's why I think it's important to give back and stay connected. The school produces some of the top tech and business talent in the world and we're proud to have quite a number of alumni working at Dyn."



Join Jeremy in supporting
the campaign to **advance WPI**

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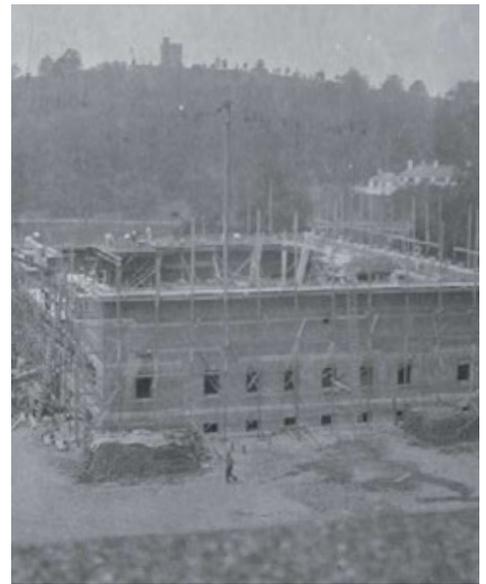
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EMAIL: IF@WPI.EDU

Gym Daze

The original Alumni Gym's modest beginnings in 1915 were born from the drive and commitment of WPI's alumni.



I would like to congratulate the WPI faculty members who were honored by Governor Deval Patrick with the State Fire Marshal's Award for their work on firefighter safety. As I read the story, I could not help but think of the tragic five-alarm Worcester Cold Storage and Warehouse Co. fire of December 3, 1999, in which six Worcester fire fighters lost their lives. The fire was in a massive, maze-like structure adjacent to I-290 that had been abandoned for years and was purported to have homeless people living in it. Firefighters intent on rescue were searching the upper floors when they became disoriented, unable to find their way out. Running low on air, they called for help. Two more crews went into the building to find them, and also became disoriented in the heavy smoke. After an hour and forty-five minutes into the fire, when the order to evacuate was given, six firefighters were missing and none of them survived. A subsequent report on this fire, issued by the U.S. Fire Administration of FEMA, stated that "according to National Fire Protection Association records, this was the first loss of six firefighters in a structure fire where neither building collapse nor an explosion was a contributing factor to the fatalities." It also cited "Lessons Learned" that included the need for improved techniques for tracking the movements of firefighters within a structure. With the development of the Precision Personnel Location system, the WPI faculty are making impressive technical advances in support of the painful lessons learned in their city, in fitting tribute to the firefighters who were lost there. For those readers who were not in Worcester in 1999, knowing this history should make the story that much more significant.

JOAN MORRA '83, '87

I enjoyed the coverage of the J. Geils Band in the Winter 2013 issue of the *WPI Journal*. I thought younger alums might be interested to know that WPI had a surprisingly robust music scene back then. In fact, my fraternity, OX, had a strong complement of musicians. Prior to the popularity of disco, all of the fraternities provided opportunities for students to display their musical talents. You may remember the



party scene in "Animal House" with Otis Day and the Knights? While we were better behaved than Delta Tau Chi, a variation of that musical scene occurred almost every weekend at WPI. I also enjoyed the commentary from my classmate Dominic Forcella '70 that appeared in the sidebar of that story. Between the article and Domenic, I felt inspired to rekindle my own musical interest and so decided to "drum up" some business (which can be found at www.digitalcc.com).

J. D. CATTEL, OX '70

I am proud of the new look of WPI's alumni magazine. You guys have done a great job with the layout and graphics—and, of course, content. My career has taken me into the area of communications and graphics, so I am particularly sensitive to the graphics part of effective communications. Often the first contact a prospective student has with WPI is the printed word and accompanying graphics, which should make a good impression. Frankly, I have always wished WPI's graphics would reflect the great education we all received there. Now it's happening with the alumni magazine!

R. A. PROPPER '57



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WPI

From the National Campaign Chair

DEAR ALUMNI:

As WPI approaches its sesquicentennial year, *if...The Campaign to Advance WPI* presents all of us with the opportunity to prepare our alma mater for its next 150 years. The campaign currently stands at \$147 million toward our \$200 million goal. If you haven't made your gift yet, I hope you'll be inspired by the plans to repurpose Alumni Gym into the physical expression of WPI's distinctive project-based curriculum – what many of us know as the WPI Plan.

More than 100 years ago, alumni recognized a need and raised the funds to build Alumni Gymnasium. Today the need is different but equally great and historic. Alumni Gym is poised for its next phase of life where students and faculty will participate in an exchange of ideas in a dedicated area for problem solving, design, and implementation. The new center will host a range of interdisciplinary programs such as the Great Problems Seminars and robotics engineering, offer space for research and instrumentation, include business acceleration initiatives, and feature an atrium showcasing the WPI Plan and famous WPI innovators and inventors.

Programming for the building is being developed by a committee of faculty and administrators, and a team of trustees is leading the corporate fundraising effort along with WPI vice presidents Stephen Flavin and Bill McAvoy. To date nearly \$4.2 million in commitments from alumni and friends has been secured toward a \$15 million goal. In the coming months we will be looking to you – our alumni – for the balance of the funds needed to repurpose this iconic campus building. With your support we can reopen Alumni Gym as the Alumni Global Impact



Read more about the new Alumni Gym on page 20.

Center in 2015 on the building's 100th anniversary and WPI's 150th.

As alumni of this great institute, we have benefited from our time at WPI. For me personally, my time at WPI was the great enabler of my life. I hope you feel

the same way and that you will join me in supporting this new facility in the heart of our campus that will become a showcase of what a WPI education means to our students today and into the future.

With gratitude for your ongoing support,

A handwritten signature in black ink that reads "Mike".

Michael J. Dolan '75
WPI Trustee and National Campaign Chair

#LIVEWPI



Helping our students to #LIVEWPI

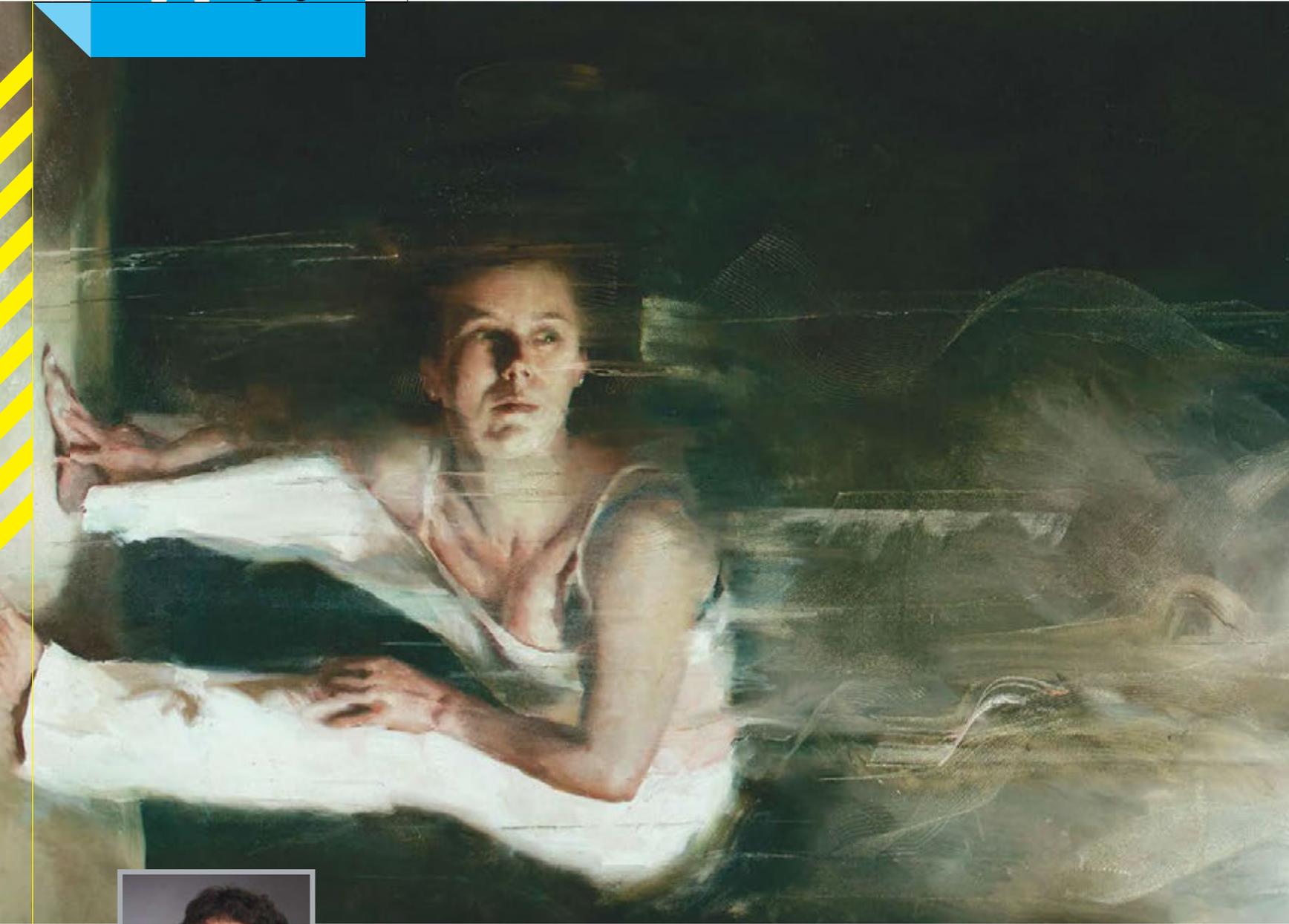
WPI takes great pride in engaging our students in a vibrant and thriving community, which is why we invest in their home away from home. When our students return for the new academic year, WPI's Office of Residential Services will welcome the first class of students "home" to the new Faraday Hall, a 258 bed upper class student residence hall featuring tech suites, in suite kitchens and bathrooms, dedicated parking, and air-conditioning. Residents of Founders Hall and Ellsworth Apartments will see many renovations. First year students in Institute Hall will live in WPI's first Wellness Community promoting the development and maintenance of a healthy body, mind, and spirit through a wide range of wellness programs. The beautiful, recently renovated Morgan Dining Hall will continue to serve the campus community with a wide variety of healthy and delicious meal choices.

For more information please visit wpi.edu/+rso.



WPI

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►CREATE

Professor Displays Digital and Oil Paintings at Fitchburg State

BRITTON SNYDER, professor of practice in Interactive Media & Game Development, recently displayed his digital and oil paintings at Fitchburg State University. *Britt Snyder: Game Design and Other Art* featured 10 works ranging from fine art to the cutting edge of the ever-evolving gaming world.

Though Snyder learned to paint through mentors like artist Dennis Cheaney and at the Watts Atelier of the Arts in California, it was his internship at Blizzard Entertainment (in Irvine, Calif.) that triggered his digital art career. “Digital illustration ... was learned on the job while at game companies—it’s just a natural extension of my previous background in oil painting. I sculpt, as well, but I mostly identify as an oil painter and a digital artist when I’m wearing my video game-maker hat.”



This stunning 4' by 2' oil painting by Britt Snyder was featured recently in *Britt Snyder: Game Design and Other Art*, which ran at Fitchburg State University.

Snyder began teaching at WPI in the fall of 2009. “The thing that drew me to college teaching was that I would be encouraged to explore and grow and then share what I know and have learned with the students. I enjoy interacting with them, especially at a university that’s so project-based and focused on developing complete games.”

Snyder feels that the art found within today’s games is at fledgling stage, and in many ways under appreciated. He acknowledges that the current emphasis on creating believable experiences uses comic books and anime as guideposts – not realism but rather a graphically altered reality. Yet, he admits, “I think that over time, some of these styles will become more diverse, perhaps opening doors similar to what a painter like Picasso did in his time to broaden the scope of what we see.”

▶ QUOTABLE

“I like to say that WPI has been 50 years ahead of its time for the past 100 years.”

CDC EXECUTIVE DIRECTOR **STEVE KOPPI**, ON WPI’S LONGTIME EMPHASIS ON THEORY AND PRACTICE.

▶ ROCKETS

Launching a Passion for STEM Studies

STUDENTS FROM THE Exxon-Mobil Bernard Harris Summer Science Camp at WPI enjoyed an action-packed morning of “rocket launching” in Institute Park. The two-week residential camp introduces historically underserved and underrepresented students to college life and inspires their interest in science and engineering as a potential career path. Bernard Harris Jr., a former NASA astronaut and the first African American to walk in space, visited campus and spent a day with the 48 middle school campers, all from inner city Worcester. “Dr. Harris assisted our campers with a spacesuit design challenge activity,” says director of multicultural affairs Bonnie Hall. “He emphasized the importance of working hard and setting goals, encouraging the campers to always go after their dreams, connecting with them in a very powerful way.”

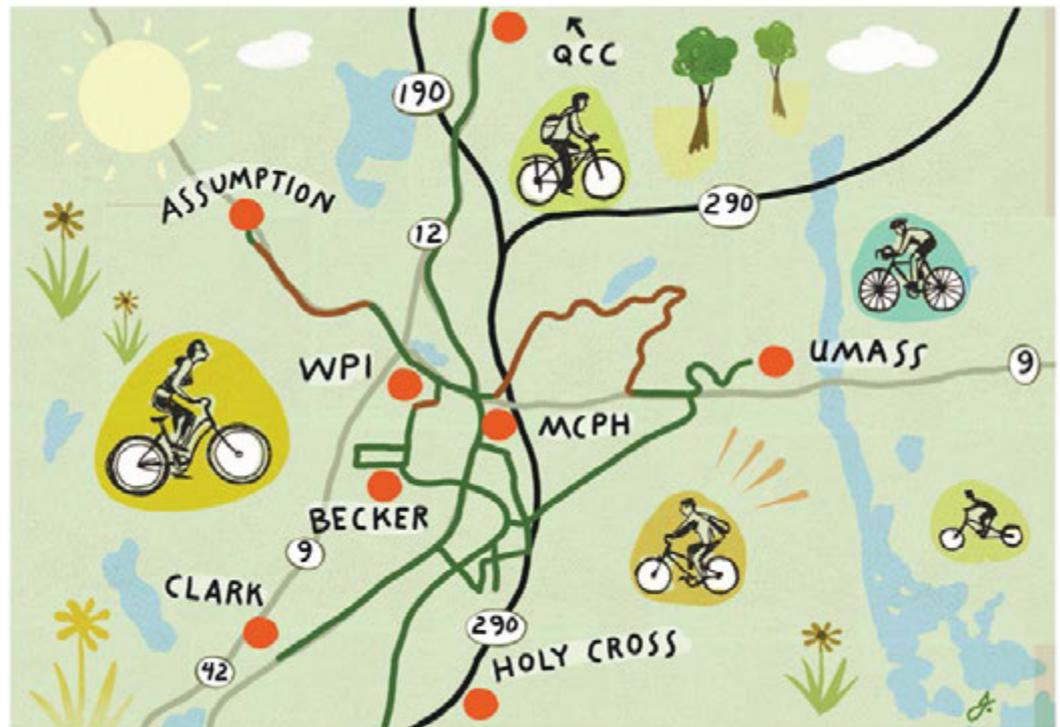


▶ COLLEGE TOWN

Pedal Pushers

WPI STUDENTS are laying the groundwork for a network of bicycle paths to link Worcester's colleges and the downtown area. An IQP team advised by professors Alex Wyglinski and Peder Pedersen brought 15 city and campus officials, activists, and planners to campus last spring for a forum to discuss the possibilities. Their efforts resulted in the formation of a Worcester Bike Work Group tasked with planning the paths. Further MQP work by civil engineering students will engage the city's DPW in determining an implementation strategy.

For cities of all sizes—from Fall River and Providence, to Minneapolis and Washington, D.C.—a “bicycle culture” is an important ingredient for any region that wants to retain the professional populations from its academic institutions, the students report.



WPI students are mapping the way to a more bike-able Worcester.

▶ SURVEY SAYS

Project-Based Learning Has Powerful and Wide-Ranging Impact

WPI ALUMNI HAVE greatly benefited from the university's commitment to project-based learning, long after crossing Earle Bridge with their diplomas, according to a recent study.

The study, which examined the long-term professional and personal benefits of project learning, included a survey of more than 2,500 WPI alumni from the classes of 1974 through 2011.

Survey respondents—who were asked to rate the extent to which their project work contributed to 39 professional skills and abilities, world views, and personal attributes—reported high levels of impact in the following areas:

Professional abilities. Taking responsibility for their learning, developing ideas, integrating information, solving problems, under-

standing ethical responsibilities, using current technology.

Interpersonal and communication skills. Teamwork, project management, effective leadership, written and spoken communication, effective professional interactions.

Professional advancement. Succeeding in business or industry, having opportunities not available to students at other universities, gaining knowledge to inform future plans.

World views. Understanding connections between technology and society, recognizing how their decisions impact others, gaining an awareness of global issues, appreciating other cultures.

Personal impacts. Developing a stronger personal character, achieving work/life balance, feeling connected to the WPI community, having their lives enriched in non-academic ways.

In addition, women reported more positive

impacts of project work than men in 36 of 39 areas, and respondents who completed at least one project off campus noted more positive impacts than those who did not in 33 of 39 areas. Along with the survey, 20 in-depth interviews were conducted to help gain an understanding of why and how the benefits were obtained.

Two papers on the survey and its results were presented at the 2013 meeting of the American Society for Engineering Education, held in June in Atlanta.

Richard F. Vaz, dean of Interdisciplinary and Global Studies, says the study validates what years of experience have clearly shown. “This alumni survey confirms that WPI's project-based curriculum prepares our students for professional success but it also reveals that real-world projects help build character and confidence.”

Likewise, says Vaz, project-based education does more than give students the ability to acquire good jobs when they graduate. “They are more sophisticated, more well-rounded, and therefore much better prepared for whatever the world throws at them.”

▶RETROSPECTIVE

The Art of Retirement

AN EXHIBITION OF photographs, hand-crafted books, and other mixed-media assemblages in Gordon Library was the perfect retirement celebration for Lora Brueck, who for 39 years curated displays of the work of local artists in WPI's galleries. An artist, photographer, poet, and organizer of many Worcester events, including stART on the Street, Brueck retired in July as assistant director of library services for collections management.



“Towering Trees,” one of several striking photographs of Higgins House on display in 39-29: A retrospective show by Lora Brueck.

Brueck came to campus in 1974 as WPI's first archivist. Typing on an IBM Selectric fitted with a special platen, she worked with an army of work-study students, filing the catalog cards by hand. Over the decades, she brought WPI's archival treasures into the digital age, making the collections searchable and making virtual content accessible online. “Lora has worked behind the scenes elegantly and gracefully,” said Dean of Library Services Tracey Leger-Hornby. “Her impact will be felt throughout history, because she kept the history.”

▶TECH

Atlas Lifts WPI Robotics to New Level

IN DECEMBER, WPI advances to the second round of the DARPA Robotics Challenge at the Homestead Miami Speedway in Florida. In its corner is Atlas, a humanoid robot awarded to victors in phase one—the Virtual Robots Challenge.

The DARPA competition aims to spur the creation of a new generation of advanced robots that can go where humans dare not go—for example, inside the earthquake-damaged Fukushima nuclear reactor. In round two, robots will be required to navigate a simulated disaster scene and perform repair operations. Winner of the final competition in December 2014 takes home \$2 million in research funding.

THE ROBOT

Name: **ATLAS**
 Height: **6' 2"**
 Weight: **330 POUNDS**
 Maker: **BOSTON DYNAMICS**
 Price tag: **\$2 MILLION**

The Booty

- Carnegie Robotics sensor head with LIDAR and stereo sensors
- 28 hydraulically actuated joints
- Two sets of hands, one provided by iRobot, one by Sandia National Labs
- On-board, real-time control computer
- Hydraulic pump and thermal management

The Challenge

The robots are required to

- drive a utility vehicle;
- traverse rubble, climb a ladder, walk a catwalk;
- use a power tool to break through a barrier;
- locate and close a valve near a leaking pipe; and
- attach a connector, such as a wire harness or fire hose.



▶ RESEARCH

Surgery Goes Wireless

REBECCA WACHS '03 was a finalist for the Lemelson-Rensselaer Student Prize for her invention of an implantable sensor that wirelessly transmits data from an orthopedic surgery site. Her role as senior research and development engineer for RTI Biologics in Florida has kept her busy, yet she took time out recently to fill us in on where her WPI degree has led her...

What's your role at RTI Biologics?

I support existing products and work to develop innovative solutions to current problems. Due to my background in mechanical engineering, I am also tasked to design experiments to mechanically characterize our products.

What drew you to the sports medicine field?

I like the idea of creating something that can increase the patients' quality of life. I especially love working with naturally derived materials because they hold great promise for future device solutions.

What was it like being a finalist for the prize?

When you are working on something day in and day out, you can get caught up in the details and the trials and tribulations. Being recognized really helped me step away from the minutia and see the potential impact my sensor could have.

What role did WPI play in your current career/life?

I was a mechanical engineering major and I played basketball. Those were the two things that most greatly affected my undergraduate career. The most important academic thing WPI taught me was how to think critically and solve a problem. To this day, this has been a skill that I heavily depend on and trust in. The most important life skill I learned in basketball is what it means to be part of a team and how to be a team player. As I progress in my career, I become increasingly aware of the importance of cultivating a great team. Overall, I loved my experience at WPI. It was the place where I grew up and made amazing lifelong friends. It will always have a soft spot in my heart.



▶ PROJECTS

Heyv naket owv?

IF YOU CAN read the words above, you're part of a very small minority. If you don't teach the next generation, your language and culture may disappear.

Of 6,900 languages left on the planet, it's estimated that 60 to 90 percent will not survive into the next century. In the United States, English and Spanish are edging indigenous languages out of homes, and 65 are already deemed extinct. New Mexico alone has five indigenous languages that are considered endangered or vulnerable.

In D-Term, three WPI students spent seven weeks in Santa Fe developing a Native Language Revitalization Resource Directory for the Indigenous Language Institute (ILI). Starting with the ILI's 15-year-old paper directory, the team updated existing information and

Level	Speakers	Largest Spoken Domain
0 Safe		Businesses & Government
1 Vulnerable		Schools
2 Threatened		Homes
3 Endangered		Homes (not to children)
4 Severely		Ceremonies
5 Critical		Ceremonies

wrote programs to auto-convert entries to a wiki-format that can easily be managed by contributing organizations. The directory includes sound samples, funding sources, and contact information.

"The WPI project team made ILI's plan of making this resource accessible online a reality," says executive director Inée Slaughter. "Populating the directory with information about Native American and aboriginal language programs worldwide will connect diverse tribes and programs to learn about and from each other. We were impressed with the WPI students' skills as well as their maturity, collaborative spirit, and high work ethics."

In case you're *not* one of few thousand remaining speakers of the Creek language: The headline above says "What is it?"



▶ GOOD CALL

Leadership Role Behind the Plate

A **CAMPUS-WIDE EMAIL** inviting faculty, staff, and students to participate in an end-of-summer softball game attracted an unexpected participant—WPI's interim president, Phil Ryan '65, who wisely nabbed a leadership role behind the plate.

"Umping is a great way to make friends," declared Ryan facetiously, whose sound judgment on balls and strikes brought instant legitimacy to the contest. The former WPI hockey player is no stranger to athletics or to making tough calls, which was noted by the players.

"President Ryan's strike zone was accurate and consistent throughout the game," said pitchers from both teams. "He also brought a healthy supply of humor that greatly enhanced the contest."

The game took place on one of WPI's newly completed rooftop fields, which were featured on an episode of WCVB-TV's *Chronicle* in mid-September.

For those keeping score, the Kuwadas defeated the Gompeis, 11–8.

▶TUSK

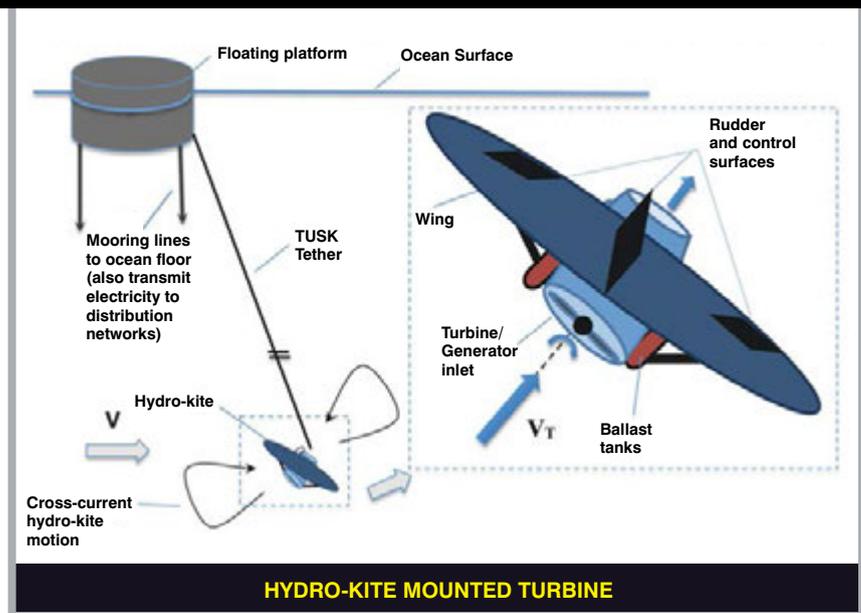
Renewable Energy from Under the Sea

MECHANICAL ENGINEERING associate professor David Olinger will conduct the first comprehensive and integrated analysis of a new renewable power source that could play a major role in meeting the country's growing energy needs.

He will use a three-year \$300,000 National Science Foundation grant to study the effectiveness of using a tethered undersea kite system, known as TUSK. The rigid-winged hydrokinetic kites would harvest energy using the constant movement of ocean currents or tides.

"I've worked on kites in airborne systems that extract energy from the wind using the same principle, so this is a natural extension of that research," says Olinger, who believes WPI is the only university in the country studying TUSK technology. "Power from ocean currents is a great energy source that is being underutilized. It definitely has a lot of potential."

The kite generates power by moving an attached turbine in high-speed figure-8 motions under the ocean surface. It is less expensive, more durable, cost efficient, easier to maintain than current fixed underwater turbine systems, and it can be used more effectively in both shallow and deep water. Plus, it can produce 64 times the power of a similar sized fixed turbine.



Olinger says small-scale plastic prototypes will be fabricated using existing 3D printing capabilities at WPI and tested in water flumes at Alden Research Laboratory in Holden. The research team will also develop computer simulations to predict the performance of the kites. He said one student team will be doing its MQP this year on the TUSK system, and several PhD students will work on the research.

He intends to pursue subsequent grants to test a larger scale prototype in the Florida Gulf Coast stream, where he estimates 16 million homes could be powered using the TUSK system.

Olinger will work with longtime collaborator Gretar Tryggvason, professor of aerospace and mechanical engineering at the University of Notre Dame, and WPI mechanical engineering professor Michael Demetriou on the study.

▶DRINK

Engineers and Water Do Mix

SINCE 2008 the WPI student chapter of Engineers Without Borders (EWB) has been working to ensure clean drinking water for Guachtu'uq, a small mountainside village in Guatemala. In May a delegation returned to Guachtu'uq to assess two pilot rainwater catchment systems and to gather data for the next phase of the project. The team was accompanied by IGSD professor Bob Hersh and Mike Reiter '00.

Villagers are dependent on the *finca*—a water collection box on a privately owned spring that is controlled by wealthy landowners. Water from the *finca* is visibly unclean and sometimes runs dry. The time-consuming task of fetching water usually falls to children, who miss school time hauling heavy buckets up a steep dirt road.

"The hardest part of the project is not the technical implementation, but the social aspects," says EWB public relations chair Caryn MacDonald '14.



EWB members Jessie Ciulla, Caryn MacDonald, Sebastian Vergara, and Tom Moutinho and alumni mentor Mike Reiter '00 pose with members of CeCEP (Community Education Center Pokomchi), who assisted with the project.

"We have to make sure that what we're doing is culturally accepted, and that the owners understand what's involved. There are tensions and dis-

putes over water here, since it's such a scarce resource."

Reiter, a longtime EWB member, says, "The community was so open and welcoming to us. We really got to know the families and learn about their lives, which will help us design better water systems to improve their quality of life." As a professional mentor to the group, he says he holds the students to the same standards he applies to the engineers who report to him at his job at Pratt & Whitney. "The students are responsible for planning and execution of the project," he says. "My role is to monitor their progress and give them guidance."

The group's long-term goal is to install rainwater collection systems for all of Guachtu'uq's 35 houses, with gutters custom designed for the unique configuration of each roof. In May 2014 another travel team will return to install the next 10 tanks. "It's an ambitious goal," says MacDonald, "but our club is committed to providing a tank to every household."

INSTRUCTIONS- EACH PLAYER USES THEIR OWN PENNY TO PLAY! HEADS= MOVE 2 SPACES TAILS= MOVE 1 SPACE!

ODD!
THIS WILL BE
A LONG YEAR!
MOVE AHEAD
ONE!

MEET YOUR ROOM
MATE FLIP AGAIN TO
SEE IF YOU GET ALONG!

EVEN!
SCORE NEW
FRIEND! MOVE
AHEAD TWO!

EXHAUSTED BY
BOYNTON HILL!
LOSE A TURN!

WELCOME
START
TO WPI!

EXPLORE WORCESTER!
FLIP AGAIN!

STAY UP
ALL NITE
LOSE A TURN!

SUCCESSFULLY
PRONOUNCE
WOOSTAH! MOVE AHEAD 2!

SPEND ALL THREE DAYS
AT GAMING WEEKEND. GO
BACK ONE!

UNPAID INTERNSHIP ENDS
FIND A JOB (FLIP AGAIN)

PENNY WARS!
TRADE PENNIES WITH
THE PLAYER ON LEFT

GO HERE
IF YOU FLIP
TAILS!

PERFORM AT TALENT
SHOW! FLIP AGAIN TO SEE
HOW YOU DID!

GO HERE
IF YOU FLIP
HEADS!

YOU WERE A
SMASH! FLIP AGAIN!

YOU ARE FEATURED AT
WINTER CARNIVAL! MOVE
AHEAD 2

CELEBRATE DIWALI
WITH ISO!

OVER INDULGE AT WOODBERRY!
CAN'T MOVE- LOSE A TURN!

CHALLENGE RPI TO
ENGINEERING TRIVIA AND
WIN! MOVE AHEAD 3!

GOMPEI'S REVENGE!
GO BACK TWO!

EARLE BRIDGE SHORTCUT
SLIDE ACROSS!

WRONG
ANSWER? GO BACK
ONE!

WALK
THRU THE FOUNTAIN!
GO BACK ONE SPACE!

ANSWER TRIVIA!
WHERE DID WPI GET ITS
SCHOOL COLORS FROM?

SO
DO
YOU
ALWAYS TAKE THE
EASY WAY? GO
TO BLUE SPACE

RIGHT ANSWER? BLAST OFF TO HERE!

ON NEXT
TURN
FLIP
HEADS
MOVE 1
TAILS
BACK
1!

WIN!
IF YOU KNOW
WPI'S FOUNDING
YEAR!

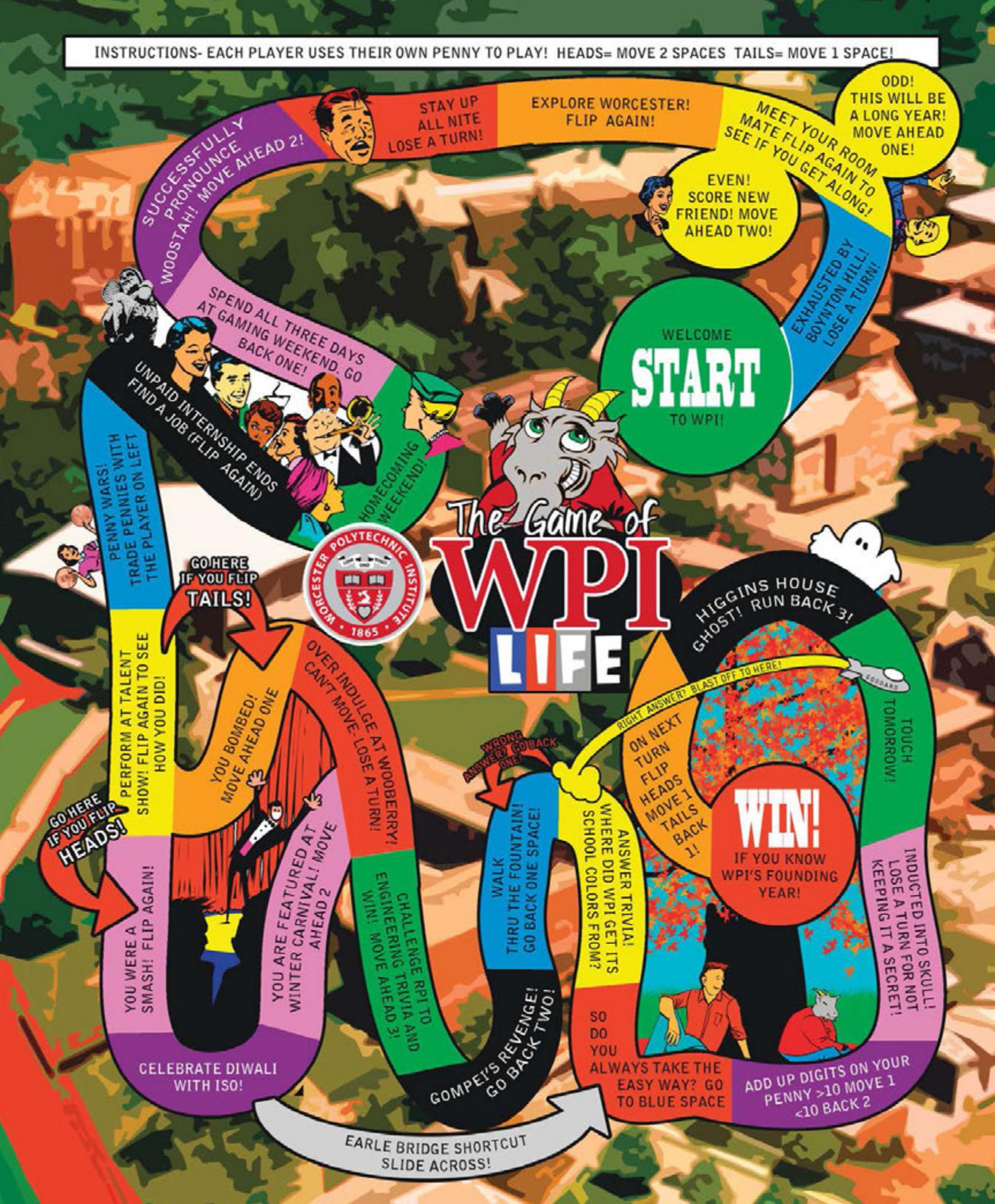
INDUCTED INTO SKULL!
LOSE A TURN FOR NOT
KEEPING IT A SECRET!

HIGGINS HOUSE
GHOST! RUN BACK 3!

TOUCH
TOMORROW!



The Game of WPI LIFE





THE TRANSFORMATION OF ALUMNI GYM

IN 1915 WPI ALUMNI STARTED THEIR OWN FUNDRAISING INITIATIVE AND TRANSFORMED THE CAMPUS. CAN HISTORY REPEAT ITSELF?

BY SUSAN BURLINGAME



IT'S THE STUFF OF WPI LEGEND.

More than a century ago, with no place on campus designated for athletics or general physical fitness, students, in true WPI fashion, took it upon themselves to solve the problem. They built themselves a makeshift gym. In the woods.

Appalled that students had no appropriate place to exercise, alumni from the Class of 1880 decided to right the wrong. They launched a broad alumni appeal to raise money. The result of their effort was Alumni Gymnasium, which opened its doors in 1916—nearly a century ago.

One can surmise that the WPI Class of 1880 possessed similar qualities to today's WPI graduates: ambition, know-how, the ability to work together, the inability to look the other way when a problem needs to be solved.

In 2013 Alumni Gym is still standing, a testament to that first alumni fundraising effort.

Today WPI alumni are leading a new charge, the focus of which is, once again, Alumni Gym. With the opening of WPI's Sports and Recreation Center in 2012, Alumni Gym stands empty, ready to be repurposed into a state-of-the-art building where WPI's distinctive project-based education will have a true home. A key component of *if...The Campaign to Advance WPI*, the university's \$200 million fundraising effort, Alumni Gym will retain its façade, its location, its 37 sports-inspired gargoyles, and its sentimental value—but it will serve WPI students like never before.

Tyco CEO and WPI trustee George Oliver and his wife, Karen (Zalewski), both Class of 1982, are among several alumni who have stepped forward to support the project.

"There was never any question as to whether Karen and I were going to support WPI. We credit our WPI experience with being the catalyst of our success, and we believe in giving back," says Oliver. "But in this fast-paced world where everything is about speed and innovation, we want to make sure our alma mater is positioned to continue producing high-quality technical leaders—people with technical depth as well as analytical,



problem-solving, and entrepreneurial skills. A repurposed Alumni Gym will give WPI a competitive edge, and it will have a tremendous impact on students for their entire WPI experience—while they are students and after they graduate."

The Olivers' gift will support space in Alumni Gym for WPI's Great Problems Seminars, which the Olivers call "accelerators" that distinguish WPI from other schools. Other lead gifts to jump-start the project have come from the ExxonMobil Foundation, through trustee and national campaign chair Mike Dolan '75; from family and corporate gifts pledged by trustee Joan Bolduc Szkutak '79, retired Procter & Gamble executive, and her husband David Szkutak '79, and Edna and Doug Noiles '44.

RIGHT BUILDING, RIGHT LOCATION, RIGHT TIME

Mike Dolan remembers Alumni Gym for its pitched track that required "37 and a half laps to make a mile" and for "the spot in the gym where we couldn't shoot a basket for fear of hitting the rafters." George Oliver says it's "just the place where students worked out." Joan Szkutak joked that Alumni Gym "was

already old when I was a student. It was not exactly an aspirational place." Many alumni remember Alumni Gym simply for its bowling alley located in the basement.

No one, however, seems to lament the building's transformation. Turning it into an "aspirational facility that is all about experiential learning and a project-based education," as described by Szkutak, is something the faculty, trustees, and alumni easily agreed upon. Even before the Sports and Recreation Center was completed on campus, plans for the center started taking shape.

On the National Register of Historic Places and perfectly located at the heart of campus, Alumni Gymnasium is "particularly well-suited for its new purpose," explains WPI Provost Eric Overström.

"We are focusing on how to best utilize the features of a building that has been here for 100 years, and this building almost uniquely presents itself for the kinds of activities we expect to take place there," says Overström. "For example, much of the high-level instrumentation and characterization-type work is vibration-sensitive. These activities will benefit from being housed in a building with a solid underpinning. And because our project-based



JUMP-STARTING THE ALUMNI GYM PROJECT

Neil McDonough is not an alumnus of WPI. But like his father before him, (the late Myles McDonough—also not an alumnus), McDonough is a trustee. The CEO of FLEXcon, a Spencer, Mass.–based leading global manufacturer of pressure-sensitive films and adhesives, McDonough believes in what WPI delivers. “We employ a number of WPI graduates and are always looking for more,” he says. “They hit the ground running because of the project orientation of their WPI education, and they’re used to group work and real-life adaptability.” A center for global impact at Alumni Gym is particularly interesting to McDonough not only because it will serve as a focal point for project activity but also because of its business incubator. “WPI is not just a school of engineers. It’s also a school of business. The opportunity to help engineers and inventors reap the rewards of their insights and sweat, to help value the potential of projects, grow them, commercialize them is what the business incubator will bring to the center for global impact and why we’re happy to support it.” The Business Incubator will be named in memory of Myles McDonough.

As National Campaign Chair for if...The Campaign to Advance WPI, Trustee Mike Dolan '75, senior vice president of Exxon Mobil Corporation, gives because “WPI is the great enabler of my life. People have to realize that someone before them built the buildings, donated money for scholarships like the one I received,” he says. For a center for global impact at Alumni Gym, however, Dolan asked the ExxonMobil Foundation to consider a gift. “I can’t tell the Foundation what to do, I can only ask,” Dolan says. “The Foundation typically spends its money on STEM education, empowering women’s programs in third-world countries, and malaria research in Africa. But at the end of the day, companies who hire engineers and scientists get great benefits from these engineers and scientists who are prepared for them. We are in partnership with schools like WPI, which is on ExxonMobil’s list of target schools where we get our best people. We have about 70 active employees who graduated from WPI, and we like them because of the education they received. The Foundation recognizes that Alumni Gym is a facility that needs to be provided to help further the quality of that education. It was an easy sell. We hope other corporate foundations will realize the benefit of investing in WPI as well.”

Trustee Joan Bolduc Szkutak '79 and her husband, David Szkutak '79, have supported WPI because they believe “it’s important to give back and repay WPI for enabling our success.” While students, Joan and David were very engaged on campus—in sports, in campus life, in the Skull honor society—a fact, Joan says, that contributed to their continuing connection to WPI through the years. “We always have felt a warmth for and a desire to help the school because of what it allowed us to accomplish in our lives.” Joan recently retired after a 33-year career at Procter & Gamble; her husband was president and CEO of US Precision Lens prior to retiring a few years ago. “Experiential learning is critical to the WPI curriculum,” Szkutak says when explaining her reasons for supporting Alumni Gym. “Having a facility dedicated to experiential learning will enable students to do a much broader diversity of projects than they are doing now. The new facility will give them flexible space so they can be collaborative, innovative, and creative—no matter what their ideas are. We chose to give to Alumni Gym because it’s time for WPI to showcase what makes it distinctive and what makes our alumni so successful. I hope my fellow alumni will think back to what their WPI education enabled them to do and on the success of their careers. I hope they will want to be part of helping the next generation of students have an even better experience by helping make the Alumni Gym project a reality.”

work is meant to be in an open, collaborative space—the upper level gymnasium will provide high-tech, flexible, in-the-moment space for increased student and faculty interaction across disciplines and projects.”

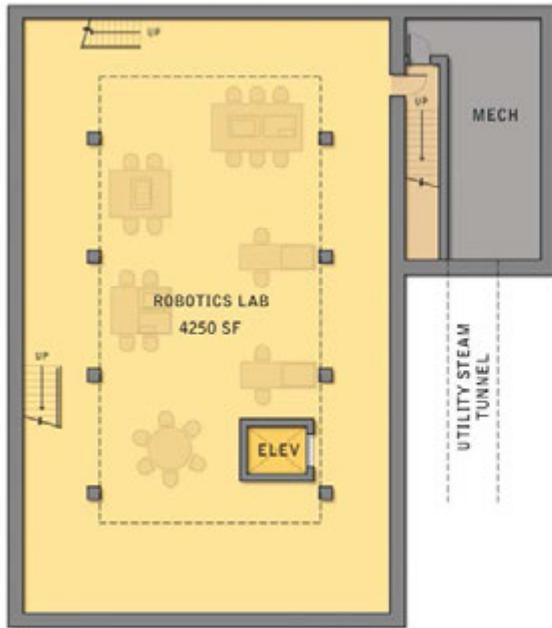
While the “bones” of the building will remain intact, significant interior improvements will make the building almost unrecognizable from the inside. In addition to collaborative project workshop space in the old gymnasium and dedicated spaces for the Great Problems Seminars, the center for global impact at Alumni Gym is slated to house the robotics engineering lab in the former swimming pool. The center will also include a business development incubator and entrepreneurship space, flexible tech suites, and a showcase atrium, among other amenities.

Touting the high-tech and adaptable nature of the new building, Rick Vaz '79, PhD '87, dean of interdisciplinary and global studies at WPI, says the Alumni Gym will connect off-campus projects back to the campus through the use of dynamic displays, real-time videos, and other communications tools.

“Since the WPI Plan’s inception more than 40 years ago,” Vaz points out, “our project-based curriculum has distinguished WPI from every other college and university. Yet, we’ve never had a physical manifestation of it on this campus. There has been no common, central location where students from every discipline can come together to work on interdisciplinary problems. Repurposing Alumni Gym gives us an opportunity to create something that is at the heart of our distinctiveness. What’s really remarkable about WPI is that here we celebrate our students. The true story of WPI is about what students do and the alumni they become.”

REINFORCING THE CURRICULUM

In a survey of WPI undergraduate alumni from 1974 to 2011, the University of Massachusetts Donahue Institute assessed the impact of project work on WPI graduates. The survey findings reinforced a conclusion that “the formal project work completed by WPI Plan alumni—in the form of IQPs and



FROM PROJECTS TO PROTOTYPES FOUR FLOORS OF INNOVATION

WHEN IT CAME TIME TO repurpose Alumni Gym, the steering committee tasked with the job quickly settled upon the idea that the new structure should “embody the WPI Plan.”

“Repurposing Alumni Gym presents a terrific opportunity for WPI,” says Provost Eric Overström who chaired the committee composed of faculty, staff, and students. “Embodying the WPI Plan emerged as a strong theme, which made functionality a key component.”

The end result is a building designed to enhance project-based collaborative learning, creating a hub for innovation, while reinforcing the unique attributes of a WPI education.

“The new Alumni Gym is designed to foster multidisciplinary work,” says Overström. “It will help our students move from good ideas, to creating project teams, to building prototypes, to taking projects to commercial markets—all within one building.”

FIRST AND SECOND FLOORS

The repurposed Alumni Gym will open to a 1,400-square-foot atrium showcase rising to the top of the third floor, creating an expansive space that will dramatically alter the building. The atrium will display WPI past innovations, alumni inventions and accomplishments, current student projects, and real-time updates from project centers around the world. The expansiveness of the atrium, along with its displays, will immediately communicate what’s possible within this building.

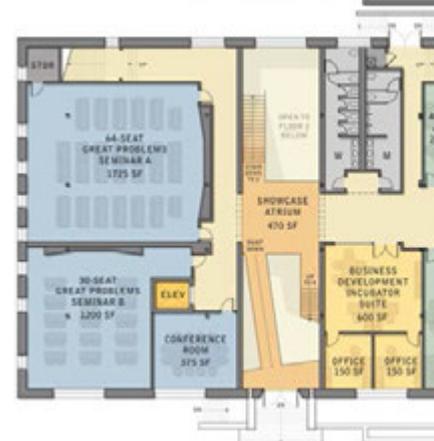
The first floor, and the pool area just below it, will display WPI’s first-in-the-nation Robotics Engineering program. It will include a robotics gallery, featuring WPI’s pioneering work in robotics, and a large maker space designed to encourage creative innovation. Adjoining the maker space is a fully equipped instrumentation lab which will allow project teams to quickly build, characterize, and test prototypes efficiently.

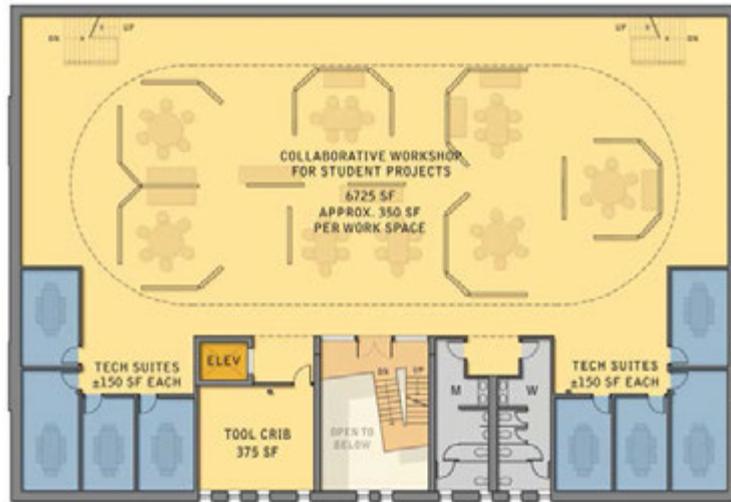
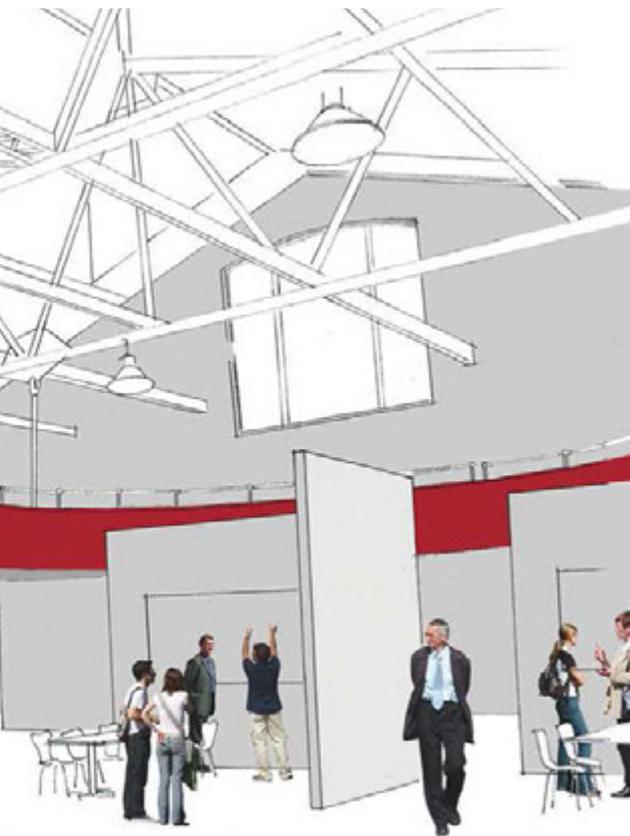
THIRD FLOOR

For projects with commercial potential, students may simply head to the business incubator and the center for entrepreneurship on the third floor. Turning good ideas into real-world products and solutions is the essence of innovation, so expectations are high for the incubator. Across from that will be meeting space for the Great Problems Seminars, WPI’s pioneering freshman program that asks students to work at the intersection of society and technology by tackling some of the world’s most imposing problems.

FOURTH FLOOR

A 6,725-square-foot open, collaborative space, the Innovation and Invention Exchange, is designed to inspire the exchange of ideas that enhance MQPs, IQPs, and humanities projects, and provide a space where teams can interact with both internal and external partners. A series of tech suites will also be housed on the fourth floor, creating a dynamic area where students and faculty can interact with industry, project sponsors, and government agencies.





MQPs—has had a positive and long-term impact on their lives, especially in terms of their professional success and their development of a strong personal character.”

Myles Walton '97, director of aerospace/defense research for Deutsche Bank Securities and president of the WPI Alumni Association, was not surprised by the conclusions of the survey. “WPI alumni certainly talk about friendships and activities, but they also talk about their project experiences. Doing research around a core problem over an extended period of time—with IQPs and MQPs, either here or abroad—really differentiates the WPI undergraduate experience and is a central part of people’s success.”

Walton says that the repurposing of Alumni Gym offers a unique opportunity for alumni today to do something even more dramatic than alumni did at the turn of the century. “Back then, alumni fulfilled an important need for this campus. Today, WPI alumni have a similar opportunity. We can provide a campus hub for the collaborative projects students are doing today.”

The turn-of-the-century appeal that originally built Alumni Gym was spearheaded by the Class of 1880, but all alumni were invited to participate. Walton sees the same scenario unfolding this time around.

“I hope we can get alumni from across the spectrum to participate in the campaign to repurpose Alumni Gym, even if they can’t give at leadership levels,” he says. “It will send a message that alumni have a role to play on campus, that they are contributing in an active way, and that we can come together for a common purpose, a shared vision.”

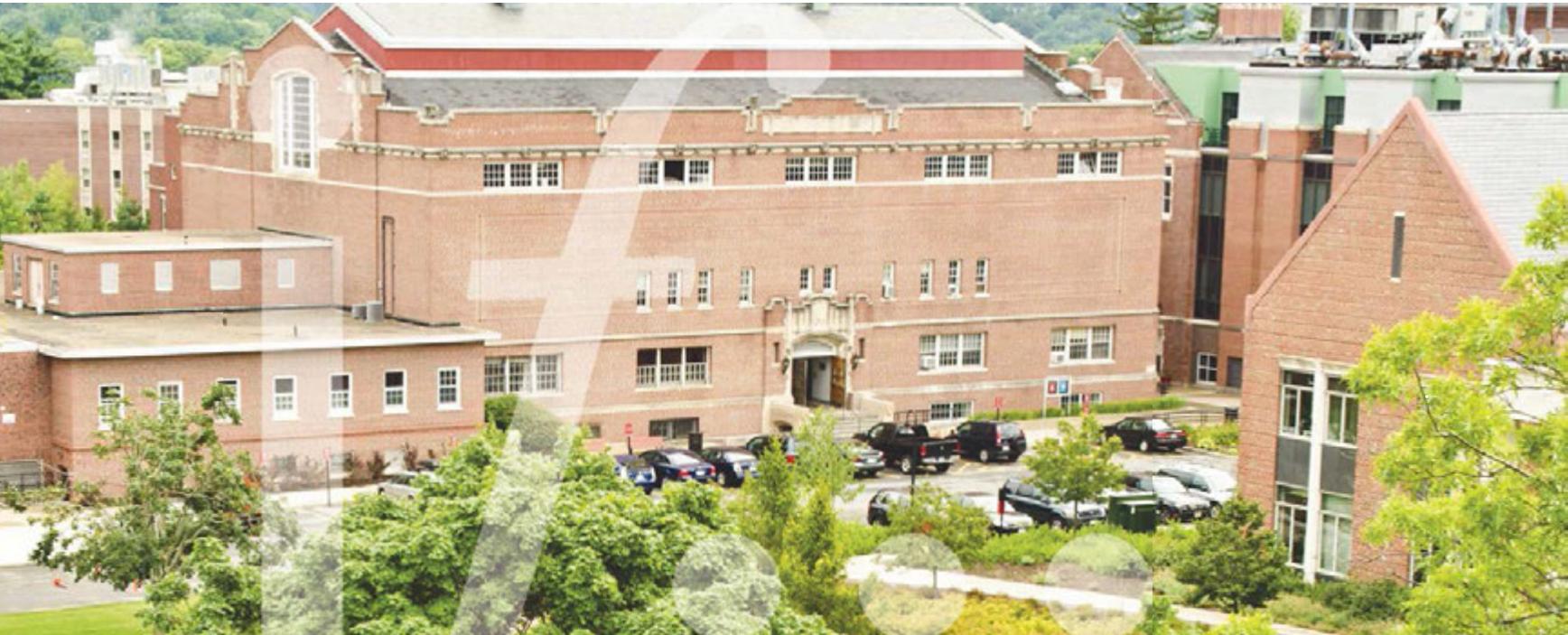
As for George and Karen Oliver, they see opportunity—an opportunity to transform WPI in a critically important way. “The WPI Plan was innovative when it was launched in the 1970s. It brought WPI to another level, and we’ve learned that although others claim to have a similar curriculum or program, no other institution even comes close to having matured the project-based experience the way WPI has. The Alumni Gym project is going to do the same thing the Plan did—take WPI to the next level.” ■



George and Karen Oliver '82



the campaign to **advance WPI**



IF... WE INVEST IN STUDENTS. IF... WE INVEST IN FUTURE LEADERS AND INNOVATORS. IF... WE INVEST IN PLACES AND SPACES.





DOUGLAS NOILES, CLASS OF 1944, is a renowned inventor and consultant, best known for his work perfecting artificial hip and knee joints. Doug and his wife, Edna, believe fervently in the power of education to inspire and drive success. Their generous gifts to *if...The Campaign to Advance WPI* have established the Edna T. and Douglas G. Noiles '44 Endowment for K-12 Outreach at WPI. Most recently, the Noileses have made a significant commitment of nearly seven figures to support the renovation of Alumni Gym into a state-of-the-art center for global impact—to support the next generation of great inventors.

IF... WE INVEST IN OPPORTUNITY. *Then...* JUST IMAGINE WHAT WE COULD ACCOMPLISH.

if... The Campaign to Advance WPI — a comprehensive, \$200 million fundraising endeavor — is about the students we educate and the leaders they will become. The Campaign will provide the critical financial aid and supply the facilities, programs, and people that help us prepare our students to thrive in and contribute to our rapidly changing world.

If... you join the Noileses and help us reach our goal, you will strengthen an already robust and critically relevant institution and provide our students with the means to achieve their aspirations for the benefit of us all.

If... we imagine a bright future, together we can make it happen.

MAKE YOUR GIFT TODAY.

ONLINE: [WPI.EDU/+GIVE](https://wpi.edu/+give)

PHONE: 508-831-4177

EMAIL: [IF@WPI.EDU](mailto:if@wpi.edu)



WPI



10 10
13.9 13.9
7 7
9.7 9.7
0 0

SOUTHERN

Georg von Neuenayer (German)
Cape Norvegia

Lyddan Island

Halley (U.K.)
Coats Land

Belgiano II (Argentina)

Falkland Islands

Mount Seelig
Whitmore Mountains

Lesser Antarctica

Byrd Land

Mount Sidley
4,181 m (13,717 ft)

Ross Ice Shelf

Roosevelt
4,026 m (13,209 ft)

Greater Antarctica

Vostok (Russian Federation)
South Geomagnetic Pole

Wilhelm II Land

Merri (Russian Federation)

Wilkes Land

Altkhaydar Island

Philippi Glacier

Masson Island

Vincennes Bay
Casey (Australia)

Cape Poinsett





Hey, Jeff, how's the weather up there

illustration by matt herring

BY JOAN KILLOUGH-MILLER

YOU COULD SAY THAT JEFF SPALETA'S CAREER IS A BIT BI-POLAR—OR DARN CLOSE TO IT. HE WORKS AT BOTH ENDS OF THE GLOBE, FROM ALASKA TO ANTARCTICA, TO HELP SCIENTISTS UNDERSTAND INTERACTIONS BETWEEN THE SUN AND THE EARTH AT THE LEVEL OF THE IONOSPHERE. HE'S PART OF A NETWORK OF FAR-FLUNG COLLABORATORS WHO PRODUCE REAL-TIME FOOTAGE OF SOLAR EVENTS THAT COULD WREAK HAVOC DOWN HERE ON EARTH.

At 6 a.m.

ON A SUMMER MORNING, cheerfully taking a call at his home in Fairbanks, Alaska (“Hey, the sun’s been up for hours!”), Jeff Spaleta ’98 has already downed multiple cups of coffee and is ready to talk weather. Earth weather—which he’s experienced at extremes that most of us can only imagine—and space weather. As a post-doctoral fellow at the Geophysical Institute, University of Alaska Fairbanks, Spaleta is responsible for remote sensing and signal processing of solar events occurring 50 miles overhead.

His group—called SuperDARN (DARN stands for Dual Auroral Radar Network)—is part of an international collaboration that provides a global picture of convection patterns in the upper atmosphere. “The SuperDARN network is a vital instrument for now-casting global space weather as it’s occurring,” Spaleta explains. “SuperDARN can’t be predictive the way Doppler weather forecasts are on Earth, but mapping the comprehensive data can help further our scientific understanding of atmospheric dynamics.”

It’s hard not to talk about the weather with a man who considers Christmas at the South Pole a summer vacation. As Spaleta tells it, “I leave Fairbanks when it’s minus 40 degrees with 20 hours of darkness, leaving my poor wife behind, living the Alaskan winter, while I’m enjoying the Antarctic summer.” For him, a month in the sun at 12 below is definitely the better end of the deal. “Actually, it’s really nice at the South Pole in January,” he says. “You can get a sunburn and frostbite at the same time, if you want to.”

With four radars owned by his home institution (two in Alaska, and two in Antarctica), plus responsibility for the electronics of sev-

eral others in the network, Spaleta spends a lot of time in remote places. When a new installation goes up, all hands are needed to erect towers and lay cables before Spaleta can be let loose on the electronics. The global network of radars spans the globe (see sidebar) and runs under a cooperative agreement, producing identical data products that are consolidated to produce a global map of convection patterns in the upper atmosphere at a temporal resolution of 1-2 minutes.

Spaleta, a physics and math major while at WPI, with a PhD in

astrophysics from Princeton, has a more succinct explanation of his job. “I do Doppler radar for the upper atmosphere.” He’s conscious of how geeky that sounds. “It’s not sexy, right? It’s not like finding life on Mars.” It’s a good thing he met his wife, Karen (Hirst) ’00, at WPI, rather than through speed dating. He considers himself lucky, since there were hardly any women physics majors at WPI at the time. “That, I believe, is a perennial problem everywhere,” Jeff remarks dryly. It was a small madrigal choir that drew them together. “It was just a fluke that Karen was also majoring in physics. She’s three years younger, so we didn’t have any classes together.”

After graduate work at Princeton (Jeff) and Rutgers (Karen), the two physicists then had to solve the “two-body problem,” as Jeff puts it. Fortunately, they were both offered jobs at a research facility in Alaska. Now they’re

both employed at UAF, although their roles do not intersect. “Sadly, we do talk work a lot at home,” he admits. Jeff asserts that Karen’s work, conducting trace element analysis in the Advanced Instrumentation Laboratory, is much sexier than his own. “Karen

SuperDARN Specifics

- ↻ 36 existing radars; 22 currently operating in northern hemisphere, 10 in southern hemisphere
- ↻ 17 independent research groups from 11 countries
- ↻ SuperDARN network has been in operation for 20 years; the oldest radar (at Goose Bay, Labrador) was built in 1983 and is still operating
- ↻ University of Alaska Fairbanks operates sites in Kodiak and Adak, Alaska, and at the South Pole and McMurdo research stations
- ↻ All U.S. sites are NSF-funded

Download SuperDARN data at superdarn.org

is in charge of the equipment you see on CSI, only they're not using it to solve crimes," he says. "She's the University's in-house expert on inductively coupled plasma spectroscopy. Instead of studying the behavior of plasma, she is using it as a tool to do very precise measurements."

Spaleta's passion for plasma physics was sparked by his MQP on sonoluminescence, which he describes as "little glowing bubbles in water produced by sound waves." Doing the literature review, "I got familiar enough with plasma physics to find it fascinating, but not familiar enough to be scared off by its intractable complexity." His project won the Physics Department's Robert H. Goddard Award and propelled him on to graduate research in the fusion energy program at Princeton.

The scale of the SuperDARN project "turns my world upside down," Spaleta says, compared to his graduate experiments with laboratory plasmas. In the lab, the plasma was at arm's reach—his to manipulate with radio waves. "Now I'm remote-sensing natural dynamics that are hundreds of kilometers away. I can't control it. I like the challenge of that, because you're not just running an experiment with the parameters locked down. We can't simulate space

weather in the laboratory. The only way to understand it is to watch it and correlate patterns over time."

SuperDARN offers terrific scientific bang for the buck, says Spaleta. "Having a network of long-lived, ground-based instruments with overlapping views lets us capture the full picture of plasma dynamics," he says. "Satellites are great at providing very precise measurements at a single point, but so far it has been cost-prohibitive to launch constellations of multiple satellites on a regular basis. We're striving to work more effectively with satellite researchers to better correlate data at points when their orbital paths align with radars in our network."

All SuperDARN primary investigators sign an agreement to share their data products, which are available online through a Java Applet that delivers packets of data from the radars right to your computer. "One radar by itself is interesting, but it's not as interesting as having ten radars," says Spaleta. The one remaining gap in the Northern Hemisphere will soon be closed when a Russian SuperDARN comes online. "That's the really cool thing about it. It's not one institution with instruments all over the world—it's institutions all over the world, with their own instruments."



Solar weather events rarely make headlines. Storms in the ionosphere don't affect us directly, but they can wreak havoc on our technology—which, in the GPS-dependent 21st century, means they can shut down communications, navigation, and data-driven industries. A recent *Washington Post* Wonkblog article called “When Space Weather Attacks” suggests that if an event on the scale of the 1859 geomagnetic storm known as “The Carrington Event” occurred today, it could leave 20 million to 40 million people without power, possibly for years. Before the advent of the telegraph, the only impact would have been bright lights in the sky.

“Anyone who puts satellites up and maintains electronic equipment is very interested in what’s going on in the ionospheric sector of the atmosphere,” says Spaleta. “The Air Force is certainly interested.” Utilities and industry are starting to pay attention and design robust and redundant systems to guard against disaster.

With some of the first-generation SuperDARN radars in operation for more than two decades, Spaleta’s current challenge is to figure out how to do technology upgrades at the older sites, so their capability matches the newer sites. “With software-defined radio, using digital signal processing you can go back through the data and re-process to get more without disrupting the data product we’re already producing,” he says. “The first radars were situated to look at the auroral zone, because everyone expects that to be where the action is. But now, with SuperDARN installations extending inward from the poles to lower latitudes, we’re seeing surprising plasma flows over the northern United States that are picked up by newer radars in places such as Virginia and Kansas.

Spaleta, who came to WPI from North Carolina, says he’ll take 50 below in Fairbanks over zero degrees in Boston. “What’s better about Alaska is that it’s ridiculously dry. It’s so cold, you actually don’t get much snow, and the snow is so fine, you can just blow it off your car. In New England, you feel the wet and cold in your bones. Here in Fairbanks, you just put on another layer and you feel OK.”

The South Pole was definitely an “off-the-grid experience,” compared to the city-like bustle of the McMurdo research station on the coast of Antarctica, which in peak season hosts more than a thousand researchers. “At the South Pole, there’s no trees, no animals—just a hundred people and a lot of compacted ice.”

The tiny South Pole research station has a small-town feel, “but it’s definitely not frontier living,” says Spaleta. “They do a good job with the food, because they know you’re stuck there.” Aside from the construction difficulties of building on top of a mile of compressed ice and snow that never melts, the main hardship was having phone and internet access only 8 hours a day. “Those 8 hours do not match up with real time, when you would want to be online,” he notes.

On January 21, UAF team leader Bill Bristow posted from the Amundsen-Scott South Pole Station:

“I am pleased to announce that the world’s highest latitude radar is now on the air. The newest SuperDARN radar was constructed over the later half of December and first half of January and put into operation on January 21st. The construction work was done by the Antarctic Support Contractor, Lockheed-Martin, along with Jeff Spaleta, UAF student Alex Morris, and me. The radar is located at -89 degrees, 59 minutes, and 42.93 seconds latitude, which makes it the highest latitude radar in the world. Just 17 seconds of latitude from the pole. Another superlative for SuperDARN!”

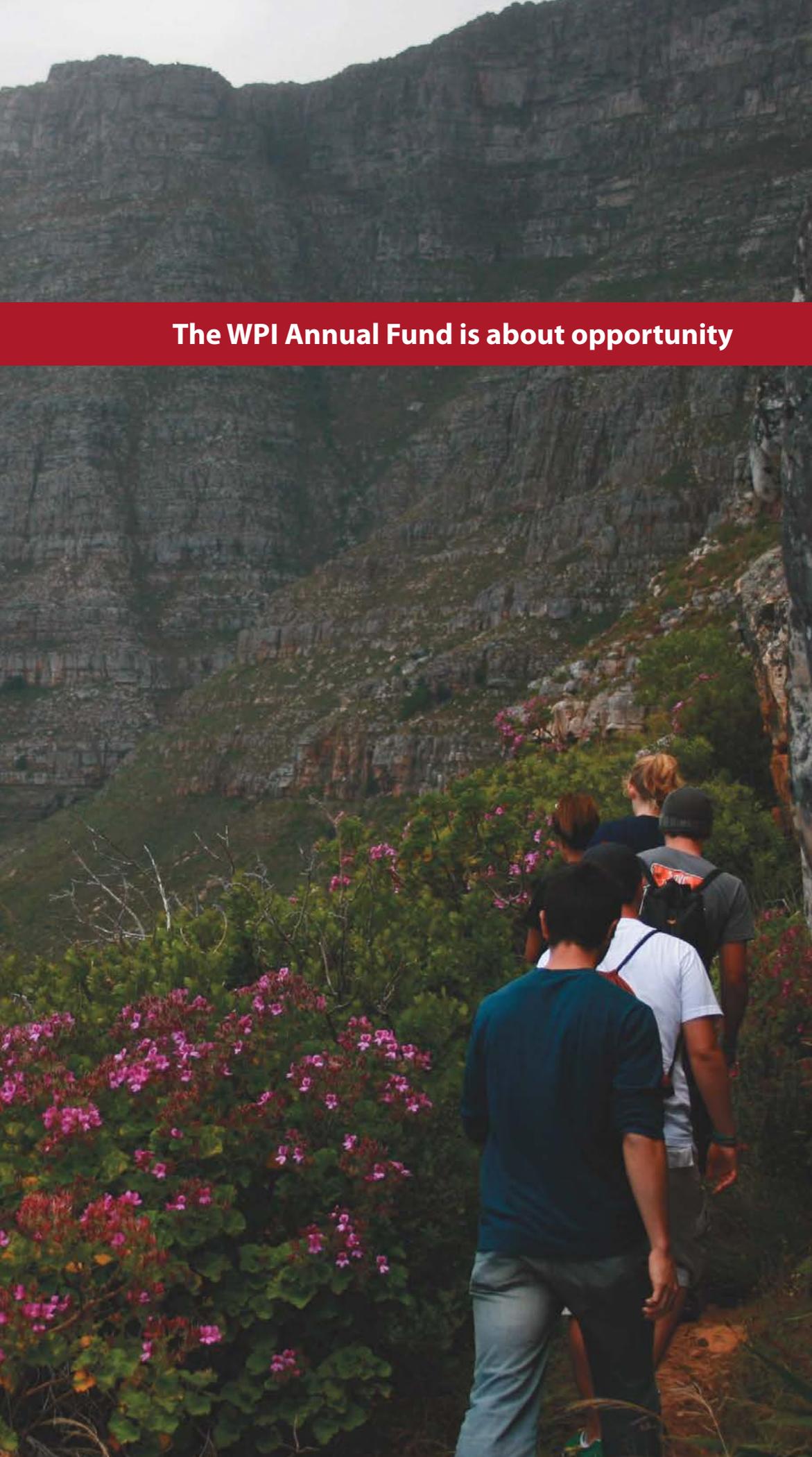
In January 2014, Spaleta will return to Antarctica to check on the new installations. Then it’s off to Svalbard, at the northern extreme of Norway,

for the annual SuperDARN conference, which is hosted at a different SuperDARN site every year. In between, he’ll squeeze in a more temperate stay in the Azores, off the coast of Portugal, to deploy a SuperDARN installation that extends the mid-latitude radar chain across the Atlantic into the European sector.

No matter what the latitude, Spaleta doesn’t get shook up about the weather. “The way I look at it, a basement lab is a basement lab, no matter where you are.” ■



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an altruistic alumnus

JOHN CARNEVALE '05 BRINGS THE
MEANING OF PHILANTHROPY HOME
Photo by Ed Carréon

WHEN JOHN CARNEVALE contracted malaria during a humanitarian trip to Uganda in 2009, he experienced what devastating effects can be felt within a community when proper medical care is beyond reach. Inspired by his experience, Carnevale established D'amours Step, a nonprofit volunteer organization. He has since built a hospital and guest house in Uganda, and is currently spearheading the East Providence High School gymnasium restoration project. We caught up with him recently to find out how his path led from Worcester to East Africa to Providence in just a few short years.

Why did you start D'amours Step?

To unite individuals who “truly” want to volunteer their time and skills to develop medical and educational facilities for communities in need. I began operating D'amours Step in late 2012; it's a part of my humanitarian efforts that started in Uganda in 2009.

How many volunteers are involved?

Four directors currently sit on the board. We are in the process of inducting several members, and we've recruited hundreds of volunteers for multiple projects.

Tell us about the Donna Carnevale Medical Center.

It's a level 3 medical facility, located in Kankobe Village. It took nine months to build it and its complementary Camilla Carnevale Guest House, which provides accommodations for the medical professionals working at the Center and for students traveling abroad to provide humanitarian support.

What is a level 3 medical facility?

It's the designation for a Ugandan government-approved medical center that can perform all medical services outside of surgery operations—general medical care, immunization care, dental care, maternity services, etc.

How many people does it serve?

The facility serves roughly 20,000 villagers, including many others throughout the parish. It has been fully operational since January 2012. A maternity ward and dental center are currently under construction, with plans to open by Christmas 2013.

BY DOREEN MANNING

Did you fundraise for the Center?

I donated my own funds [Carnevale gave over \$100,000 for both facilities and surrounding efforts] to build the center and the guest house because I wanted to give my own money first to prove to others it could be a sustainable project and that I was committed to seeing it through.

What sort of influence did WPI have on your current career path?

WPI put me in daily interaction with some of the brightest, most caring individuals I have ever come to know. My friends were unbelievable thinkers; that was truly something that rubbed off on me a little later on.

How has being a mechanical engineer helped you with your many projects?

Being an engineer helps you to think systematically; teaches you to attack a problem from many different angles. I think having an engineer's thought process is a vital asset to solving a variety of real-world issues. It has helped me tremendously in becoming a developer, a creator—and in having the confidence to present a vision. Being an engineer has given me the power to turn a vision into reality.

How did you become involved in the East Providence gym project?

I started the project to unite thousands of citizens my hometown. Our goal is to turn a decrepit, 62-yr-old gymnasium into one of the best health education facilities in the state of Rhode Island.

Do you have a day job? Or is D'amours Step your full-time employment?

I'm a systems engineer at Raytheon Integrated Defense Systems. D'amours Step is my passion and my way to wholeheartedly give back to the world. Neither I nor any of the volunteers receive any compensation or benefits through D'amours Step. We are true volunteers and we want to bring back the real meaning of giving and real volunteerism, with no strings attached. ■



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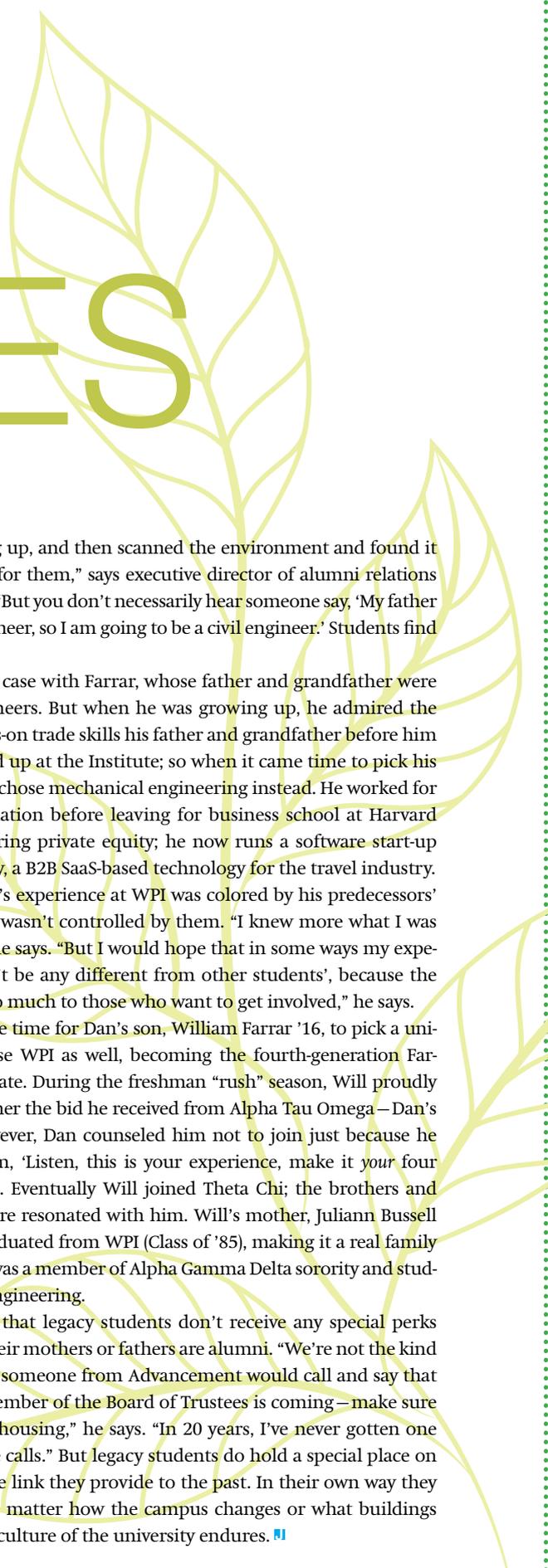
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WPI

LIVING LEGACIES



BY MICHAEL BLANDING

EVERY FALL, Daniel Farrar '84 looked forward to the “pilgrimage” — his father, Robert Farrar '56, and grandfather, Frederick A. Farrar '31, would load up the cars and the family would drive down from Keene, N.H., to Worcester for WPI's annual Homecoming and football game. There he belted out the cheers alongside current students, strolled the campus, checked out the fraternities of his dad (Sigma Phi Epsilon) and granddad (Lambda Chi Alpha), and soaked up the atmosphere. “There was a lot of camaraderie and spirit,” he remembers. “My father and grandfather were always telling WPI stories, about what they did at the fraternities or about four-letter athletes, and I listened with big eyes and wide ears.”

When it came time for Dan Farrar to decide on his own education, he checked several schools, before choosing WPI himself. When he did, it was as much for the campus as for what it would mean to his father and family. “I felt like I could really participate, and have a great college experience. I could join a fraternity and clubs, and really make an impact,” he says. The Farrars are just one of the 2,241 legacy families that have made an impact on WPI over its nearly 150-year history. Some, like the Higgins family, donated land and money to build the buildings that created much of the campus. Others have become professors, fraternity advisors, or — like Dan Farrar — trustees.

But all of them have contributed in a more subtle way as the bridge between generations, carrying on traditions from the Rope Pull to the project-based curriculum across the decades. “Because students only experience four years here, they don't have much sense of what came before them, they only experience the ‘here and now,’” says dean of students Philip Clay. “Legacy parents can come back and say, here's what we did, here's how the tradition played out.” On the flip side, it allows legacy alumni to retain continuity with the school through their own children. “It creates this dynamic relationship as opposed to a static one,” says Clay. “It's almost like a living history as opposed to pictures in a photo album.”

For children of WPI alumni, coming to the school themselves is never a foregone conclusion. “If a parent says I want you to go to my alma mater, it's like the kiss of death,” says Clay. “There is such a strong feeling to find something of your own.” It's even more significant, then, when one does take the plunge.

“It's often the case that a student heard great things about the uni-

versity growing up, and then scanned the environment and found it was a good fit for them,” says executive director of alumni relations Peter Thomas. “But you don't necessarily hear someone say, ‘My father was a civil engineer, so I am going to be a civil engineer.’ Students find their own way.”

That was the case with Farrar, whose father and grandfather were electrical engineers. But when he was growing up, he admired the practical hands-on trade skills his father and grandfather before him had also picked up at the Institute; so when it came time to pick his own major, he chose mechanical engineering instead. He worked for GE after graduation before leaving for business school at Harvard and then entering private equity; he now runs a software start-up called Switchfly, a B2B SaaS-based technology for the travel industry.

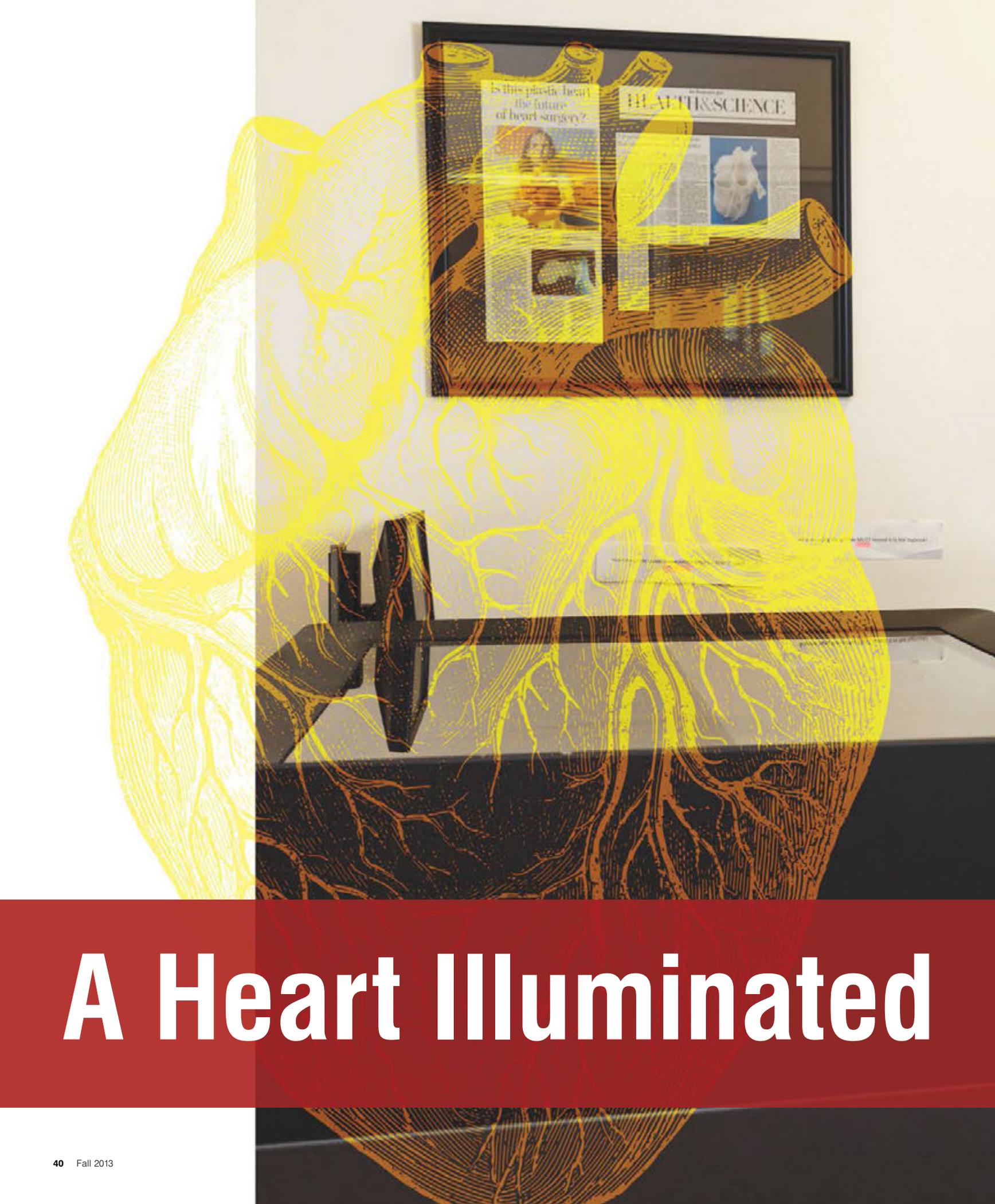
While Farrar's experience at WPI was colored by his predecessors' experiences, it wasn't controlled by them. “I knew more what I was getting into,” he says. “But I would hope that in some ways my experience wouldn't be any different from other students', because the school offers so much to those who want to get involved,” he says.

When it came time for Dan's son, William Farrar '16, to pick a university, he chose WPI as well, becoming the fourth-generation Farrar to matriculate. During the freshman “rush” season, Will proudly showed his father the bid he received from Alpha Tau Omega — Dan's fraternity. However, Dan counseled him not to join just because he did. “I told him, ‘Listen, this is your experience, make it *your* four years,’” he says. Eventually Will joined Theta Chi; the brothers and the culture there resonated with him. Will's mother, Juliann Bussell Farrar, also graduated from WPI (Class of '85), making it a real family affair. Juliann was a member of Alpha Gamma Delta sorority and studied electrical engineering.

Clay stresses that legacy students don't receive any special perks just because their mothers or fathers are alumni. “We're not the kind of place where someone from Advancement would call and say that the son of a member of the Board of Trustees is coming — make sure he gets prime housing,” he says. “In 20 years, I've never gotten one of those phone calls.” But legacy students do hold a special place on campus, for the link they provide to the past. In their own way they ensure that no matter how the campus changes or what buildings are added, the culture of the university endures. ■

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udinoff Brosnan Fraser Luiz Hopf Collamore Hoyle Crook Preston Grimm Mahon Levitsky Garagliano Arthur Colognesi Rice
n Sherry Mildonian Chase Hershoff Coyle Higgins Torcellini Wester Kolodne Swanson Kimball Keshavan Godfrey Pary, Jr.
en Labonte Manzi Le Pacheco Markowski Goimycz Mammen Harley Zawistowski Giddings Romanowicz Painter Wheaton
na McShea Youkana O'Dowd Warms Dahmer Cook Lanphere Laypie Kupcinkas Zampino Tegan Hogan Bruno Conlan Preli
ay Bilodeau Courville Costello Garcia Donohoe Briere Al-Shawaf Bagdonovich Landry Ottowitz Lovetere Earle



A Heart Illuminated



Laura Cooper Olivieri '99 uses 3D models to improve cardiac surgery

BY AMY CRAWFORD

PHOTOGRAPHY BY STEPHEN BOBB

ined up at the edge of a table, they look like a collection of sea creatures: a spiraling white conch shell, a translucent jellyfish, a gnarled piece of coral. Cradling a brilliant red one in her hands, Dr. Laura Olivieri points to the delicate tubes that twist around and through its chambers. These are blood vessels, and each of these alien-looking pieces of plastic, created using the latest 3D printing technology, is a life-size model of a child's heart.

A pediatric cardiologist and assistant professor of pediatrics at George Washington University's Children's National Medical Center in Washington, D.C., Olivieri spends much of her time examining the tiny hearts of children suffering from life-threatening congenital diseases. Using ultrasound and other medical imaging technology, she studies each heart's malformations, working with interventional cardiologists and cardiac surgeons to develop a treatment plan that might range from catheterization to a complicated open-heart operation. Congenital heart disease is scary for patients and their families, and while the vast majority of cases end happily, Olivieri and others in her field are always looking for ways to save more lives.

"Where models can be helpful is when you're dealing with patients who have unique anatomy," Olivieri explains. "Our hope is that these will really help kids and adults who have the most complicated heart disease and would require the highest risk procedures. We hope that we can improve their outcomes."

The technology to create accurate 3D models of real patients' hearts is very new, and Olivieri is one of an elite group of doctors and engineers working to develop it at the Sheikh Zayed Institute for Pediatric Surgical Innovation, the research arm of Children's. The project began in 2012, when Dr. Dilip Nath, assistant professor of congenital heart surgery, won a research grant from the Thoracic Surgery Foundation for Research and Education to work on a curriculum for congenital cardiac surgery education. Since many of the defects his team sees are inside the heart, rather than on its surface, getting the high-quality images required to make accurate models can be tough. Early in 2013, Nath and his colleagues recruited Olivieri, hoping to take advantage of her expertise in echocardiography, or ultrasound of the heart.

"I think she is one of the very few people in the country who is able to take an echocardiogram and translate it to a virtual image," Nath says. "She's also a clinician who sees patients on a daily basis—I think that experience enhances her research abilities, and vice versa."

Olivieri, who graduated from WPI in 1999 with a BS in biomed-

ical engineering, has spent the past 14 years honing an expertise in clinical medicine, first at the University of Chicago Pritzker School of Medicine and later as a resident at Brown University's Hasbro Children's Hospital in Providence, R.I., and as a fellow and faculty member at Children's. Today, however, she finds herself calling once again on the engineering foundation she built at WPI.

"It's nice to be able to work on something that is actually going to help people, and that has such a strong technical component to it," she says. "When you bring these two things together, I think you can create really, really nice possibilities for patients with this kind of disease."

REFRESHING REFLECTIONS

Although Olivieri still spends much of her time working with patients, her research pursuits have her reflecting on her years at WPI.

"The way physicians are trained versus the way engineers are trained—these are two completely different educational philosophies," Olivieri notes. While engineering education focuses on critical thinking, decision making, and trial-and-error, much of medical education centers around amassing knowledge about anatomy, treatment methods, and how the body works. "Having the liberty of sitting down and thinking about a problem, and trialing a lot of solutions and having some technical conversation—in some ways it's really refreshing to be able to do that," she says.

That sort of thinking was always one of Olivieri's strengths, says Art Heinricher, math professor and dean of undergraduate studies at WPI. He

recalls Olivieri as one of the top peer learning assistants in his class on differential equations. "She was a fantastic listener," he says, explaining how she worked with groups of fellow undergraduates, guiding them through projects. "She'd listen to where the students were really stuck and nudge them in the right direction. She was able to say, 'I don't know what the answer is, you don't know what the answer is, but together we can figure it out.'"

Jennifer Wright Rice '99, a close friend at WPI and now an adult cardiologist in Wisconsin, recalls Olivieri—then known to friends as "L.J."—as a brilliant student who always had a soft spot for children. "I think it was natural for her to be a pediatrician—putting those things together, her love of kids, her love of science, and her smarts."

Olivieri's interest in technology is what led her to WPI, but once there she realized she wanted to pursue a career in medicine, working in the trenches to save patients' lives. She quickly settled on pediatric cardiology as a specialty, drawing on the formative experi-

"These inspiring kids and families are facing tremendous difficulties," Olivieri says. "They are unbelievably strong. I love that aspect of my job."

ence she had as a child, when pediatric cardiologists and surgeons saved her baby brother's life.

"He was diagnosed with pretty severe congenital heart disease as a newborn and underwent a life-saving surgery," Olivieri says, noting proudly that today her brother is doing postdoctoral research in plasma physics.

Although she was only six when he was ill, the experience had a deep influence on Olivieri.

"It was like, 'Look at what happened. Look at what people were able to do for your brother, it's really amazing!'" she says. "I thought, 'Hey, this is pretty cool stuff. These people literally save lives.'"

TEAM SPORT

With the 3D modeling project, Olivieri has found a way to integrate her desire to save lives with her enthusiasm for solving tough technical problems. The work, she says, reminds her of her MQP, for which she and two classmates looked at the properties of cancellous, or "spongy," bone.

"The MQP is a total team sport, and that's exactly what my life is every day," Olivieri says. "It was a nice model for what life is eventually like in any kind of collaborative scientific field, I think."

One of her collaborators is Axel Krieger, an assistant professor at the Sheikh Zayed Institute, who worked with 3D printing while earning his PhD in mechanical engineering at Johns Hopkins. When the Sheikh Zayed Institute acquired a high-end poly-jet 3D printer, he took on the role of managing it.

This is not the first use of 3D printing in medicine, Krieger explains. It has been used to create prototypes of medical devices, and, in the past few years, for anatomical modeling, including of adult hearts. Children's hearts, however, are much smaller, and getting good images can be harder.

"That's a very big challenge, printing accurate models off of ultrasound," Krieger says. "You need to get very, very good imaging, and then you need to process the images to create a digital 3D model."

Once Olivieri collects accurate images of a patient's heart, she and Krieger use software to stack them and create a three-dimensional virtual model. They then must tell the printer which pixels belong to the heart and which should be discarded as noise, a process called segmentation. Finally, the printer creates the model by applying droplets of liquid plastic resin, just as a two-dimensional printer deposits ink on paper, in layers no wider than a human hair. The quality of the image determines how detailed the physical model is—the best images can produce extremely lifelike models,

accurate up to a fraction of a millimeter. These can be used not only for education—training future doctors to recognize and treat heart defects—but for surgeons, who can use the models to plan surgery.

"You might be able to do a practice round, if you will," says Nath. "It makes a significant difference to practice on the court you're going to play on the next day. I would expect that it will become more and more common in the coming years."

Dr. Craig Sable, director of echocardiography at Children's, agrees. While the success rate for surgery on congenital heart defects is as high as 97 percent, with tens of thousands of surgeries done each year, that means hundreds of children still die. If surgeons are able

to print out practice copies of a heart before surgery, not only will they be better prepared for complex operations, but their young patients will end up spending less time on heart-lung bypass machines.

"My hope is that this will become commonplace," Sable says. "I think it can absolutely save lives."

HEALTHY OUTLOOK

Like most doctors, Olivieri works long days, caring for patients and collaborating with colleagues to develop treatment plans. In her off hours, she spends time with her daughters, 2 and 4 years old, and husband Mike Olivieri, WPI Class of '98, a software engineer for Bank of America.

"We live in the D.C. area, so we love taking advantage of all the stuff D.C. has to offer," she says. "I don't think a

month goes by with us not visiting the elephants and the pandas at the zoo. We try to inspire the girls' curiosity, especially our older daughter. I see her asking really cool questions about the world around her."

Olivieri has also made it back to WPI, once for a reunion and several times as part of a networking group that connected successful women with female undergraduates. Regardless of what she's doing, however, Olivieri's patients are never far from her mind.

"These inspiring kids and families are facing tremendous difficulties and are doing really well," she says. "They are unbelievably strong. I love that aspect of my job."

Some days, it can be tough to work with vulnerable children whose lives are in peril, Olivieri admits. But she chooses to see her vocation differently.

"You can look around and see certainly the sadness and unfairness of kids having these difficult clinical medical problems," she says. "Or you can look around and say, 'Who are we going to help today?'" ■



news from HIGGINS HOUSE



THE VIEW FROM THE HILL

From the Alumni Association President

DEAR ALUMNI AND FRIENDS,

Homecoming 2013 was a special treat, with such highlights as the football game, the rope pull, and the Athletic Hall of Fame dinner, and the addition of some marquee events: the Student Alumni Society's 30th Anniversary, Lambda Chi Alpha's 100th Anniversary, the introduction of the WPI Army ROTC's Hall of Honor, and the Goat's Head Award presentation to Professor Helen Vassallo '82.

The campus continues to look better with age and great care. The Quad without parking is something I didn't think I'd see in my lifetime, and it is stunning. If you haven't already made your mark with a brick on the Quad's Centennial Walkway, you can join the more than 6,000 who have by placing your order online at wpi.edu/alumni. If you didn't make it to Homecoming, be sure to put October 10 and 11 on your calendar for Homecoming 2014!

Even as fall slowly turns to winter, the campus is abuzz with activity. The 1,100 members of the class of 2017 (the largest in WPI's 148-year history) are already into their second term, and it's exciting to think about how their personal and professional contributions will build on the history being written by WPI's 33,000+ alumni today. Hopefully, you have had a chance to meet or hear from interim president Phil Ryan '65 on his goals for both the current academic year and the progress being made on the thoughtful search for WPI's 16th president. Serving on the selection committee, I can assure you that the voice of the alumni has been sought and heard, and the Board of Trustees will receive well-rounded and researched advice from the selection committee on WPI's next leader.



Alumni will once again serve a critical role in the life of Alumni Gym.

With the amazing new Sports & Recreation Center serving the WPI community, the opportunity to better use the historic Alumni Gym is before us. In 1915 WPI's alumni, concerned about the lack of adequate facilities for athletics at WPI, raised the funds to build this gymnasium for students. After serving the community for nearly 100 years, it's time to breathe new life into the structure. A campaign is under way to rally support to repurpose this campus icon toward the core of WPI's distinctive educational offering—its project-based curriculum—while providing a venue to recognize individuals and organizations who have contributed time, treasure, and talent to the Institute. Alumni will once again serve a critical role in the life of Alumni Gym and WPI through our participation in *if...The Campaign to Advance WPI*. Keep an eye out for opportunities to support this important project.

Looking ahead, please be sure to put April 26, 2014, on the calendar for WPI Community Service Day (when alumni, students, staff, and their families combine forces) and May 30–June 1, 2014, for

Alumni & Reunion Weekend. As always, please reach out to me (mwalton@alum.wpi.edu) or any of the other Alumni Association board members with feedback on what you like that we're doing and what we can do to improve our engagement with you.

With best wishes,

Myles Walton '97

2013 GOAT'S HEAD AWARD RECIPIENT

Professor Vassallo Honored for Dedication to WPI Community

The Alumni Association presented Helen Vassallo '82 MBA, professor in the School of Business, with its Goat's Head Award for Lifetime Commitment to WPI on Saturday, Sept. 28, during Homecoming celebrations. The award recognizes Vassallo for the positive influence she has had on countless WPI students and alumni, many of whom consider her a pivotal figure of their undergraduate years.

"I consider the Goat's Head Award to be an overwhelming honor for doing what I love," says Vassallo. "My colleagues keep me on my toes, the students keep me young and up-to-date, and the alumni keep me re-invigorated. What more could I ask for?"

Vassallo came to WPI in 1967 to teach molecular biology and formally joined the faculty as a tenure track professor in 1982. She was only the second woman faculty member at the university and soon built a reputation as one of the most dedicated teacher-scholars at WPI. She is well known for her energy and creativity in the classroom and for her thoughtfulness and compassion as an advisor. In 2003 the Board of Trustees recognized her for these qualities with its Award for Outstanding Teaching.

During her tenure at WPI, Vassallo gladly took on leadership roles and paved the way for more women to take advantage of all that WPI has to offer. She became the second woman to be named a full professor at WPI and, so far, the only woman to be elected Secretary of the Faculty, the highest faculty post at the university. She has served as a member



Helen Vassallo, professor in the WPI School of Business and 2013 Goat's Head Award recipient, with family and friends at the award presentation during Homecoming.

of the President's Council for the Advancement of Women and Minorities, as chief justice of the Campus Hearing Board, and as chair of the Committee on the Status of Women. From 1989 to 1995 she served as head of the Management Department and held the Harry G. Stoddard Professorship in Management from 1991 to 1996.

Vassallo is also known for her commitment to WPI's campus life. She has served for years as the advisor of WPI's chapter of Phi Sigma Sigma sorority, has been a regular performer in WPI theatre productions, and is a member of Skull, the senior honorary society. She also has been active in a number of community and civic activities, including the Girl Scouts, the Worcester Catholic Diocese, and the Worcester City Manager's Advisory Committee on the Status of Women.

An accomplished scholar and business woman, Vassallo holds a bachelor of science, summa cum laude, from Tufts University and a master's degree from Tufts University School of Medicine. She earned a PhD at Clark University and an MBA at WPI. She is the author of numerous articles, two

books, and one monograph, and is the co-holder of two patents. She has frequently served as an expert witness on the pharmacology and toxicology of local anesthetics. In 1981 she was named American Business Woman of the Year by the American Business Woman's Association. In 2008 she received the Women of Consequence Award from the Office of the City Manager of the City of Worcester.

Vassallo achieved all of this while honoring her commitment to her family. She has raised 10 children—three of whom have earned WPI bachelor's degrees; two of those went on to earn WPI master's degrees, as well.

The Goat's Head Award, created in 2010, recognizes an individual for lifetime contributions to the WPI community at large and reflects the friendship, support, and overall responsiveness to needs and interests provided to students, parents, alumni, faculty, and staff over the years. Previous recipients include former director of placement Bill Trask, former campus chaplain Rev. Peter Scanlon, and Dean Emeritus Bill Grogan '46.

Alumni Weekend and Homecoming 2013

Hundreds of alumni and friends return to campus for these cornerstone events, enjoying friendship and nostalgia. Whether spring or fall, it's a thrill to be back on the Hill.

Alumni Weekend

- ▶1 **PHIL RYAN '65**, serving as interim president of WPI, presents medallions to the 50-Year Associates.
- ▶2 It's never too early to introduce a future engineer to WPI.

Homecoming

- ▶3 **JUDY NITSCH**, WPI Trustee Emerita, at the dedication of the Judy Nitsch '75 and Tony Magliozzi Entrance of the Sports and Recreation Center during Homecoming.
- ▶4 The Class of 1948 steps off in the Alumni Weekend Parade.
- ▶5 Dedicated WPI student volunteers pause in their duties to gather around the goat puppet.
- ▶6 The Homecoming Parade of Floats
- ▶7 **MORT FINE '37** with Gompei before the Alumni Weekend Parade.
- ▶8 **HAL TAYLOR '63** and Alumni Association president **MYLES WALTON '97**, present the Reunion Challenge Cup during Alumni Weekend. The Class of 1953 had the highest percentage of participation (38%); the Class of 1958 had the highest giving total (\$560,289).
- ▶9 Toby Bergstrom (right), operations manager for manufacturing laboratories, talks with alumni who have come to engrave their Alumni Weekend favor—a medallion—in the Washburn Shops. This activity was sponsored by the Alden Society.
- ▶10 The Rope Pull remains a favorite Homecoming tradition.
- ▶11 Cookouts during Homecoming were held along West Street while the grass on the newly renovated Quad took hold.
- ▶12 What's Homecoming without Engineers Football!







Opening Doors and Blazing New Trails

Sports & Recreation Center Entrance Honors Trustee Emerita Judy Nitsch '75 and Her Late Husband

DEDICATED. INSPIRATIONAL. DETERMINED. When others describe Judith Nitsch '75, those words come up repeatedly. So do words like generous, approachable, down to earth, genuine, caring, humble – terms less often associated with high-powered executives like Nitsch, the founding principal and chair of the board of Nitsch Engineering Inc.

Not everyone at WPI knows Judy Nitsch, but one glance around the campus reveals the tireless effort she has put into the school. WPI's physical campus shines with Nitsch's touch on everything from the green roof atop LEED Gold-certified East Hall to the bustling Campus

Center. She is among the university's most dedicated volunteers and most generous supporters. Most recently Nitsch has made a significant seven-figure commitment to *if...The Campaign to Advance WPI*. The gift supports Nitsch's two passions – ensuring WPI has the best facilities for educating future engineers and scientists, and providing a top-rate civil engineering academic program.

Of all the facilities on which Nitsch has worked at WPI, the Sports and Recreation Center is her special project, bringing to life her professional expertise and her passion for WPI by blending steel and glass with purpose and grace. This fall the Center's entrance was named after Nitsch and her late husband, Tony MaglioZZi, in recognition of their extraordinary commitment to WPI and Nitsch's commitment to environmentally sustainable facilities development at the university. She is touched by the gesture.

"It makes me smile," says Nitsch simply. The building, one of many Nitsch worked on during her 23-year tenure on the board's Facilities and Campus Infrastructure Committee (16 of which as chairman) is particularly meaningful.



ACTIVITIES OPEN TO ALL ALUMNI

ANNIVERSARY CELEBRATIONS FOR ALL CLASSES ENDING IN 4 AND 9



ALUMNI WEEKEND 2014

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MAY 29 – JUNE 1

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From the beginning, the Center was professionally challenging. “The building has four fronts,” Nitsch says, “and they all had to be interesting, attractive, and appropriate for the size and scale.”

But the task was also conversation between Nitsch and her husband, an architect, who was her sounding board, listened to the details, and offered advice from an architect’s viewpoint, she says.

She is honored to have the main gateway into the building called the Nitsch - Magliozzi Entrance. Alumni and friends gathered on campus September 27 for a celebration to dedicate the entrance in their honor. She is even more pleased with the final building. “People are just going to say, ‘What a fabulous facility,’” Nitsch says.

HER OWN PATH

No one is surprised that Nitsch pushed to make it the best. From her early arrival on a campus that had only recently begun admitting women, Nitsch has always followed her own path, burnishing her reputation for excellence and balance.

“She was one of the trailblazers,” says Mike Dolan ’75, a WPI trustee and national chair of *if...The Campaign to Advance WPI* who worked closely with Nitsch on campus improvements. “She exemplifies that personal spirit of WPI,” he says.

As the second oldest of seven siblings growing up in Southwick, Mass., Nitsch says, “I liked being a little bit different,” and notes that having five younger brothers made her comfortable with working with the opposite gender. An avid reader who loved science and math, she was her high school class valedictorian and knew her work style early on. “I always liked to work start-to-finish and see something accomplished.”

Nitsch began at WPI as a math major because she didn’t know what an engineer did. Although she doesn’t recommend deciding on a major the way she did (“I ended up as a civil because I thought, ‘Well, I like designing house layouts,’”), Nitsch’s instincts were right. A sum-



Judy Nitsch talks with students at a Trustee Mentor Luncheon.

mer job at a civil firm as an undergrad shaped her career and led her to found Nitsch Engineering in 1989. It is the largest women-owned business enterprise civil engineering firm in the state. She has served on countless professional organizations, boards, and committees, and was the first female president of the Boston Society of Civil Engineers Section of ASCE.

CHAMPION OF SUSTAINABLE ENERGY

“Her passion for WPI is so tangible and visible in everything she does,” says Jeffrey Solomon, WPI’s CFO and executive vice president. “She is very thoughtful and she doesn’t just push her agenda forward. She wants what is best for this institution. I think she epitomizes the very best of what a trustee should be and is a role model for others in terms of engagement and commitment.”

Nitsch was an early champion of LEED certification for energy efficient campus buildings. “I was pushing that on campus and no one was following me,” she says. “I knew in my heart of hearts it was the right thing to do.”

Solomon agrees. Her passion for sustainable energy spurred the building committee to adopt a policy for making all new campus construction energy efficient, he says. “I attribute all that to her.”

OPENING DOORS FOR OTHERS

Not all of Nitsch’s contributions are tangible. Legions of WPI students, mostly women, count her as a thoughtful and active mentor.

While Nitsch’s professional status is satisfying, it’s her work with students that pleases her most. “There were no women [mentors] for me when I was a student,” she says. “And I was the only woman engineer at two firms for my first eight years out of college.”

Those experiences drive her mentoring, adding a self-described responsibility to share her knowledge just because she can. “She would do anything to help a woman in a technical field,” says Amy Prange ’07, who was matched with Nitsch in WPI’s Trustee Mentor program and eventually worked for Nitsch Engineering. And Nitsch’s mentees absorb the idea that they have a responsibility to give back in some way – whether through time or talent.

Nakisa (Niki) Alborz, a civil engineering PhD candidate, calls Nitsch the perfect role model. “She is an example of what hard work and a great personality can accomplish,” she says. “Her drive and ambition are intoxicating. She makes you feel that the sky’s the limit, and that you can accomplish anything you want.”

Nitsch is well known in the WPI community for giving back in so many ways. She has been recognized by the WPI Alumni Association not only for her career accomplishments but also for her service to WPI, and she is one of only a handful of alumni who have received all four career and service awards from the association. She is also generous with her treasure. In addition to her recent gift to *if...The Campaign to Advance WPI*, the Nitsch/Magliozzi Green Roof atop East Hall recognizes the couple’s generous contribution to that facility. These contributions are two among a lifetime of generous support to her alma mater.

Nitsch’s colleagues are thrilled to see her receive recognition. “As one of the earliest female students and as the first alumna trustee, Judy has been opening doors to WPI students for over 35 years,” says Janet Richardson, former vice president of student affairs at WPI. “It is fitting that the entry to the recreation center will be another door Judy will be opening to all members of the WPI family for years to come.”

40 Years of Global Education

This year marks the 40th anniversary of WPI's Washington, D.C., project center, as well as the 25th anniversary of our center in Venice. With more than 30 locations around the globe, WPI students pursue hands-on, life-changing project opportunities in all corners of the world.

UNITED STATES

- Bar Harbor, ME
- Boston, MA
- New York, NY (Wall Street)
- Microsoft, Cambridge
- MIT-Lincoln Laboratory, Lexington
- MITRE - Bedford, MA
- Nantucket, MA
- Santa Fe, NM
- Silicon Valley, CA

- Washington, DC
- Worcester, MA
- WPI-Stantec

AFRICA

- Cape Town, South Africa
- Ifrane, Morocco
- Windhoek, Namibia

ASIA

- Bangkok, Thailand
- Beijing, China

- Hong Kong, China
- Nanjing, China
- Osaka, Japan
- Shanghai, China
- Wuhan, China

CENTRAL AMERICA

- Panama City, Panama
- San José, Costa Rica
- San Juan, Puerto Rico

EUROPE

- Budapest, Hungary
- Copenhagen, Denmark
- London, England
- Nancy, France
- Venice, Italy

SOUTH PACIFIC

- Melbourne, Australia
- Wellington, New Zealand

Summer Science

WPI Hosts ExxonMobil Bernard Harris Science Camp

A **GENEROUS GRANT** of \$80,000 from the ExxonMobil Foundation enabled WPI to give 48 underrepresented middle school students from inner city Worcester hands-on science, technology, engineering, and math (STEM) experiences this summer. The students came

to WPI—all expenses paid—from July 21 to Aug. 2 for the ExxonMobil Bernard Harris Summer Science Camp. This is the fourth time since 2009 that WPI has been selected to host this two-week residential camp, which is the largest of its kind in the United States.

Veteran astronaut Bernard A. Harris Jr. and ExxonMobil partner to offer 20 free math and science camps across the country to help prepare today's students for excellence in college and beyond. The goal of the camp is to ensure that students from all backgrounds, particularly from underserved and underrepresented communities, gain a deep understanding and appreciation of STEM subjects, and to promote careers in STEM fields.

"WPI has great pride in partnering with the Harris Foundation and ExxonMobil in carrying out the mission to serve underserved students with aspirations in STEM

disciplines," says Bonnie Hall, director of multicultural affairs. "Hosting the Harris Foundation's Camp allows us to provide outreach in a very tangible, meaningful way that will impact students' future academic and career choices, but also build their self esteem in a way that will positively impact the rest of their lives."

According to a recent Harris Foundation study of camp alumni who are currently enrolled in college, 96 percent credit the program for influencing their decision to pursue higher education. Of those college students, 85 percent plan to pursue STEM-related degrees.



ExxonMobil Bernard Harris Summer Science Campers with Bonnie Hall (left), WPI's director of Multicultural Affairs, veteran astronaut Bernard Harris, and Allison DiNitto, ExxonMobil project controls engineer.

Allison DiNitto works with campers on the "Space Suit Challenge."

A Promise Fulfilled

Robert Beckett '57 has paid back the scholarship he received many times over

BOB BECKETT NEVER needed to be convinced to give back to WPI.

When he graduated from high school and then a postgraduate year at the Pennington School in Pennington, N.J., Beckett was sought after by colleges and universities—an accomplished student, star football player, and self-described “socially active” person. He was accepted at multiple colleges and universities, and he chose Lafayette. However, when he received only half the scholarship funds he was expecting, Beckett’s dream of a college education was dashed.

“I was from a working-class family, and I didn’t see how I could make up the difference,” Beckett recalls. Instead of heading off to college, he worked two jobs to earn more money for a college fund, continued to play football, and met and married Pat, his wife of 60 years. While playing football on a semi-professional team, Beckett was introduced to Charlie McNulty, then football coach at WPI. And that changed everything.

McNulty convinced Beckett to visit WPI; he did—and he loved the school. More important, WPI provided the scholarship support that made it possible for Beckett to attend.

“After visiting so many colleges and universities, I just longed to have an opportunity to go, and it was given to me by WPI,” Beckett says. And right then, WPI became his top philanthropic priority. “You have to understand how much I needed that assistance. I made up my mind that I was going to help this school. I didn’t know where my career was going, but I knew WPI was going to share in it.”

Beckett has lived up to that promise. Bob and Pat Beckett are long-time generous supporters of the university. Their philanthropy has impacted many areas of WPI—faculty and academics, facilities, and the Annual Fund, which is so critical to WPI’s ability to leverage emerging opportunities. Over the years Beckett has especially enjoyed helping his reunion class giving reach new heights, including helping the Class of 1957 break the class gift record for its 50-year reunion in 2007.

Of course, the main focus of the Becketts’ philanthropy at WPI is their endowed scholarship fund, in recognition of the financial support that made Bob’s WPI education a reality. The Becketts have met many of their scholarship recipients over the years and even had an extended correspondence with the mother of one of the students. Last year, they were

Beckett says one key lesson he learned at WPI is “not every decision in life will be made by you.”

particularly delighted to meet one recipient—a young man who graduated from the same high school they did.

“That touched us so much that a boy from our high school received part of our scholarship,” Bob says. At Commencement 2013, that student received his bachelor’s degree and Beckett received an honorary degree from WPI.



DECISIONS NEVER MADE

For Beckett, the honorary degree was “very humbling” and also a time to reflect on his WPI experience. In thinking about what he could share with the Class of 2013 in his remarks, Beckett says one key lesson he learned at WPI is “not every decision in life will be made by you.” He recalls two instances where others strongly urged him into decisions that changed his life for the better. In his senior year, a dean introduced him to Howard Freeman ’40, an inventor who had saved thousands of lives during World War II with his fog nozzle design for extinguishing oil fires on Navy aircraft carriers. Freeman sought an engineer to help him build a line of flanged valves. Beckett studied Freeman’s patents, and every weekend made drawings for the new valve. Freeman would have the valve made and tested, then they would repeat the whole process until they had an entire line of new valves.

“Immersion was my WPI Plan,” says Beckett, adding that he wrote about the work experience in his senior year and how the university could change its curriculum so more students could benefit from similar project experiences.

The second decision came after a classmate who’d visited a company near Beckett’s home said, “you should go to work for them.” During the

CONGRATULATIONS ON A STRONG FINISH AT

THE SOLAR DECATHLON IN CHINA

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semester break, Beckett arranged an interview and determined, “It was exactly what I wanted in a career—working with instruments, measurement, and process control.” He accepted the job offer at the interview.

A CAREER OF SOLVING PROBLEMS

In fact, to hear him tell it, all smiles and a twinkle in his eye, just about every job Beckett took was just what he wanted. After serving in the military for six months, Beckett started his career at Leeds and Northrup as a sales engineer and later became a materials process control specialist. He went on to leadership positions at K-Tron International, where he patented with others a continuous process weighing device to meter dry granular material, and the Data Decision Computer Corporation as OEM sales manager for buffered card peripherals. He then embarked on the adventure of starting his own business, Robec Inc., with several unique programs on one of the first microcomputers. The business evolved into the third largest technical microcomputer distributor in the country.

When Beckett talks about his career, however, it’s not the company names and job titles that stand out, but the problems he was able to solve, thanks to his WPI education.

“What the project does for everyone is stimulate creativity,” Beckett says. “Educators can’t tell today’s students what technology is coming in the next 30 years, but the education WPI students receive will help them find the technologies that will stimulate their curiosity and help them build their life’s career. That’s why Pat and I committed to make scholarship funds the primary thrust to pay back what we have received. We wanted more students to participate in this project-based education.”

THE RIGHT THING TO DO

As a student Beckett was involved in all aspects of campus life, from football to student government to honor societies to restarting Parents Day, with no budget—all while a young newlywed. His commitment to WPI has never wavered over the years. In addition to inspiring his reunion class fundraising, Beckett has served WPI as a trustee and trustee emeritus and helped lead two previous university fundraising campaigns. He is currently contributing his extensive experience to *if...The Campaign to Advance WPI*, the university’s \$200 million fundraising endeavor, as a member of the National Campaign Advancement Committee. Bob and Pat are members of every leadership donor recognition group at WPI: 1865 Society, Presidential Founders, Alden Society, and President’s Circle. And while the recognition is nice, it has never been the object of their support.

“We do these things because it’s the right thing to do,” Beckett says, “and because we’re just so committed to WPI.”

The Great Class of 1975



Members of the Class of 1975 at their 35th reunion in 2010

LET’S FACE IT—all WPI alumni stand out. But sometimes, leafing through Class Notes in the *WPI Journal* one class in particular takes on a shine. This is true for the Class of 1975, which has a cadre of not only social, economic, and business leaders, but also leaders of the WPI community. This list is just a sampling of the accomplished individuals who make up this great class—three of them are current trustees and one just recently finished her service on the board and became trustee emerita.

- Joseph D. Adams Jr., President, Energy and Industry, MWH Global, Inc.
- Michael E. Aspinwall, Managing Partner, CCP Equity Partners
- Michael J. Dolan, WPI Trustee, Senior Vice President, ExxonMobil Corporation
- Henry J. Fitzgerald, WPI Trustee, Principal, First Stop Program Management

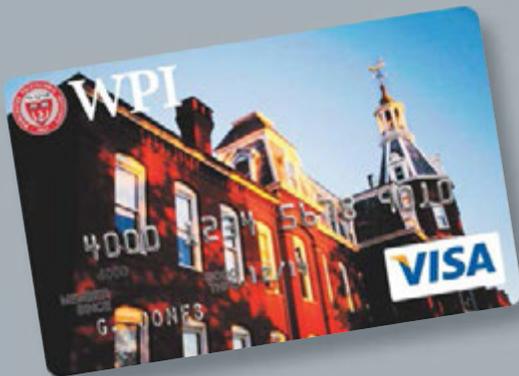
- John F. Gabranski, Retired Partner/Auditor, PricewaterhouseCoopers LLP
- A. Laurence Jones III, President, Aegis Management, LLC
- Robert R. Martin, WPI Trustee, Owner, ZizWiz Consulting
- Judith Nitsch, PE, LEED AP, WPI Trustee Emerita, Founding Principal, Nitsch Engineering Inc.
- Elizabeth Pennington Sigety, Consultant, Bison Investments Inc.
- Paul N. Varadian, Chief Marketing Officer, AlumniBridge
- David H. White, President and Chief Executive Officer, R. H. White Construction Co. Inc.

Do you think yours is a great class? Tell us why! We’d love to highlight other WPI classes with a list of some of the individuals who make them great. Email wpjournal@wpi.edu.



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'57

R. A. Propper sent this recollection of a rude awakening of the freshman class. "In the wee hours of the morning I awoke to a symphony of loud explosions just outside Sanford Riley Hall. From my window I saw a pack of sophomores "welcoming" us to Tech by jumping around, yelling, and setting off more firecrackers. (Today I would've been on my cell phone, calling 911.) In front of the sophomore legions was this misshapen metallic figure of a goat, like a Roman totem urging the troops on. I don't remember whether I came down with my beanie on (the stunted dwarf version of a baseball cap worn by our freshmen to tell the academic world we were definitely on the bottom rung of the ladder at Tech). The challenge could not be ignored: Out we poured for a good-natured rumble with our tormentors. I can still see the glinty form of the Goat's Head, and I wonder if it still exists today in its original form. Is it exhibited some place, or in a museum locked away?"

A longer version of his memoir was shared with current WPI students online.



1957

Al Papianou sends this shout-out on Tech Old Timers: "With two past presidents of the group, a current vice president, and active participants in the yearly program planning committee, the world-famous Class of '57 has been an important part of keeping the organization interesting for all attendees. We recently heard an update on the university by interim president **Phil Ryan '65**, who enthusiastically discussed the incoming freshman class and all the changes going on at WPI. The October speaker was **Gary Goshgarian '64**, author and professor, talking about writing medical thrillers. These are just two of the many interesting and informative programs TOT has lined up." Al throws down the challenge to alumni of all classes, and WPI retirees: "Come to Tech Old Timers. Don't let me and the Class of '57 keep bragging about how great we are!"

1958

Richard Hammond retired late in life and moved from New Hampshire to Yarmouth Port, Mass., where he lives with his wife, Alice.

Bill Hopf was honored with the Red Scott Award as the Florida Vistage Business Coach of the Year for 2012. He lives in Jacksonville.

1941

Hilly Paige was recently elected to the Delaware Valley Engineering Hall of Fame. He is retired as vice president, technology, for General Electric Co. and was inducted into the National Academy of Engineering in 1968.

1949

Hal Gruen writes, "I've been retired for a number of years, now living in a lovely retirement community in Palm Desert, Calif. My wife passed away eight years ago, and I have become associated with a lovely and beautiful California gal. We visit many of the interesting sights on the west coast and around the world. I'm just as busy now as when I worked for an (honest) living. Lots of duplicate bridge, golf (usually two or three 18-hole sessions a week), volunteering at the McCallum Theatre, and marshaling at the PGA and LPGA tournaments in our area. In my spare time, I produce the tributes for the west coast chapter of a major international charitable organization (Hadassah). Just this year, I gave up editing the Palm Springs-area news bulletin for Brandeis University. I also take a couple of senior enrichment courses given by the University here in the desert. But I guess that's kind of what retirement is about...giving back to the community what you took when you were younger. I'm very proud to read of the many accomplishments made by Worcester Tech students and alumni."

1950

Les Reynolds says, "I have to say once again that WPI is now an even better and higher-rated school than it was when I first knew about it from my uncle **Herbert Ferris, Class of 1899**. Diane and I were proud when our daughter Kay Reynolds graduated from Lafayette and became director of admissions at WPI for many years."

1951

Richard Davis was employed by Monsanto in St. Louis as a young engineer and then as a marketing manager, where he evaluated and planned the marketing of new products, and served as a consultant after retiring in 1985. He says, "At age 61, I returned to school and in 1994 graduated with high honors as a doctor of chiropractic. That profession was fulfilling and kept me busy to age 81, when I retired again, and with my wife moved to 134 acres of woods in rural Missouri. Here we raise, for our pleasure, fruits, vegetables, berries, and even trout. I am blessed with the health and stamina to do this. And, by the way, I still see a half-dozen or more patients every Tuesday."

1956

Richard Rotelli is the author of two biographies: *A Creative Odyssey: The Story of Floyd and Richie*, and *Let Me Be a Light: The Faith Journey of Father Ron Lawson*. Both are available through his website, rrotellibooks.com.

► Bookshelf

The family of **Roy Pearson**, who passed away on Aug. 12, 2013, requests that those wishing to make a memorial gift consider two of Roy's favorite organizations, Habitat for Humanity and WPI.

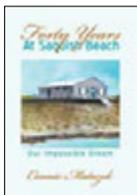
Paul Vilandre married Anne Carter, March 9, 2013. They plan a belated honeymoon in New England. Paul writes from Murrells Inlet, S.C., "Doing well health-wise, except for the normal aches and pains of a 77-year old. My daughter, Keren, and her husband also live in South Carolina. One grandson is a restaurant manager, the other recently graduated from North Greenville College."

1959

Seymour "Sam" Ellin retired from Polaroid Corp. in 1996, after 30 years. Early in his career, he worked with RCA Aerospace Division in Burlington, Mass. He and his wife have 10 apartments in the Boston area, and Sam supervises their management. He writes, "I played golf for 10 years at Blue Hill Country Club until I became too busy playing other sports. I am still playing league tennis and softball year-round. unless injuries or pulled muscles interfere. At this date I am in the softball playoffs in the EMASS senior softball league. We play four league games a week here in Massachusetts and after Thanksgiving will be playing in the Boca Raton senior softball league. I am on the board of directors of the former Polaroid Credit Union (now Direct Federal Credit Union) in Needham, Mass." Sam and his wife spend half the year in Florida (they became residents a few years ago). Their travels include yearly Road Scholars vacations (designed for grandchildren and grandparents) with their granddaughter.

Roger Kuenzel is president of the Irem Shrine Club of Greater Wilkes-Barre, Pa., responsible for social activities of the Irem Country Club. Although the temporary loss of the Club's liquor license depressed membership for a couple of years, Roger reports that the license has been restored and "a vigorous party schedule will ensure for the rest of the year." He also holds a part-time job with the Prothonary of Civil Records at the Luzerne County Court House, filing marriage licenses, divorce proceedings, property disputes and liens, as well as foreclosures and lawsuits.

Win Wassenar '60 (MS CE) retired as of December 2012 and is spending winters in Venice, Fla. He has two grandchildren in college in Boston and one in St. Andrews, Scotland. He sees the two in Boston frequently and will visit St. Andrews next May. He writes, "Adjusting to not having a 'work' schedule, but probably time at 75 to do so. Looking forward to our 55th next year."



Forty Years at Saquish Beach: Our Impossible Dream

CONNIE MATUZEK '61 | Authorhouse

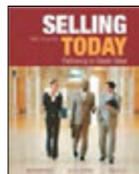
Have you ever built, owned, rented, or visited someone at a cottage on an ocean beach, a lake, or somewhere off the beaten path? Matuzek shares the challenges of building in a remote environment, caring for children and pets, and living with wildlife, in his memoir of life on an isolated peninsula 30 miles southeast of Boston. He relates experiences that range from hilarious to life-threatening.



New York Yankees Home Runs: A Comprehensive Factbook, 1903-2012

MITCHELL SOIVENSKI '71 | McFarland

The New York Yankees' home run record exceeds their closest competitors by more than 1,000 runs—despite their having been in existence for 20 fewer years. Soivenski's compendium organizes the data by category and offers player and team records, including career summaries and totals by year and by season. Also included are appendices for inside-the-park and bounce home runs and home runs allowed by the Yankees. Soivenski, an IT data professional, is a member of the Society for American Baseball Research and has written for *Baseball Research Journal* and contributed to the SABR Baseball List and Record Book.



Selling Today: Partnering to Create Value (12th Edition)

MICHAEL L. AHEARNE '91 ('92 MBA), GERALD L. MANNING, AND BARRY L. REECE | Prentice Hall

Ahearne's research focuses on improving the performance of salespeople and sales organizations. He holds the C. T. Bauer Chair in Marketing at the University of Houston, and is executive director of the Sales Excellence Institute. His textbook, now in its 12th edition, combines academic theory and real-world applications to help readers develop their skills. The authors' "learn by doing" approach offers a variety of teaching tools to strengthen the process. Ahearne holds a bachelor's degree in mathematics and a master's degree in operations management from WPI, as well as a master's and doctorate in marketing/decision sciences from Indiana University.



Diego Manhego & The Dessert Dilemma

ALAN BELNIAK '97 | CreateSpace

Brie's six nephews are coming over for apple pie. How can she divide the pie equally for them? Diego Manhego, fearless cheese detective, has the answer. He uses problem-solving skills geared for growing minds, and shares some Spanish and French vocabulary along the way. Available in Kindle and paperback editions, the story leads readers to additional activities and engagement online. (The print edition offers URLs and QR codes.) There's even a recipe for Brie's Apple Pie, with suggestions on how kids can help in the preparation.



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business.wpi.edu/+alum

'64

Carl Youngman is winding down after a 44-year career in corporate renewal. He credits the training he received at WPI as the foundation of lots of this work, especially the skills in developing a framework for problem solving, and then to generating the data to populate the framework. Carl writes that his son started another new company and went from zero to 175 employees in two years. "He has a wonderful family of his own (and I have a grandson to carry on the family name). But when he needed a break, he called his father to go fishing with him. We went fly fishing for salmon on Eagle River in Labrador, Canada, the best river in the world to do that. Three days on the river fishing with your son...PRICELESS!!!!"



1960

Television historian **Richard Brewster** was presented with the Bruce Kelley Journal Award for 2012. This is given to the member who publishes in the *AWA Journal* an article judged to be the most outstanding, original, historical presentation of the award year. Electronics historians should find "Hollis Semple Baird: Bringing Electronic TV to Boston" interesting reading, he says. Next spring, Susan and Richard will be heading back to West Africa to work with Smile Train, doing cleft repair under the auspices of Mercy Ships.

Sang Ki Lee writes, "My first impression of WPI fresh from war-torn Korea in 1955 was, 'Wow, what a beautiful country and beautiful campus!' Study at WPI prepared me to become an engineer and a patent lawyer, and to serve in the international arena in technology, licensing, contract, and government relations in Asia for AT&T, Xerox, and Motorola." In 1995, Sang Ki returned to Korea in to help Handong Global University establish an international law school with focus on the U.S. and international laws to prepare Korean lawyers for global work. At the 50th class reunion, he was selected as the Humanitarian of the Year. Sang Ki retired this spring and is back home in the U.S.

1961

Asjed Jalil has been retired since 2006 and has spent time playing tennis, walking, doing Tai Chi, reading, and traveling. He tells us, "An opportunity has arisen to do consulting work for a company out of India to help them sell their products in North America. Hoping to get the first contract this year."

Frank Marra went on to earn an MBA from the Tuck School of Business at Dartmouth. He worked for computer companies in New York City, Boston, and Silicon Valley, founded two network consulting companies, and moved to the Palm Springs area of Southern California in 2002. Frank writes, "My proudest moment came this year when my granddaughter, Cassandra Tomerlin, entered WPI as a freshman. She will be graduating 56 years after I did. She fell in love with the school when we visited in January and now calls New England her home, even though she grew up in California. She is a starter on the volleyball team and was just named Student Athlete of the Week. Even

though WPI has grown immensely since my days, it still retains the character of a small, friendly school. I am proud to be a graduate of this unique institution."

Connie Matuzek writes, "Ten years after graduating from WPI, I built a cottage on a remote beach in Plymouth, Mass. There were no roads, electricity, or town services available. All materials and furnishings were brought in over five miles of beaches and sand dunes, by boat trailer and my SUV. I have just written a memoir, *Forty Years at Saquish Beach: Our Impossible Dream* (see Bookshelf, p. 57), published by Authorhouse (available at fortyyearsatsaquishbeach.com and through Amazon and Barnes & Noble). Chapter 18 ("Remembrances") tells of a reunion that Ann and I hosted at Saquish Beach with a number of classmates. WPI and Skull are mentioned in my author bio. The problem-solving capabilities learned at WPI not only played a role in my business career, but also provided me with the ability to build a cottage on a remote beach without power tools. That was not an easy problem to solve, but the result greatly enhanced our family and social life." Connie and Ann are now retired and live in Fort Myers, Fla.

John Ogorzalek is semi-retired but still practices law in Southern California. He lives in beautiful Seal Beach and enjoys the weather. John recently accepted the position as development director for a Lions Club nonprofit. Rebecca, his wife of 48 years, is Queen of the local Red Hat Society chapter.

1962

Jesse Erlich has been selected for inclusion in The Best Lawyers in America® 2014. This is the fourth consecutive year he was selected for this honor. He is a partner at Boston-based Burns & Levinson, and co-author of the blog Obviously Patentable, ObvIPat.com.

Bill Krein tells us, "A number of upper Connecticut River Valley alumni gathered at the lovely home of Michael and Margaret Galbraith in Lebanon, N.H., on Sept. 21 to welcome interim president **Phil Ryan '65** and Mrs. Ryan. President Ryan presented a brief but fact-filled update on a wide range of developments at WPI. The evening concluded with an exchange of reminiscences and news concerning old friends."

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- *Businessweek*

business.wpi.edu/+alum

1963

Richard Iacobucci runs a senior housing community set on the 73-acre nature preserve in Pembroke, Mass. He is also president of Rocrtronics Lighting Corp., providing entertainment lighting, laser displays, and special effects for nightclubs, trade shows, stage performances, and special events since 1965.

Dave Nevers reports a spectacular travel year, touring Nepal, Bhutan, Sardinia, Cambodia, and Vietnam. He lives in Deland, Fla., with his wife, Beverly.

1964

Gary Goshgarian, author of science thrillers under the pen name Gary Braver, announces that his book *Atlantis Fire* is now in ebook form. Gary writes, "I wrote the hardcover version in 1980, and recently edited the text to make it leaner, meaner, and a better read. *Atlantis Fire* is a marine archaeological thriller that links Plato's Atlantis legend to Minoan history, which Stephen King called 'a fine thriller, seasoned with wit and sensibility.'" Gary returned to WPI as a Tech Old Timers speaker this year. Two of his other books, *Rough Beast* and *The Stone Circle*, have also been edited and reissued.

Bill Museler sits on the boards of ITC (International Transmission Co.) and Independent Electrical System Operator. He lives in Annapolis, Md.

Tom Newman writes, "I'm excited to be working on the 50th Reunion for our class, to be celebrated starting May 29 next year. We've got a great committee of volunteers working to make sure a good time is had by all. We hope everyone comes back to see some old friends and to see the amazing changes to the campus since the mid-'60s."

John Schmidt writes, "After nearly 36 years, I will retire from ABC TV on Nov. 4. I got a very good severance package, and am a very happy camper." He plans to do some traveling, do some work on his house, and work on transferring his large collection of Caribbean vinyl (records) to digital.

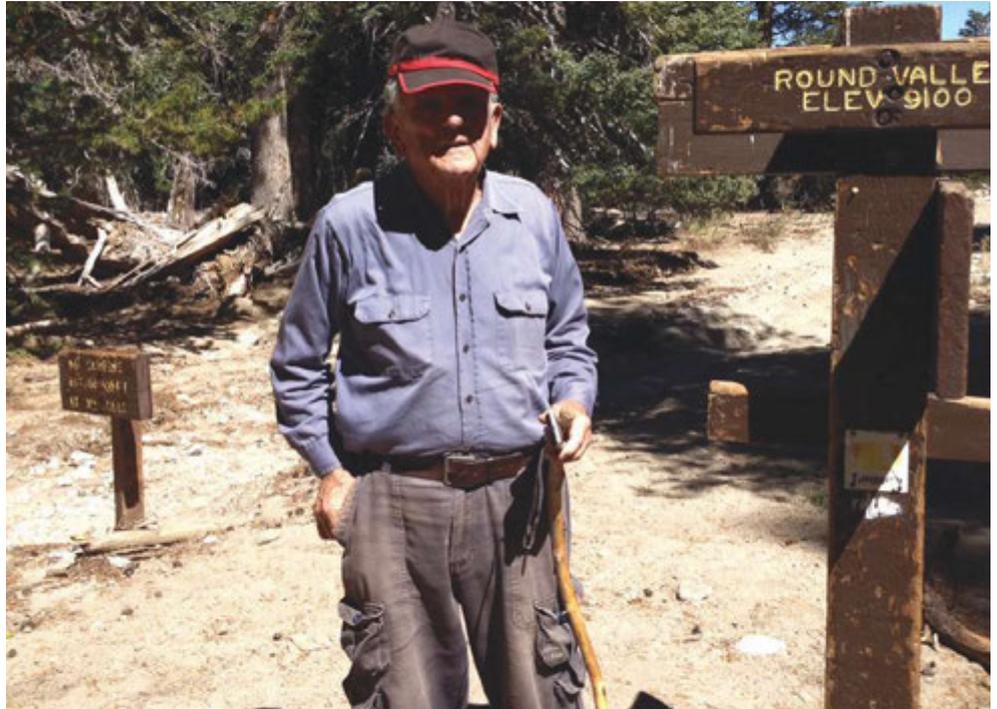
Bob White tells us "We've just finished our summer on Big Tancook Island, Nova Scotia. Now it's time to gear up for the 2014 Youth/Junior Biathlon World Championship, which the Nordic Heritage Sports Center will be hosting in late February. My role is that of competition secretary, and Ginny is my invaluable assistant."

1965

Peter Collette received the Frank W. Reinhart and Henry W. (Butch) Kuhlmann Award for his contributions to the development of standards for ASTM International Committee F17 on plastic piping systems. An ASTM fellow, Collette

'58

Herb Clarkson has been day hiking around the San Jacinto wilderness area near Palm Springs at the 9,100 foot level.



was honored with the Award of Merit from Committee F17 in 2000 for his dedicated work on the committee. He retired from Public Service Electric and Gas Co. (PSE&G) as manager of gas system and plants in 2006 with 41 years of service.

Don Franklin continues as a school board member and town auditor for the town of Hebron, N.H. He also continues to monitor his parents' health in their assisted living facility, after celebrating their 75th wedding anniversary this summer. In his free time, he enjoys being on Newfound Lake.

1966

George Elko tells us that after graduation, he received his MS in math from MSU and began studying for his PhD in mathematics and computer science. Since retiring from his full-time job with NYNEX Telecommunications (now Verizon), he has done some independent consulting, has been an adjunct instructor at several colleges and universities, and has passed his time and kept his mind active by functioning as an emergency substitute teacher for several school districts. He writes "I also love to visit

with my four grandchildren. My wife, Linda, and I spend as much time as possible traveling."

After 38 years with the Air Force Civil Service, **James Gibson** is enjoying retirement in Bedford, Mass.

Russ Morey has been retired for seven years. He moved to Laconia, N.H., in 2006 and has spent his time in outreach ministry in his parish, St. Andre Bessette in Laconia. He writes, "Helping the needy in our region is a fulfilling task and keeps me busy." He was ordained a permanent deacon in the Catholic Church 25 years ago in Boston. "We celebrated that anniversary this spring by sailing to Bermuda for a week and enjoying ourselves with five of the men I was ordained with, and our wives. I am recovering from a revision to my right knee that was replaced 10 years ago, and it is going slow. Keep me in your prayers, please. Blessings!"

1967

Eduardo Mendez lives in Puerto Rico. He is in contact with many former classmates, especially the PGD bunch,

including **Phil Giantris '65**, **Dave Healey '69**, **Al DiPietro '66**, **Denis McQuillen '67**, and Dean **Bill Grogan '46**. Ed had a very special relationship with the late **Dan Coifman '67**, who also lived in Puerto Rico. They were golf buddies until Dan's death. He writes, "We used to go to the Chi-Chi Rodriguez course, and he would always tell Chi-Chi that he was a rabbi and me a priest from the Catholic Church (which I practice). Chi-Chi believed him always. My son, **Eduardo Mendez '95**, also attended WPI."

Arnold Miller retired from vice presidency of a small high-tech company in Massachusetts nine years ago. Since then, he has privately tutored students from grades 6 to 12 in mathematics. Arnie enjoys life with his wife, Sharon. They have two married daughters, Miriam and Sharon, and four grandchildren, Jacob, Will, Freyda, and Drew. "Looking forward to our 50th Reunion in 2017!"

Doug Pike worked at WPI for 10 years and married Professor Carl Koontz's assistant, Carolyn. They have one daughter, two grandchildren, and one great-grandson. He writes "Carolyn and I moved to northern Maine 23 years ago and retired to organic farming five years ago. Recently purchased an old ambulance so we can make it to the 50th Reunion!"

1968

Roger Ludin is enjoying retirement from Cal Poly, after 26 years in the mechanical engineering department. He also coached soccer for 40 years, 28 years of which at the high school level.

Roger Pryor, president of Pryor Knowledge Systems, is pleased to announce that his company has been verified by the U.S. Department of Veterans Affairs, Center for Veterans Enterprise, as a Veteran-Owned Small Business. He says, "I was proud to serve my country in the U.S. Navy, and I am gratified that the VA appreciates the service that small businesses contribute to our country. We are looking forward to applying our expertise in multiphysics modeling to the programs of the VA."

1969

Peter Heins and his wife, Robin, enjoy retired life on the left coast. They spend most of their time in Ventura County, but also enjoy life on Whidbey Island, just across Puget Sound from Boeing's 747/767/777/787 assembly plant.

David Johnson writes, "Was nice seeing some of my fraternity brothers on a recent trip to Boston. We are enjoying living in Greenville, S.C."

Ed Mierzejewski recently joined Renaissance Planning Group. He says, "At 66 years of age, I felt that I had one more new start in me. I feel blessed to have had a career, not a job, and enjoy the mental challenge of contributing three days a week and having four-day weekends."

Stephen Rogers reports that he's enjoying retirement in Corolla, N.C., and Deland, Fla. "I retired in 2008, after 38+ years with DuPont. Linda and I have two sons and two grandchildren."

1970

Kent Lawson is loving retirement, golfing, traveling, and enjoying his cottage on a lake. He spent his entire 39-year career at Polaroid Corp. in a variety of engineering disciplines and technical management jobs. He worked in Glasgow, Scotland, and Shanghai, China. He writes, "With my MBA heavy on finance, I am a volunteer director and treasurer at a large housing cooperative in Norwood, Mass. Life is good!"



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THE GOMPEI COLLECTION



Walter Thompson is still working in Central America, managing wind projects in Nicaragua and Guatemala. He writes, "Energy prices here are high due to primary dependence on oil-generated electricity, so the more alternative energy projects, the more stable the energy pricing will become over the years. Learning a little Spanish, but mostly it revolves around food and getting fed. I've decided I like hot a lot more than cold, so visiting my roots in New England during the winter is questionable. Besides, swimming or sailing in the warm southern Pacific waters is more enjoyable than in the northern Atlantic waters."

1971

Frank Catanzaro recalls that as one of the very first students to fully exploit the WPI Plan, he studied organismic developmental psychology at Clark, photography at the School of the Worcester Art Museum, and video at the Rhode Island School of Design, "and, oh yes, management engineering at WPI. What I did with this strange brew of studies was to carve out a career as a futurist." From 1977 to 1982 he produced one of the very first and one of the most successful early online communities for The Humanity Foundation. In 1984 he set up and ran a network for the first Soviet American Citizens Summit. Since 1990 he has continued to work with software communities, social networking, the Kuwait Oil Company, and the Ford Foundation, among others. He has helped develop a new music-based web business backed by former presidents of Capitol Records, Elektra Records, and Polygram Records, as well as retired executives from Warner New Media. In 2011 Frank began developing a worldwide alternate reality game called *The Ever Present Future*.

Mitch Soivenski has written a book titled *New York Yankees Home Runs*, published by McFarland (see Bookshelf, p 57). He organizes information on the many New York home runs into detail- and summary-oriented tables by various situational categories and significant player and team records; provides career summaries and franchise totals; and covers season-by-season totals and yearly leaders.

1972

Don Drinkwater (MS EE), director of licensing for the Bose Corp., received the 2013 Frank Barnes Mentor Award from the Licensing Executives Society (U.S.A. and Canada).

Robert Ranta is retired after an "awesome" 25 years with IBM. "My last project as a business area manager outsourced by IBM Global Services, was to update Eckerd Corporation's 3000 retail stores and 20 distribution centers for the Year 2000 (Y2K). I now work part-time as a web

'70

Pat Abbe reflects on the changing times at WPI in a piece he calls "And Then There Were the Women." His poem brings together a mixture of memories, from playing "Sergeant Rock" games in ROTC, to home-grown rock icon J. Geils. Fraternities, drugs, and the taste of teargas were all part of the scene as "We began to grow up/and own up." While the Rolling Stones sang "You Can't Always Get What You Want" at WPI, "In the beginning we had parietals on Saturday afternoon/And now we could spend the night together." Just when it seemed that "smoking a bowl would solve it all,"

**Then came Kent State
And all the rules changed.
Kids were dying.
And our innocence waned and was lost.
And we became.....
The class of 1970**

Read the whole poem at tinyurl.com/kryxzca.

developer for a few restaurants, retail stores, and the city of Deerfield Beach, Fla. I also play semi-professionally as a musician in local jazz and blues clubs. Above all, I provide loving care for an elderly mom who is afflicted with terminal cancer. To be content and complete in retirement is where any professional wants to be, and I am thankful for the blessings I have been given. I feel that it is now my turn to give to others, which I do graciously. In total, I am very satisfied with my life. I have done well with no complaints and am enjoying my retirement. I have many wonderful memories to look back on, both working and my years at WPI."

1973

Debbie (LaPlante) and **Steve Goodwin** just returned from visiting their son, daughter-in-law, and newest grandchild (#4) in Salt Lake City, where they heard the Mormon Tabernacle Choir. They also spent four days in Yellowstone Park.

Dick Kirk has been working at JDS Uniphase in Bloomfield, Conn., as an optical performance engineer since 2010. Dick and his spouse, Debbie, have three grown children—Elise, Sara, and James. "My current interests include photography, art, jazz, chess, and wondering if retirement is practicable."

1974

Alden Bianchi was named to 2013 Staffing 100, a list of the top 100 most influential individuals in the staffing industry. An attorney for Mintz Levin, he advises corporate, not-for-profit, governmental, and individual clients on compensation and employee benefits issues. He represented the Romney administration in connection with the 2006 Massachusetts health care reform act, and he has testified before the Senate Finance Committee on the subject of health care reform. He is the author of over 100 benefits-related articles and more than a half dozen books, including *Employee Benefits for the Contingent Workforce* and *The Health Care Reform Advisor*, both published by Bloomberg/BNA.

Jim Briggs informs us that that he's on the cusp of retiring for a second time, after he heals from a recent broken leg. "Let there be magic," he writes, "—if I am fortunate enough, I hope to remake myself as an amateur magician."

Jim Kudzal writes, "I'm proud to announce that my daughter Andelle recently graduated as part of the WPI Class of 2013 with a BS in chemical engineering. She is continuing at WPI for graduate school."

After working in the Alaskan oil & gas industry for 25 years, **Will McBride** retired after BP took over ARCO Alaska. He continues as a consultant to the industry. Will is active in the IEEE Petroleum and Chemical Industry Committee, serving in the Standards Subcommittee for over a decade. Will was appointed to serve on Code-Making Panel 14 of the National Electrical Code (NFPA 70) for the 2014 code cycle. He continues to live in Alaska, but also purchased a house in Arizona as well as lots in Hawaii, Baja Mexico, and Portland, Ore. He plans to build energy efficient sustainable dwellings for retirement projects.

Stephen Page, a founding member of Page, Mrachek, Fitzgerald, Rose, Konopka & Dow PA, has been named a SuperLawyer in the area of business litigation in the 2013 edition of *Florida Super Lawyers*. He is a trial attorney whose practice focuses primarily on complex business and commercial litigation. In addition to his local business practice, Page frequently travels throughout the state of Florida representing the firm's larger clients, including nationally known pharmaceutical companies, athletic corporations, and healthcare organizations. In September, he re-joined the Gunster law firm.

1975

Mario DiGiovanni writes, "Major events this summer: the engagement of our son **Dominic DiGiovanni '09** to the lovely Jenna Carino. Dominic is working as a stage carpenter at the La Jolla Playhouse while his fiancé attends UCSD for her MFA in scenery design. We also began the long-delayed whole-house remodeling project on our 1950s boxy ranch house in the Oakland hills. When asked why we didn't buy a new house, we replied that we were—but at the same address! With luck and good weather we'll move back in during January. I continue working for DuPont Sustainable Solutions in the same business I joined 36 years ago under Monsanto Company."

Helen Kotilainen has been promoted to director of quality management at Network Health, a nonprofit health plan in Massachusetts. She brings more than 20 years' experience in the health care industry to the post, in addition to a master's degree in microbiology from Clark University. She has published on a variety of topics relating to quality improvement and has been an instructor at the University of Massachusetts Medical School, Northeastern University, and Worcester State and Assumption colleges.

Kevin Mischler shares that his daughter, **Kristine '08**, had her first child, Mackenzie Jean Barr, in May. Kevin lives in West Chester, Ohio, with his wife, Deborah, and serves as senior assistant transit planner for the regional transit authority.

Mike Parker is the dad of two WPI alums, **Krystal '08** and **Matthew '10**. Since mid-2011, he has co-chaired a combined undergraduate/alumni committee to recognize the centennial anniversary of the Lambda Chi Alpha chapter. He writes, "Centennial events began at homecoming in September 2012, continued on a monthly basis, and we completed our year-long celebration at homecoming 2013 with a centennial banquet at Union Station."

Alex Vogt has retired after 25 years with the New Hampshire Department of Transportation.

1976

Andrew Kopach has been employed by General Electric for 35 years. He is a senior estimator for GE Power and Water in the company's Global Power organization.



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Neal Wright, Dewberry vice president and director of DOD business development, was awarded the Society of American Military Engineers (SAME) President's Medal. He has been an active member of SAME since 1984. Wright is a retired lieutenant colonel who served in the engineering branch of the U.S. Army. An article on his work with SAME's Warrior Transition Task Force appeared in the Fall 2013 issue of *WPI Journal*.

1977

Scott Sieburth married his high school sweetheart, Karin Soderberg, on the Ides of April (the 13th). He says, "We organized our 40th high school reunion that was held last October. Even better, we attended Burning Man together for the third time. As usual, it was beyond description." Scott also organized the 43rd National Organic Chemistry Symposium, a biennial meeting sponsored by the Organic Division of the American Chemical Society. "Thirteen plenary lectures, the Roger Adams Award Lecture, nearly 400 poster presentations, almost 650 attendees—and three years in the planning," he notes.

Linda Weiss has worked for 30 years with the U.S. Geological Survey. Since 1997, she has been the director of the New Mexico Water Science Center.

1978

Bruce Bertrand, MD, is the new chief medical officer/VP of medical affairs at Heywood Hospital in Gardner, Mass. He has been at Heywood since January 2011 and has been chief of radiology since January 2012. He started his new position in October and also continues in radiology.

Jean Cariglia '81 (MS EE) writes, "In 2001 a rare neuromuscular disorder invaded my space, unfortunately at the start of the economic downturn. Since then I have been out of the engineering field, realizing how much I miss the brain workout. I did design work at small companies that give you broad responsibility for 3-phase 400v ac power during European standards conversion to embedded microchip design. I spent months working in Scandinavia installing, design tweaking, and making software improvements. Engineering was always a way to grow more, accomplish more, be more." Jean also has a YouTube posting with 30,000 hits.

Ian Cannon has joined Shell TechWorks in Cambridge, Mass., as a senior product manager working on large projects to improve upstream exploration and drilling activities. He retired after 35 years from Aerojet Rocketdyne, where he was recruited during the famous Blizzard of '78. Ian and his wife, Patricia, enjoy living on the Massachusetts North Shore in Beverly.

'77

Henry LeBlanc, far right, is currently producing his first major commercial feature film, titled *I Was Never Here*, a dramatic story of a young writer's journey of self-discovery that leads him into an exotic nightlife of unexpected relationships, sex, and bloodshed, toward a new understanding of what is truly important to him. After 25 days of filming, with more than 50 actors, the film is in post-production, with an expected completion by Christmas 2013 and release in spring 2014. Henry, who minored in theatre at WPI, worked as a project manager for Mobil Oil after graduation, before starting his own video production company and earning an MFA in theatre from the Mason Gross School of the Arts, Rutgers University. He now is president of Marathon films in Los Angeles and a professor in the entertainment studies program at UCLA, where he teaches several acting courses each year. His acting credits include theatre, film, and TV, with regular appearances on Jay Leno, as one of his comedy skit actors. Henry writes, "I don't get back to the East Coast very often, but have attended a few ATO and WPI reunions."



Austin Kalb writes that he is managing a small hedge fund, Alpha Enhanced Index Fund LP, and enjoying retired life with Norma, his wife of 26 years.

Frank Leahy finished his first year at Salesforce.com in early July and immediately headed off to England, Ireland, and Scotland to see Rachel's family and trace some of their Irish roots. He says, "Our son Nathaniel just started high school here in Mill Valley and is on the water polo and mountain biking teams; Sebastian started 5th grade and is crazy about soccer. I was out on San Francisco Bay last weekend to watch the first America's Cup race between Oracle USA and Emirates New Zealand. I'm not convinced it should be called sailing (more like drag racing than any sailing I've ever done), but it sure was exciting!"

1979

Arthur Hughes is operating a private wealth advisory practice named Hughes and Associates and currently housing two junior hockey players for the upcoming season for the Rio Grande Valley Killer Bees. "Yes," he says, "hockey in deep South Texas."

Mary McDonald just celebrated 30 years of marriage with a trip to Hawaii, said a final goodbye to her mom, and sent her kids off to college—WPI and St. Andrews, Scotland.

1980

Verne Backus, MD, worked for 10 years as the medical director for Northwestern Occupational Health in St. Albans, Vt. He also had a private independent medical examination consulting practice. As of February 2012, he has been working full-time for his own solo corporation.

1981

Mark Burzynski became a grandfather for the first time on Father's Day. His daughter, Hannah, gave birth to a healthy baby girl in Longmont, Colo.

Paul Tenaglia has been the football coach at East Lyme High in Connecticut since 2003. He has accepted a transfer at Boeing and will also join the staff at Andover High.

Dennis Wysocki wishes his twin boys the best of luck in their senior years at college. Dennis writes, "Both are studying engineering (sorry, not at WPI...I'm not sure where it went wrong!). One is IE at Lehigh, one is ME at Carnegie Mellon. But maybe some forgiving WPI grad out there can do their old man a solid and consider hiring them."

1982

Professor **Helen Vassallo (MBA)** was presented with the Goat's Head Award for Lifetime Commitment to WPI at Homecoming. She came to WPI in 1967 to teach molecular biology and was the second woman to be named a full professor and the only woman to have served as Secretary of the Faculty. A role model and mentor to countless students, she was honored for her dedication, her energy and creativity, and her thoughtfulness and compassion. (See more, p. 45.)

1983

Doug Acker received the Silver Beaver award from the Sam Houston Area Council of the Boy Scouts of America based in Houston, Texas.



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'81

As an adjunct business instructor specializing in strategy and innovation, **Ed Gonsalves '94** (MS MG) sees some intriguing ideas come across his desk. When a Providence College student approached him with the Teecil, a combination golf tee/scoring pencil, "This jumped out at me as unique," he says. "It reaches beyond the traditional golf channels." Ed called in classmate **John Wisniewski** to design precision machinery to produce the Teecil, which conforms to USGA rules and regulations and can be customized with any name or logo. The machining posed a "non-trivial" engineering challenge, says Ed, but the marketing challenges turned out to be even greater. "It's more than a golf tee. It has to be positioned and branded right." Some attention-getting placements include pizzerias, convenience stores, and wedding favors. Ed has coached students on diverse products, from monogrammed boat shoes (popular with fraternities and sororities) to Surprise Ride, an educational activity package that arrives monthly as a gift from dotting relatives. He's even advised Water Dog, a company that retrieves and re-sells golf balls (his student's husband scuba dives in water hazards to collect them). Ed says it was a great experience to team up with his old pal John.



Cynthia Kosciuczyk tells us that after participating this past September in the Rug Lovers 2013 tour for professionals in Las Vegas, she is launching her consulting business for handmade rugs at theruggoddess.com. She can also be found on Facebook as Rug Goddess or Salonista Cynthia and has been working with The 4th Avenue Rug Gallery in different capacities since 2000. She is very active in community events, especially with the Coronado Optimists, and is finally getting around to publishing books of poetry. Look for *Weaving Life* and *My Odyssey* in the next year or so.

1984

Dean Holman is proud to see his oldest daughter, Nichole, enter her senior year at WPI studying for her BS in mechanical engineering. His daughter Corey is a sophomore at Brown University studying biology while competing for their Division 1 gymnastics team. His son Mitchell just entered his sophomore year at Westford Academy and is hoping to pursue an engineering degree at WPI after finishing high school. Dean is currently the director of Global Support Services and Sustaining Engineering at Mercury Systems in Chelmsford, Mass. He and his wife, Rochelle, live in Westford.

Joan Morra '87 (MS MTE) says, "After an extended hiatus from materials engineering and metallurgy, I have returned to my field of study. I am working at M & P Labs in Schenectady, performing failure analyses and engineering investigations on a diverse range of materials and products. It's gratifying to know that all those skills I learned at WPI as both an undergraduate and graduate student were so deeply ingrained. Going back to them has been like riding a bike... never forgotten. Thank you, Professors Biederman and Sisson!"

Josiah (Josh) Reed says, "I just celebrated my fifth anniversary with Lowe's and have the privilege of managing a small group of highly dedicated, incredible, and accomplished individuals."

Judy Sedgewick passed the patent bar in March of 2013. She is currently working as a patent agent for Hunter Clark PLLC in Beverly, Mass.

1985

Ken Chenis is a chief architect at ACI Worldwide in Waltham, Mass., focusing on high-performance payment systems and specializing in wholesale payment messages and anti-fraud machine learning systems. His son, John, who graduated from high school in May, enjoys audio system design, and DJs in his spare time. At 16, Ken's daughter, Abbie, is attending a college gateway program, where she is taking a mix of college- and high school-level

classes to graduate early and get a jump-start on her college degree. She is also using her artistic talents by painting murals for decoration at local businesses. Ken, John, and Abbie live in Lunenburg, Mass.

Mark Lacasse (MS EE) is the president and CEO of Cost Segregation Consultants LLC. He writes, "Our daughter Katherine graduated from Clark with a PhD in social psychology in May and is currently an adjunct professor. She is engaged to be married next summer."

Jim Mirabile is currently sales operation director for major accounts at EXFO, a telecommunications test and monitoring company headquartered in Quebec City.

Greg Santini writes he is "pushing 29 years at the Boeing Company in Seattle. I am a structures engineer working on leading and trailing edge components on the wing (all the bits and pieces you see move when flying). Having a blast working on new concept airplanes, and developing the next strong crew of young engineers. Married 25 years, three happy kids, and one spoiled dog."

Jo Anne Shatkin is living in Boston and working on nanotechnology and sustainability issues as an independent consultant, under the name Vireo Advisors. The second edition of her book, *Nanotechnology: Health and Environmental Risks*, was published this year.

Susan Woods writes "After almost two years with Hearst Magazines, I started a new position with Hearst Corporation in the summer of 2013. I'm enjoying living and working in New York City and preparing to run my 7th NYC marathon in November."

1986

Michael Mazzucco writes that his daughter Jena's college search began almost two years ago. She wanted a small engineering school with a field hockey program that was within a reasonable distance from home. "She decided to join the WPI Class of 2017 for many reasons, one being the robust Spanish program WPI offers. To say that she is happy and I am proud are understatements. The next four years I will be visiting my alma mater often and watching the field hockey team play. Go, Tech!"

Bill Sacramone and his wife retired at age 55 and are now Florida residents. He writes "We are snowflakes, not snowbirds. I coined the term snowflakes to denote Florida residents who come north for the summer. When we're not in our home in Daytona Beach, we are in Oxford, Mass., to escape the hot Florida sun."

Margaret Shinkle was elected to the board of directors for the Software Quality Group of New England.

Richard Wilson lives in Walnut Creek, Calif., and continues to work at the East Bay Municipal Utility District in Oakland, where he manages infrastructure renewal projects for raw water aqueducts and tunnels and water treatment plants. He now holds a professional engineer's license in both mechanical and civil engineering. Last April, he and his wife welcomed the birth of their son, James Howard Wilson.

1987

Kevin Austin was named chair of the graduate program in computer science at Fitchburg State University.

Pat Bannon is a general manager for RBC and lives in Southbury, Conn.

Peter Ingle is currently an associate professor of special education at Westminster College in Salt Lake City. He is also the director of the Learning Coalition, which provides professional development for all faculty on campus. Peter writes, "I am married to Krista, who is a third grade teacher, and we have two wonderful boys – Gunnar, 14, and Anders, 12. Living in Utah, we ski a lot!!!"

Brian Teague was named to the Rising Stars list in the 2013 edition of *Virginia Super Lawyers*®. This honor is awarded only those who are 40 and under or who have been practicing attorneys for 10 years or less. He is an attorney with Patent Law of Virginia PLLC, specializing in patent preparation and prosecution for individuals, large and small companies, government agencies, and universities.

Douglas Tracy (MSM) writes "I have been retired for five years now and am enjoying it immensely—golfing, gardening, fishing, playing with my great grandchildren—and did I mention golfing? I live with my wife of 48 years in Pomfret, Conn., from April to October, then in Florida from October to April. That is great because I can golf year-round!" He tells us that what he learned at WPI easily integrated with his professional work being a VP of a manufacturing company and then marketing and sales, consulting, and starting his own industrial supply business.

1988

Ann Palmer Anderson just completed ten years of working on a volunteer program that helps elementary school students do science experiments. She has been busy volunteering and raising three kids: Kevin, 16, Jill, 14, and Eric, 11. Ann lives in Florida and she and her husband recently celebrated their 18th wedding anniversary.

After WPI, **Pamela Curbelo** went to law school, then worked at United Technologies Corp. as a patent attorney. She joined Cantor Colburn LLP in 1998, where she is a partner and the co-chair of the Chemical, Material and Life Sciences Group.

Rob Provost, Lt. Col. (ret) USAF, recently relocated with his wife, Lt. Col. Cindy Provost, to their home in Colorado Springs. Before his move to Colorado, Rob was honored by the WPI Jazz Group for his work establishing the WPI Jazz Alumni Association. He was the group's founder and first president and helped re-establish contact with nearly 200 WPI jazz alumni. Rob continues to play drums and is founder and owner of Grand Slam Fly Fishing Destinations, grandslamflyfishing.com.

1989

Drama/theatre alumnus **Patrick Brennan**'s play *Singulariteen* won five awards at the San Francisco Fringe Festival (four "Sold Out" awards, and a "Best of Fringe" award). "Fringe producer Christina Augello called us out as the play that 'everyone was clamoring to see,'" he notes in his Undefined Symbol Theater blog. "We are very gratified at the recognition of *Singulariteen* as one of the standout plays of the Fringe, and we thank the producers, staff, volunteers, and all the other theater artists of the San Francisco Fringe for an unforgettable experience."

Lisa Jalbert Menard looks forward to the graduation of her grandson Tyler Menard '14, which will also mark the 25th anniversary of her own graduation from WPI. Tyler's sister, Brittni will be graduating on the same day (May 17, 2014) from Worcester State University.

Rosemary Vassallo Nelson just celebrated her one-year anniversary at Ipsen-Biomeasure in Milford, Mass. She continues to lead the automation efforts for the endocrinology in vitro group.

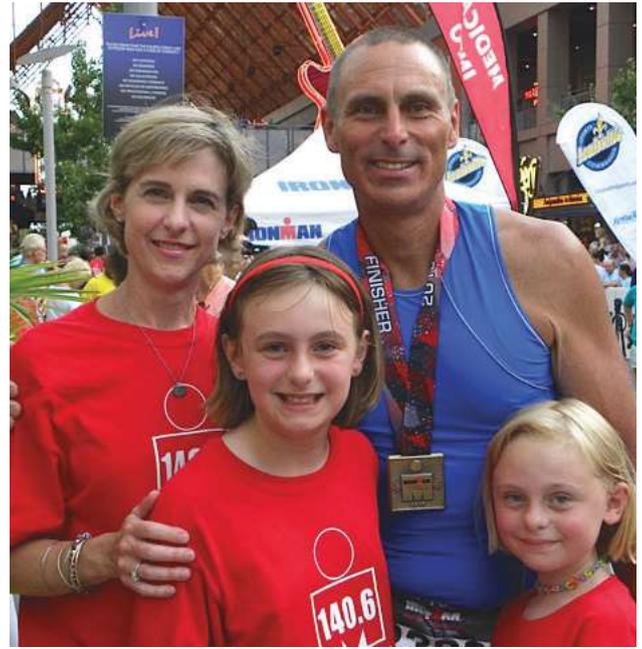
1990

Jonathan Bird tells us, "I have been putting the finishing touches on season 4 of *Jonathan Bird's Blue World*, which will begin airing on PBS in early 2014. Also, we were nominated for a national daytime Emmy award in June."

David Degrange was appointed general manager of Business Development and Pricing Advancement for the Mobile Industries and Process Industries Segments at The Timken Company. He joined Timken in 1990 as a product design engineer and has held various positions in engineering, manufacturing, and new product development. He most recently served as general manager of the Corporate Strategic Intelligence Group. He lives in Mansfield, Mass.

'87

David Bedard competed in the IRONMAN™ Louisville triathlon on August 25. He writes, "My road to IRONMAN Louisville started roughly 40 weeks before the event, training up to 25 hours per week. The level of training for this 140.6-mile race (2.4 mile swim, 112-mile bike, and a 26.2-mile run) was far greater than the shorter triathlons I've done. It calls for family buy-in, as the majority of your free time is spent training instead of on family fun. It was 91 degrees on race day, but I was glad to have my cheering squad (my wife and two daughters) there. "I had no expectation other than to complete the course within the allotted 17 hours. The training paid off. I finished in 12:20, averaging nearly 19.5 mph on the bike. For me there has never been a more rewarding experience! (A note for you WPI materials majors: My triathlon bike was a titanium model made by Seven Cycles in Watertown, Mass.)"



John MacDougall and his wife, Maeghan, welcomed their 10th child, Eoghan, in May of 2013. John continues his role as the manager of electronic circuit breakers development at Schneider Electric in Cedar Rapids, Iowa.

Chris MacGregor (formerly Chris Arthur) is now a senior software engineer at Google in Seattle. He can be reached via cybermato.com.

Patti Newcomer-Simmons has been the chief marketing officer at WorldPay US in Atlanta for the past two years. She lives in Charlotte with her two kids, Megan, who is 9 and in the fourth grade, and Weldon, who is 7 and in the second grade.

1991

Shawn Gordon is enjoying the sunshine in Southern California and keeping busy between family and work as a senior systems engineer for Northrop Grumman. "Married and a dad of twin 3-year-old boys... no idle hands here as Parker and Quinn apparently inherited engineering genes and a fascination for tinkering with all things mechanical," writes his wife, Kellie.

Aju John is currently virtualizing the IT industry with VMware through software defined computing, storage, and networking.

Jim Wilkinson '93 (MS MFE) and his wife, Pat, have recently moved to their newly constructed lake house in

Hampstead, N.H. Jim is senior director, user experience, at Dassault Systèmes SolidWorks Corporation, where he has worked for the past 17 years.

1992

David Andrade is the chief information officer for Bridgeport (Conn.) Public Schools. He and his wife, Cori, welcomed their daughter, Abigail Claire, on Aug. 2, 2013.

NEOS LLC, a business technology consulting company co-founded by **Robert Norcera** has been listed as one of Inc 5000's fastest growing companies of 2013.

1993

Steve Tomas writes, "I recently hunted in South Africa with my Zeta Psi brother **Joe Musmanno '88**. We booked the seven-day hunt two years ago and our time in Africa raced by faster than imaginable. Fraternity outlasts many things, and Joe and I remain close friends and brothers many years after graduation."

Tania Wolanski had a great summer and took a family vacation to Switzerland and Bavaria with children Garrett, 8, and Vivian "Gracie," 6. Tania continues to work for MKS Instruments in Boulder, Colo., and is now a principal quality engineer responsible for the quality assurance group.

1994

Rich Leaton writes "Greetings from Louisville, Kentucky! This has been a pivotal year in data governance and data quality. Sharing these best practices to ensure company compliance has become vital. As a keynote speaker at the IQPC Data Governance Conference in New York City in March, I discussed the importance of setting a business data vision, treating data as a strategic asset, and quality controls vital to a master data management strategy. On a personal note, my oldest daughter has chosen mechanical engineering at the University of Dayton (in addition to being a D1 softball student-athlete), while my younger children are finishing up their high school careers. Best wishes to all of my former classmates! Would love to connect with many of you on LinkedIn.

Paul Leung is semi-retired and doing medical interpretation as a contractor. An avid cyclist, he lives in Hopkins, Minn., with his wife and two teenage sons.

Michael Rzeznik has joined GHD in New York as principal fire protection engineer and code consultant. Mike will be leading the expansion and growth of the company's specialized fire protection and life safety service line in the tri-state area, while also providing project management and technical support nationally and internationally.

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you'll get Gompei's Goat Cheese shipped directly to you.

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Warren Smale writes, "Many members of the Class of 1994 celebrated 100 years of the Lambda Chi Alpha fraternity at a gala black tie event at Homecoming 2013 at Worcester's Union Station. **Joe Klimek** has served as the president of the Pi Zeta chapter's alumni organization for many of the last 20 years and was integral in the construction of the 30 Dean Street house that the fraternity currently calls home. As the chapter begins its second century, members across the decades from the 1950s through 2010s celebrated the fraternity's history and its bright future contributing to the greater WPI and Worcester community."

1995

Kerry (Cooke) Keleshian worked in the semiconductor industry as a process engineer for Allegro MicroSystems and then Texas Instruments until their fabrication plant in New Hampshire closed. "Since then, I have been focusing on raising my family in New Hampshire," she says. "At this point, I have three children, one dog, and one cute little kitten."

Jeremy Little writes, "My wife, Donna, and I currently live in Wakefield, Mass., with our two sons, Spencer and Hudson. About two years ago, I became the vice president of North American affairs for BioSpring, a custom manufacturing company in Frankfurt, Germany. Between our boys' activities and work, we try to find time to enjoy boating as a family with our dog, Madgy. I really enjoy seeing all the exciting updates to the WPI campus and love that WPI remains one of the top schools in the nation!"

Marybeth (Pulli) Mineo writes, "After working for six years as an analytical chemist, then staying home to raise my three children for 10 years, I just started my second year as a middle school science teacher. Other than being a mother, teaching is the most enjoyable job I can imagine. I find it very fulfilling to share my love of science with my students. I love to watch their excitement and sense of accomplishment while working on lab experiments."

Shawn Pete and his wife, Jasmine, are expecting their first child in March. Shawn works as a mechanical engineer II/ CAD administrator for Esterline Defense Technologies in Coachella, Calif. Besides his engineering duties for the California location, Shawn also oversees the day-to-day CAD operations for his company's four U.S. locations.

1996

Mike Caprio is currently a software engineer in the search intelligence engineering department at Ask.com. In April 2013 he organized the NASA international space apps challenge site in New York City (a global hackathon with over 11,000 participants) to solve problems aimed at improving life on earth and in space. NASA has since asked

Mike to contribute to the Asteroid Grand Challenge, a program focused on detecting, characterizing, tracking, and defending the planet from near-earth objects.

Shannon (Finley) Foskett recently started a new teaching job at Twinsburg (Ohio) High School, where she teaches AP and regular chemistry. She is married to **Stephen Foskett '94**; their son is a freshman at Western Reserve Academy.

1997

Alan Belniak had the privilege of reading his book, *Diego Manchego*, (See Bookshelf, p. 57) to a kindergarten class in Weston, Mass., in April. "I was excited because this was the first reading of the book," he writes. "The class and teacher were genuinely enthusiastic." Alan and illustrator Michelle Poirier also did a book reading and signing event, with an activity for the kids at Tatnuck Bookseller in Westborough.

Geoffrey Borggaard writes, "I've been feverishly working on Google Play for Education, making Android tablets shine for schools." He currently lives in Lincoln, Mass., with his wife and two sons.

Wes Jones writes, "I continue to wrangle pixels into digital art and to forge words into whimsical fiction."

1998

Lindsey Bullard has recently returned to Ohio to be closer to her family. She tells us, "My free time away from work is filled with learning more about agriculture, caring for a farm, and being a tennis ball dispenser for my dogs. I have also recently been reconnecting with some of my old WPI classmates and friends."

On the first anniversary (in Earth years) of landing of Mars rover *Curiosity*, **Richard Cournoyer** reflected on its success. "She's working great," he writes, "and has been averaging about 200 feet a day (finally)...compared to Oppy, who only averaged 10 feet on a *good* day in the beginning of her life on Mars. In other news from space, I also put a lot of love into *Juno*, which will arrive on Jupiter in July 2016."

Rich also posted on Facebook that it's been 55 years since the creation of NASA. ("I *really* wanted to say, '...and 3½ years ago the White House euthanized it,'" he adds.) "I still teach a Design for Manufacturability class for NASA HQ and I completed two classes this summer at JSC and KSC.

I see the look on my students' faces during the two sessions I taught, when I ask them what they are now doing and what project they are working on. I usually get the generic answer, "We are busy designing and building a new launch vehicle (rocket, to the layperson), to go to a location yet to be named, and will lift a payload, yet to be determined" ...then then they sigh. It truly is sad, and breaks my heart."

Cournoyer is planning a 5,500 mile, one-year motorcycle trip from Beijing to Shanghai China, with explorations of key locations, like Xi'an—home of the Terra-Cotta Warriors—and a two-month visit to Tibet via train. "Unfortunately I will not be riding my retirement Harley on this trip (it's not allowed), but I did find a shop/guy who will custom rebuild me a '70s era Chinese version of a BMW. It's either that or I make the trip in a moped. Yes, choices are limited. Once I finalize the bike purchase, I'll need to work on getting my Chinese motorcycle license (they don't honor our International license), then come back to the U.S. and await warm weather."

Capitola Lau tells us that in April of 2013, she was promoted to channel sales manager of electromechanical products used in heating and refrigeration for North and South America. She writes, "Our company has been purchased by Schneider Electric, which will be implemented in 2014. I live in the western suburbs of Chicago with my daughter, Isabella Rose, who will turn 3 on New Year's Eve."

Courtney Lewis is a practicing veterinarian in Massachusetts. She married Andrew Laporte on June 15, 2013.

Christopher Pacitto founded Velocity Engineering Services LLC in July 2013. "Velocity is based in beautiful Fort Myers, Fla., just minutes from Jet Blue Park, the Red Sox spring training facility," she says. "We offer geotechnical and environmental engineering, building sciences, and facilities consulting services throughout southwest Florida."

David Srebnick tells us that in 2003, after a 20-year career, he left Hewlett-Packard and pursued a career in education. He writes, "Early in 2004, I got a job teaching 8th grade mathematics at the Solomon Schechter Day School in Newton, Mass., and I'm still at it. It is a job that I thoroughly enjoy, although as with any job it does have its 'moments.' My education at WPI has been invaluable in preparing me to integrate new technology into my teaching as our school implements its STEM curriculum."

1999

Julie Rasku became engaged to Tom Donaldson Aug. 4, 2012; they will be getting married Dec. 1, 2013.

2000

Bernie Till (MS FPE) has formed Bernie Till and Assoc. LLC, providing fire protection engineering services to a wide variety of clients, and specializing in fire protection for nuclear facilities.

Sarah Walkowiak is currently an instructional designer at Wentworth Institute of Technology in Boston.

2001

Robert DelPaine and his wife, Kristen, welcomed the arrival of their first child, Maxwell, on June 5, 2013. They are raising Maxwell in Acton, Mass.

Jonathan Graham says it is "somewhat ironic that my first day back to work after a vacation coincides with a partial government shutdown." He tells us this year has been an exciting ride as he's been juggling work, mentoring a high school robotics team, and being back in school for WPI's Cohort MBA, which he expects to complete in 2015.

William Osmer (Phi Kappa Theta and WPI Wrestling) earned an MS in 2011 and an MBA in 2012. He currently works with freshman pre-engineering students at the University of Maine in Orono. He is also the club advisor for the newly formed UMaine Black Bears NCWA wrestling team.

2002

Patrick Saggal and his wife, Mary, have been married for seven years. They welcomed their second child, Joseph, into the world on Sept. 15, 2013. Big sister Brooke (19 months) is excited to have a little brother. Patrick just celebrated 10 years with General Dynamics Electric Boat, where he is manager of operations at the Quonset Point facility in Rhode Island.

Lauren Wojtkun started as the director of volunteer training and development in the Alumni Association at MIT in March 2013. She also consults as a speaker and trainer for RISE Partnerships, delivering comprehensive programs to students and staff at universities nationwide. She lives in Arlington, Mass., with her husband, Jeff Davis.

2003

On Aug. 30, **Ryan Clarke** was promoted to the rank of lieutenant commander in the U.S. Navy. Ryan is currently the assistant operations officer for Carrier Air Wing NINE, based at Naval Air Station Lemoore, Calif. In December he will report to the Black Lions of Strike Fighter Squadron TWO ONE THREE, based at Naval Air Station Oceana, Va., for his department head tour, flying F/A-18F Super Hornets.

On June 20, 2013, **Anthony Forester** and wife, Kellie, welcomed their first child, Penelope Marais. The Forester family is currently living in Los Angeles, where Anthony is the regional engineering leader for XL Global Asset Protection Services.

Seung Kim is working at BAE Systems and has returned this fall to WPI to get a second master's degree.

Michael Landi recently moved to Long Island, where he accepted a position as a sales representative supporting the New York City/Long Island engineering community with its plumbing specifications.

2004

Timothy Baird '08 (MS ME) has had a very exciting year. He married Kristin Allberg, and submitted his first design to the USPTO for patent pending status. He writes, "I'm living and working in Clinton, Mass., as a project engineer III at Nypro Clinton, primarily focusing on robotics, automation, and production support. I'm currently working toward an MS in management at Worcester State University and will be done in spring 2014."

Anna Foss and Craig Dionne '03 welcomed their second child, Leo, in January of this year. "At 10 lbs. 10 oz., we hypothesize he is the largest baby born to WPI alumni," they say.

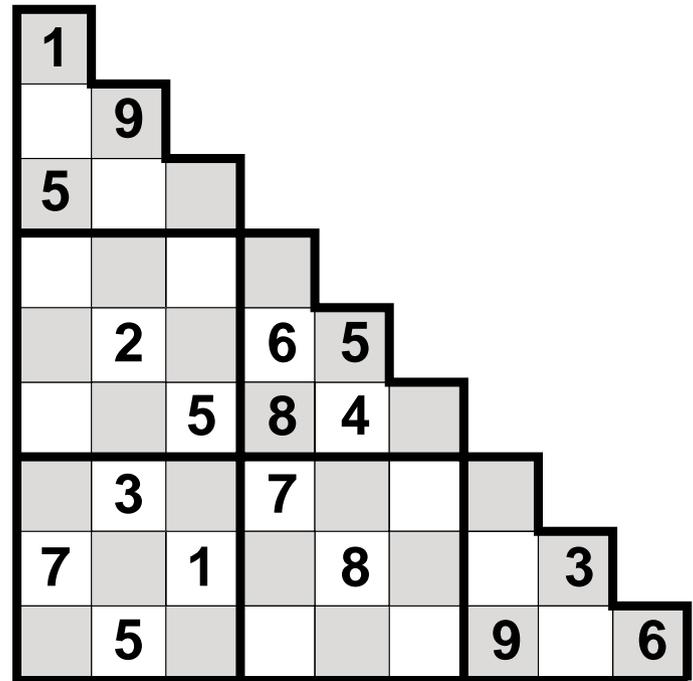
After three years with Booz & Company, **Gregor "Greg" Kronenberger '04** was promoted to senior associate/engagement manager earlier this year. He is enjoying life with his wife, Ahra, in Germany.

Jonathan Legare '08 (MS MA) and **Brittany Morgan '03** will celebrate their seventh anniversary in Acadia National Park, Maine, during the autumn equinox. Jonathan has worked at Fidelity Investments since May 2004. Brittany earned her PhD in physics from Clark University in 2010 and is currently a postdoctoral researcher at UMass Medical School in Worcester.

Jason Runcie tells us, "I just had a close call when I fell from my second-story roof and was outside for a full night until my boss came to my house and found me the

Sujiken

By George Heineman



Place digits from 1 to 9 in the triangular grid such that:

1. No digit repeats in any row, column, or diagonal
2. No digit repeats in any of the outlined boxes and triangles

PUZZLE ANSWER ON PAGE 74

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'05

William Herbert spent some time in Europe over the summer with his friend **Laura Amodeo '06**, who was on an extended work assignment in the German state of Baden-Württemberg. He says, "In one weekend we saw Biberach an der Riss, Germany; Vaduz, Lichtenstein; Menaggio, Italy; Chur, Switzerland; and Bregenz, Austria. Laura expertly drove us through the Splügen Pass (connecting Switzerland and Italy), where we had the chance to see the stunning beauty and incredible size of the Alps."



next day. It's definitely worth finding a job that values you, and being consistent enough to get people to look for you when you don't make it to work!"

Krystal Tam married Jeffrey Yong in Cancun in October 2013.

Duncan Torkornoo is currently working as a global director at SAP America.

2005

Megan Holmes and **Tiffany (Warrington) Holmes '07** announce the birth of their beautiful baby boy, Cooper William Holmes.

Gregory Krane and his wife, Farleigh, just celebrated their first anniversary in Kauai, Hawaii, where they spent their honeymoon in 2012. Greg recently joined the Plainfield (Conn.) Veterinary Hospital as an associate veterinarian. He currently resides near Westerly, R.I., and hopes to meet some WPI alumni in the area.

Peter Lohrmann competed in the USA Triathlon Age Group National Championship and earned a spot on Team USA to compete in the 2014 ITU Age Group World Championship, which will be held in Edmonton, Canada.

Yamini Varma Nanagiri (PhD CE) writes, "Moved back to my home country, India, and became a faculty member myself; I am also busy raising my 6-year-old son."

Erica (Abrahamsen) Sabia graduated in August from Western New England University with a master of arts degree in mathematics for teachers.

2006

Laura Handler is director of virtual design and construction (VDC) for Woburn-based Tocci Building Companies. She was recently named one of the "Top Young Professionals in New England" by the design and construction industry publication *ENR*. At age 25 she was *Building Design + Construction's* youngest ever "40 Under 40," and in 2005 she was a recipient of WPI's first "Women of Strength" award.

Sara Fowler Lajoie writes that she moved to Virginia and focused on water resources engineering, including drainage design, erosion and sediment control, storm water management, and riverine analysis for statewide transportation projects. She says, "Earlier this year I passed the professional engineering exam (on the first try!), a significant achievement in any engineering career. The most rewarding part of this profession is watching your design go from a computer screen to the construction site. This is a challenging yet innovative and ever-changing world—I'm glad to be a part of it!"

Rocco Lore writes that he is living in Norwood, Mass., and working for Inspectorate in Chelsea.

Dan Pickett recently co-founded Launch Academy (launchacademy.com), a school that teaches the art and science of web development with Ruby on Rails. "We're based in Boston and we recently graduated our first class of students with great results. I'm currently living in Bridgewater, Mass., with my wife, Shannon, and our dog, Linux."

2007

Kevin Barrett resides in Andover, Mass., in a multi-family home he purchased a few years ago. He writes, "I've traveled to the little-known, but absolutely beautiful, island of Anguilla six times since graduating." He works as a sales engineer at the financial software company Vestmark in Wakefield. He also has his real estate broker's license and is working for Rose Real Estate representing buyers and sellers in Massachusetts.

Mohammed Kazim worked in healthcare private equity from 2008 until this year, when he left to work on multiple start-ups, including allinque.com and tamashee.com. He also works on commodity trade opportunities from time to time through international connections and is exploring skin care opportunities.

Rekha Rani (MS CS) joined Pegasystems, based in Cambridge, Mass., thanks to the WPI career fair. She currently works for the company in India. "Along the way, there was another addition to the family—a son, who is now three years old," she writes.

Scott Sideleau is happy to announce his engagement to Hope Benjamin (Regis College, psychology, 2011) of Rochester, Mass. The wedding ceremony will take place in the fall of 2014. Scott and Hope have been dating for two years and enjoy competing together in the Scottish Highland Games Heavy Athletics up and down the east coast. They currently reside in Tiverton, R.I.

Jillian Wise received her PhD in cancer virology from MD Anderson Cancer Center and moved to Oslo, Norway, to begin a postdoctoral fellowship in the lymphoma department of Radium Hospital. In May, she married Massachusetts native Kevin McGoff in Santorini, Greece, and in June, she says, "we held a reception in Westport, Mass., where there was a fabulous showing of WPI alumni."

2008

Mike Demers '13 (MBA) is currently working at EMC Corporation in Hopkinton, Mass., as a global program manager the company's new product introduction group for manufacturing. He finds that the combination of his engineering undergraduate studies in tandem with his graduate degree in business administration is the perfect marriage for his day-to-day responsibilities in his new role. "I have moved out of engineering and into a role in business operations, but I am still working with engineers every day. Receiving two degrees from WPI on opposite sides of the spectrum really prepared me to get the job done."

Armen Dilsizian writes, "I seem to have become an accidental world traveler. Since graduating, besides working full-time as a chemical engineer, I have visited more than 10 countries throughout Asia and Europe. Most of the places

I traveled to were the result of some unexpected (positive) circumstances, and now I'm hooked. I hope to keep adding countries to my growing list!"

Kevin Gagnon graduated in August from Texas A&M University with his PhD in chemistry. He spent five years fully funded by the NSF researching metal-organic frameworks using non-ambient crystallography. He accepted a job at the Advanced Light Source, Lawrence Berkeley National Laboratory in Berkeley, Calif., as a project scientist-chemical crystallographer on Beamline 11.3.1.

Katarzyna Koscielska is about to submit her doctoral dissertation in biochemistry and molecular biology at the University of California, Davis. Her dissertation research was conducted under the supervision of Dr. Paul Hagerman at the UC Davis School of Medicine, and resulted in one first-author publication in *Human Molecular Genetics*.

Michael Tiu is engaged to Cassie Henderson, who graduated from Becker College in 2008. They will be married in the spring of 2014.

Mary Kate Toomey is now working for Consigli Construction Co.

Ryan Trunko has started a new job with Greenman-Pederson Inc., building and expanding the land development group in the Albany, N.Y., branch. He writes, "The new job provides better opportunities to expand my professional experience and I am greatly enjoying the new position."

Lynn Worobey completed her PhD in bioengineering at the University of Pittsburgh. She was joined at graduation by **Mike Richard '08**, who received his doctorate in civil engineering. Lynn is now working for the University of Pittsburgh, carrying out biomechanics research on wheelchair users, while also enrolled in the university's doctor of physical therapy program.

2009

Gary Tishue (MS MTI) is an executive board senior advisor to Disruptive Marketing LLC, a full-service digital marketing agency he launched with his daughter, Jessica, in 2012. She is the company's CEO. (The Winter 2013 issue of the *WPI Journal* incorrectly stated that Gary was CEO.)

2010

Adam Cartier is currently serving as the executive officer for Charlie Company, Special Troops Battalion, 2nd Brigade, 1st Armored Division. He writes, "My unit is currently scheduled to take part in the semi-annual Network Integration Evaluation, or NIE, to help shape capability integration (tactical communications and data network) in the United States Army. NIE 14.1 will take part in October

and November, utilizing 3,800 soldiers of 2/1 Armored Division. The goal is to assess potential systems and capabilities in a operations environment to determine whether they perform as needed and are interoperable with existing systems."

Christopher Jeznach and **Lillian Clark '11** celebrated their marriage on Aug. 24, 2013, in Sterling, Mass., with family, friends, and lots of other WPI alums. "We are looking forward to many happy years to come!"

Tobin McGee received a World Bronze Medal for Rowing. "Medaling at the World Championships for rowing is extremely difficult, and on the same achievement level as an Olympic Medal," writes his proud wife, Meagan. The Lightweight Men's 8 team began training in June. After qualifying, they flew to Korea in August to compete against Italy and Australia, and came home with the bronze. Tobin previously competed on the World Championships under

23 Team in Belarus in 2010. At WPI he took 4th place with the Men's Collegiate 8 team at Head of Charles Race in 2009, and competed in the England Henley. He trains out of the Community Rowing INC boathouse in Boston, Massachusetts, and works as a process engineer at Madico. He and Meagan (Chianese) were married on Palm Island in April 2013. His plan is to continue competitive rowing and strive for a possible Olympic experience.

Shan Peng, a graduate of the Operation Design and Leadership master's program, is a senior project engineer at Avery Dennison.

Lianne Elsner Poisson writes that she and her husband, Nathan, expect to welcome their first child into the world in September 2013.

'05

Amanda Solomon was married to Thomas Klemm Jr. on July 27, 2013, at The Margate Resort in Laconia, N.H. The bridal party included classmates **Alexia (Kedves) Volpe**, **Danielle Dufour**, **Kimberly (Mazza) Rickard**, **Carolyn (Scheriff) Montagna**, **Lee Helberg**, and **Krista Backiel**. Other alumni in attendance included **Michael Cuipa '02**, **Robert "Chip" Chipman '02**, **Caleb George '05**, **Brian "Coach" Schlossberg '05**, **Nicole DeCampo '08**, and **Briana Dougherty '08**.



2011

Caitlyn Shaddock received a master of arts in teaching, secondary education, from Northeastern University in September 2012 and is currently in her second year of teaching freshman physics at a high school on the South Shore, as well as coaching swimming and softball there. She writes, "I am also back at WPI pursuing my master's in physics education degree part-time."

This past August, **Bridget Stevens**, along with **Sebastian Cohn '10**, **Stephanie Kavrakis '09**, **Allison DiNitto '08**, **Corinne Linderman '07**, and **Anne-Marie Chouinard '00**, traveled to France and represented the Friends of WPI in the Rallye du Canal du Midi. The race course was 200 km long commencing in Toulouse and terminating in Beziers; competitors rowed in a coxed quad on the canal and took turns bicycling (read: resting) along the shore. "Lots of delicious food and wine was consumed, friendships were formed with other international competitors, and new blisters were enjoyed by all. It was a wonderful experience racing with WPI alumni abroad."

Dan Praetorius and **Vadim Chernyak (MS EE)** delivered WARNER, WPI's new Atlas robot to campus from its creator (their employer), Boston Dynamics. Cable station NECN captured the arrival of the 330-pound robot on film. Read more about WARNER in the *WPI* section of this issue.

2012

Jessica Booth will be completing her MS in materials science and engineering at Case Western Reserve University in May 2014, and will soon be hunting for a job in Cleveland.

Jared Broberg has been working at a biotech start-up in Medford, Mass., doing manufacturing and process development. He writes that he has adopted a puppy.

Ryan Clinton worked two years in the biotech industry doing contract research for pharmaceutical companies. More recently, he was accepted into the PhD program at Case Western Reserve University.

Samantha Do writes, "Since graduation, I've been working at 3D Systems in Andover, Mass., as a materials engineer, developing core materials for their line of multicolor 3D printers. Before this position, I had no idea what 3D printing was. I'm glad to be a part of this fast-growing technology!"

Baillie McNally is beginning her PhD studies at WPI. She writes, "I couldn't leave WPI because it is such a great place to do research and my advisor is the best. WPI is very special to my family as my sister and brother both attended. In fact, starting this semester, all three of us are currently students of WPI. **Brittany '10**, is starting her master's degree part-time, and **Taylor '14** completes his undergraduate degree next May. We are all very proud to be a part of the WPI community."

Michael Mieyr (Meng CE) writes, "Mieyr Engineering is completing a new rural fire department building for the town of Highwood, Mont."

Monica Mohtasham works at Pratt & Whitney as a project engineer for engine test systems and will be transferring to the flight test instrumentation group in the next few weeks.

Sam Neu is still at WPI, pursuing his PhD in mechanical engineering. He spent his summer working at NASA on cryogenic fuel transfer problems.

Apologies to **Yura Pyatnychko**, who was mistakenly referred to as "she" in the last issue. He writes to set the record straight, "You mistakenly identified me a female, and I am a dude." [Sorry, Dude. —Ed.]

Jonatas Silva (MBA) writes, "I was promoted to head up distribution contract services here at NSTAR. In my personal life, I am continuing my education at New England School of Law this fall."

Caleb Swieson says, "It's been a whirlwind 12 months! A year ago, I was unemployed and living in my parents' house. Then on New Year's Eve, I proposed to my girlfriend, Christina (she said yes!). Four weeks later, I landed an electrical and automation job at Rieker Inc., an engineering company that designs and builds inclinometers. They quickly made me project lead of a new product. Over the next few months I got a car and an apartment, and did tons of wedding planning. On September 15, Christina and I were married, and the next day we flew to Greece for our honeymoon. We spent an amazing ten days there—we just got back and are starting to put our lives together."

Ryan Worsman is pursuing his MS (finishing in December 2013) in civil engineering, highway infrastructure. In the spring of 2014, he will begin working toward his PhD—the first year will be completed at EMPA in Switzerland.

2013

Donal Boyd of Raynham, Mass., was headed for Peace Corps service in Kenya when events there resulted in an indefinite suspension of his assignment. "After much consideration I have decided that my best option would be to return to WPI for the spring semester to finish my master's degree in chemical engineering before departing as a Peace Corps Volunteer in June 2014," he says. He is also working for Hayward Industries.

Macauley Kenney was the winner of the Institution of Engineering and Technology (IET) Americas regional Present Around the World (PATW) competition for her presentation "Titanium Nanowire Scaffolds: A new structure for biological implants." PATW is the IET's presentation competition for young engineers and technicians, age 18 to 26. Macauley received prize money and will represent the IET Americas Region at the Global Final in London on Nov. 20.

Puzzle Corner Solution

1									
3	9								
5	8	4							
4	7	9	2						
8	2	3	6	5					
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9	3	6	7	2	5	8			
7	4	1	9	8	6	2	3		
2	5	8	4	3	1	9	7	6	

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OUR GLOBAL IMPACT

WALL STREET, NEW YORK
DECEMBER 3

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FEBRUARY 25

HARTFORD, CONNECTICUT
APRIL 29

SANTA FE, NEW MEXICO
MAY 1

ZURICH, SWITZERLAND
APRIL

LONDON
MAY 30



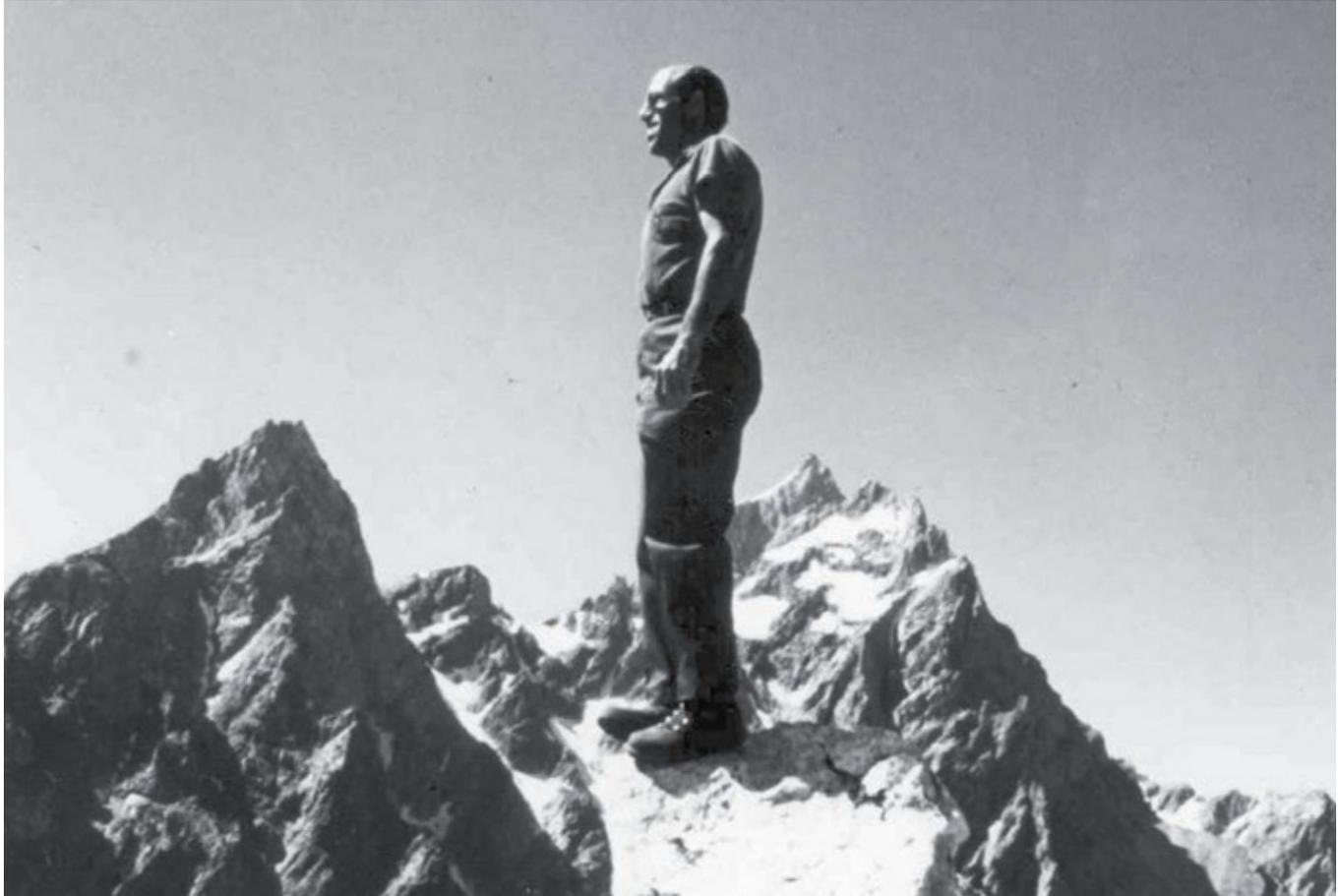
The Office of Alumni Relations invites alumni, families, and friends to a series of events featuring students from our global project centers. Learn how today's students are continuing your tradition of making a difference in the world through engineering, science, and technology.

If you're traveling, make an event part of your trip.

Events include student project presentations and a reception. For locations and times, and to register, visit wpi.imodules.com/projectcenters or contact the Office of Alumni Relations at 508-831-5600, alumni-office@wpi.edu.



WPI



Bob Wagner

Chemical Engineering Professor and Outdoor Leader

Professor Robert E. "Bob" Wagner joined the WPI faculty in 1949 and taught chemical engineering for 40 years, taking only a brief break to earn his PhD at Princeton University in 1955. His nickname, "Daddy Wags," reflected his almost paternal concern for his students. In the 1960s, a student called out, "You're right on, Daddy Wags." The name stuck, and Wagner proudly displayed it on a nameplate he kept on his desk.

Wagner served as advisor to the WPI Outing Club and delighted in leading students on mountain treks, including winter hikes in the White Mountains. His passion for the outdoors inspired numerous MQPs on environmental issues, from acid rain and alternatives to road salt, to solar composting. Wagner received the WPI Board of Trustees' Award for Outstanding Teaching in 1972, and the William R. Grogan Award, which recognizes contributions in support of the mission of WPI or the welfare of its students, in 1991. The Robert E. Wagner Educational Fund was established at WPI in 2001 to celebrate his legacy.

Wagner died June 15, 2013, at the age of 92. After retirement, he and his wife, Ruth (Svejda), traveled cross-country and were welcomed into the homes of over 40 alumni from coast to coast. Ruth died in 2009. Their three daughters survive, along with a grandson, a great-granddaughter, and a nephew.

Memorial contributions may be made to the Wagner Educational Fund at WPI, University Advancement, 100 Institute Road, Worcester, MA 01609.

Gilbert Ireland '16
 Cyril Dawson '19
 George Bijur '21
 Tzu-Hzu Chou '25
 John Hynes '25 (Alpha Tau Omega)
 George Chow '27
 Yat Chow '27
 Gordon McColley '28
 Henry Dearborn '37 (Sigma Phi Epsilon)
 Richard Glencross '40 (Lambda Chi Alpha)
 William Carroll '41 (Phi Kappa Theta)
 Gustaf Coontz '41 (Sigma Phi Epsilon)
 Clarence McMurray '41 (Phi Sigma Kappa)
 Fred Briery '42
 Paul Disario '42 (Phi Kappa Theta)
 Harvey Maurice '42 (Alpha Tau Omega)
 J. Richard Weiss '42 (Theta Chi)
 Byron Newhall '43
 Manuel Queijo '44
 Paul Bacher '45
 Robert Fay '45
 John Considine '46 (Phi Sigma Kappa)
 Wilton Ericson '46 (Sigma Phi Epsilon)
 Samuel Cocks '48 (Lambda Chi Alpha)
 Paul Evans '48 (Phi Kappa Theta)

Daniel Lintz '49 (Alpha Epsilon Pi)
 Sidney Madwed '49 (Alpha Epsilon Pi)
 Robert Miller '49 (Theta Chi)
 Wallace Thompson '49
 Philip Barbaccia '50 (Phi Kappa Theta)
 Axel Linder '51
 William Lloyd '51
 George Peet '52 (Alpha Tau Omega)
 George Abdow '53 (Sigma Phi Epsilon)
 Thomas Bradley '53 (Lambda Chi Alpha)
 Henry Camosse '53 (Phi Kappa Theta)
 Charles Dechand '53 (Sigma Phi Epsilon)
 Michael Hoehstetter '53 (Alpha Epsilon Pi)
 Harry Wiitala '54 (Lambda Chi Alpha)
 Howard Dworkin '55
 Joseph Paparella '56 (Phi Gamma Delta)
 Marian Knight '58
 Roy Pearson '58 (Sigma Alpha Epsilon)
 Geza Ziegler '59 (Phi Kappa Theta)
 Bernard Seastrom '60
 William Walsh '60 (Phi Sigma Kappa)
 Stanley Wells '60 (Theta Chi)
 Paul Sharon '62 (Phi Kappa Theta)
 Alan Roberts '63 (Lambda Chi Alpha)
 Richard Hedlund '64

Walter Ruthenburg '65
 Paul Flaherty '66 MNS
 Francis Lamoureux '66 (Alpha Tau Omega)
 Frank Pyle '67 (Alpha Tau Omega)
 Madeline Shea '68 MNS
 Douglas Keily '71 (Alpha Tau Omega)
 Wesley Pierson '72
 Alice Carr '73 MS
 Lloyd Hemenway '75 MS
 Jeffrey Johnson '76
 Ralph Chapman '78
 Henry Nkakue '78
 Jon Doiron '81
 Steven Oxman '81 MS
 Charles Chandler '84 MNS
 Richard Tyler '84
 John Fahey '86 MNS
 Mark Hamel '86 MS
 Joseph Sullivan '08 MME

Other members of the WPI community who have recently passed away include faculty members Melvin Cushing, Wilfrid Lussier, and Leslie Wilbur (Tau Kappa Epsilon). WPI also mourns the passing of Alba Kalenian, wife of the late Aram Kalenian '33, who established the Kalenian Award in his honor.



George Abdow '53 Trustee and Big Boy Restaurant Founder

For decades, the plump, glossy Big Boy statue was a welcome sight for hamburger-loving American families seeking a solid meal at no-frills pricing. George T. Abdow opened the first Abdow's Big Boy Restaurant in West Springfield, Mass., in 1959, with his brother, Ronald, and sister, Phyllis Lavalley, and served as president of the franchise. In all, the family opened 19 Big Boy restaurants and four specialty restaurants in their 35 years in the industry. An active supporter of his class and his alma mater, Abdow served as WPI Alumni Association president from 1989 to 1991 and as a trustee from 1993 to 2005. He received the WPI Alumni Association's Robert H. Goddard Award for

Outstanding Professional Achievement in 1978 and was honored with the Association's Herbert F. Taylor Award for Distinguished Service in 1993. A Hall of Fame athlete inducted in 1991 as one of the football team's top two-way grid performers ever to play at WPI, he also captained the Golf Team and qualified for the New England Intercollegiate Gold Championship in his senior year. Abdow remained dedicated to WPI athletics as a Poly Club member. With his wife, Janet (Rucki), he helped fund renovations to Alumni Field that included new bleachers, press box, scoreboard, and field lighting. She survives him, along with their two sons, his sister and brother, and nieces and nephews.

Complete obituaries can usually be found through newspapers, websites, legacy.com, and similar indexes. WPI will share details on the "completed careers" of friends and classmates, if available. To request further information, contact jkmiller@wpi.edu or call 508-831-5998.

Virtual Murder

By John Sanbonmatsu

As someone who teaches a course on the philosophy and ethics of video games at WPI, I must take issue with the conclusion of the *WPI Journal's* recent article “An Industry Under Fire,” which suggested that there is no evidence of a link between virtual violence, played out on millions of computer screens, and real-world violence.

In fact, there have been numerous credible studies suggesting that children and young people who play violent video games are altered by those experiences, in ways that should give us pause. Some studies have found that playing such games may lead to heightened aggressiveness, while others have found that playing violent games diminishes the ability of players to respond empathetically to the suffering, distress, or trauma of others. As the authors of one 2004 study, in the *Journal of Adolescence*, observed: “In violent video games empathy is not adaptive, moral evaluation is often non-existent, but pro-violence attitudes and behaviors are repeatedly rewarded.”

It is true that there has never been a definitive study proving a direct causal link between playing violent games and real-world violence. But social phenomena as complex as violence do not lend themselves to the sorts of neat, positivistic proofs demanded by industry. Notwithstanding the crudely reductionistic world of games like *The Sims*, human beings cannot in fact be modeled mechanistically, like billiard balls moving predictably under inertia. It's more complicated than that. No one has ever “proved” that misogyny in cinema, music videos, pornogra-

phy, and so on, “causes” rape or sexual harassment, either, or that anti-Semitic propaganda “caused” the Holocaust. That's because they don't, and didn't. The power of culture is subtle, serving to reinforce existing beliefs and attitudes—in this case, attitudes toward violence.

But you don't need a PhD in cultural studies to suspect that video games that invite players to shoot virtual people in the head, to stab life-like virtual people, to murder virtual prostitutes by setting them on fire after having sex with them, or (as in the latest version of *Grand Theft Auto*) to slowly and deliberately torture someone, might be a bad idea. By encouraging players to find pleasure in pretending to inflict trauma on others, such games essentially condition young people to identify with antisocial violence.

The very insistence with which extreme representations of violence continually erupt in video game culture may provide us with an important clue to their wider social function today: namely, normalizing violence and dominating behaviors, precisely at a

“ . . . video games play a crucial role in socializing young people to identify with militaristic values.”



time when the poor and vulnerable are being driven to despair and suicide by neoliberal austerity programs throughout the world. It also is occurring when the U.S. national security state is expanding to frightening proportions, making the entire globe its theater of operations. The antisocial violence and misogyny of gaming culture, simply, appears to be “adaptive” for a technological and social order dependent upon socioeconomic inequality, war, and the destruction of the natural world.

One connection between virtual and real-world violence that can’t be explained or willed away, certainly, is the role of video game culture in militarizing civil society, normalizing state violence, and serving as the proving ground of new weapons technology. If, as apologists for industry maintain, there is no link between virtual and real violence, then why does the U.S. Army maintain *America’s Army*, the online military simulator and recruitment tool, played by millions? Why do our Armed Forces buy ad space in the leading gamer magazines? Why do they integrate Xbox controllers and other game interfaces into their weapons systems? Or spend billions on virtual battlefield training platforms?

Over the last twelve years, the U.S. has killed over one hundred thousand civilians—real people, not virtual ones—in Afghanistan, Iraq, and other countries, a paroxysm of mass violence out of all proportion to the original terrorist attacks that ostensibly provoked them. Why have the American people gone along with this violence, if not in part because they have accepted powerful cultural myths about the necessity of using violence to resolve political disputes—myths which video game culture promulgates?

This nexus between commercial war simulation and real-world slaughter, what scholars call the “military-industrial-entertainment complex,” often gets buried in the debate over media violence. Yet video games play a crucial role in socializing young people to identify with militaristic values. *Black Ops 2: Call of Duty*, for example, until recently the top bestselling video game (only the release of *GTA5* dethroned

it), invites players to participate in a highly realistic war game simulation from the perspective of the U.S. Special Forces. At the same time, actual Special Forces deployments have gone up 400 percent, and the Special Forces budget has tripled. Though lionized in the mainstream mass media, these Forces have committed atrocities against civilians and helped the President undermine international rule of law. Yet rather than question the wisdom or constitutionality of the President’s vast expansion of the powers of the U.S. Special Operations Command, millions of young people instead are playing *Black Ops 2* and similar games, symbolically enacting the violent policies of the U.S. national security state.

This broad identification of the populace with organized violence has spillover effects in civil society, where young killers model their tactics on their favorite games. Eric Harris and Dylan Klebold, who killed 12 fellow students, a teacher, and themselves at Columbine High School in 1999, modeled their ram-

page on the first-person shooter game *Doom* (a game also modified by the U.S. Marines to train soldiers). Anders Breivik, the right-wing extremist who murdered 69 people, mostly teenagers, on the Norwegian island of Utoya in 2011, later bragged that he had done his weapons training on *Modern Warfare*, which he had played for up to 16 hours a day as “part of my training-simulation.” Breivik was indeed so fond of a particular model of gunsight he used in the game that he bought the real version and had it installed on the rifle he used to hunt down his victims. Aaron Alexis, too, the deranged man who in September treated a U.S. Naval installation as his own first person shooter, had played *Modern Warfare* obsessively in the weeks leading up to his attack. “He played all the time. That was his passion,” a friend of the killer later told ABC News. “It got so bad—was in his room all the time ... he’d be late for work.” Yet another aficionado of the game was Adam Lanza, the 20-year-old who murdered 26 people, most of them elementary school children, in the Sandy Hook attack. Lanza,

“As if cribbing from the NRA, the video game industry clings to the view that video games don’t kill people, people kill people.”

too, was obsessed with the game, playing it for hundreds, or thousands, of hours before the attack.

The question is, how could anyone walk into a classroom crowded with innocent young children and systematically slaughter them, unless he (it is always a “he”) had been raised for years playing games conditioning him to shoot everything in sight? When in our history as a species has such a thing happened before? Humans invented firearms six centuries ago; yet until only a short time ago, mass atrocities against unarmed civilians were committed only by soldiers during war time. Video game culture has now helped spread the disease to civil society.

To be sure, exposure to violent media is only one factor among others. Gender socialization, bullying, socioeconomic background, mental health status, and so on, are also key. Yet there is no getting around the fact that real-world atrocities are being closely modeled on virtual scenarios provided by the games industry, and that killers are using games to train for murder.

As if cribbing from the NRA, though, the video game industry clings to the view that video games don’t kill people, people kill people. The same industry which, in other contexts, boasts about the extraordinary power of interactive media and simulations to condition behavior, train body-memory, and shape perceptual consciousness, suddenly turns its back on its own research data, maintaining that violent games like *Gary’s Mod* are no different than *Parcheesi*.

Then how do we make sense of what happened in the town of Slaughter, La., in August, when an 8-year-old boy shot and killed his 90-year-old caregiver, minutes after playing *Grand Theft Auto*? Whence did such a young child get the idea of shooting his caregiver in the head, if not from the violent media culture that surrounds him?

Such tragedies fail to impress the industry’s academic apologists, who continue to circle the wagons around what is, in fact, not an “industry under fire” (“under fire” from whom? from the Congress and Supreme Court, which refuse to regulate it? from the capitalist entrepreneurs who fund it?) but, on the contrary, the most profitable, powerful, and unscrupulous media industry on earth. Such critics, faced with yet more shootings, merely dismiss them as “copycat” attacks, suggesting that killers simply enact what they hear on the news.

“This broad identification of the populace with organized violence has spillover effects in civil society”

But when my friends and I heard stories about the earlier Boston Strangler killings as kids growing up in the 1970s, it never occurred to any of us to strangle anyone, or to play-act the murders. When I tell my students, though, that it would never have occurred to any of us to imagine picking up a gun and shooting other children at random, or to mow down pedestrians with an automobile, or to have sex with prostitutes and then knife them to death, they don’t believe me. They are so used to thinking in such terms themselves, of vividly imagining, and then enacting “in play,” possibilities of extreme violence and degradation, that they cannot imagine anyone growing up differently and not having such thoughts.

In this connection, the worst thing about violent interactive media may not be their contribution to real-world violence, but rather what they do to the human spirit, by burrowing deeply into the fabric of culture to corrupt the moral imagination. Peter Schumann, the founding director of the Bread and Puppet Theater, one of the few cultural bright spots in our wasteland of cultural debasement, says the following about the ways in which the original, healing gift of theater, that great legacy of civilization, has been

corrupted by the commodity culture of film and television: “The . . . aping of kitchen and bedroom intimacy, and [of] the intimacy of pain—that is what is so demeaning. Real pain in life is a serious relative of death, a terrorizer, usually a visitor of great consequence. The detailed, imitated pain in movies makes a mockery of the vital resources which enable our nature to fight pain or even submit to pain gracefully.”

Schumann’s reflections apply even more to video games, which go beyond inviting us to sit and watch spectacles of violence and degradation to actively enact them with our bodies and minds—compulsively, repetitively, thoughtlessly. Playing violent antisocial games, we come to believe that we are heroically defeating evil enemies. In reality, with every virtual bullet to the head, every virtual knife to the stomach, each virtual punch in the face, we are only laying siege to our own endangered humanity. By mocking suffering and pain, we ally ourselves symbolically and psychologically with the instruments of death, against the vital forces of life.

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