

WPI

transformations

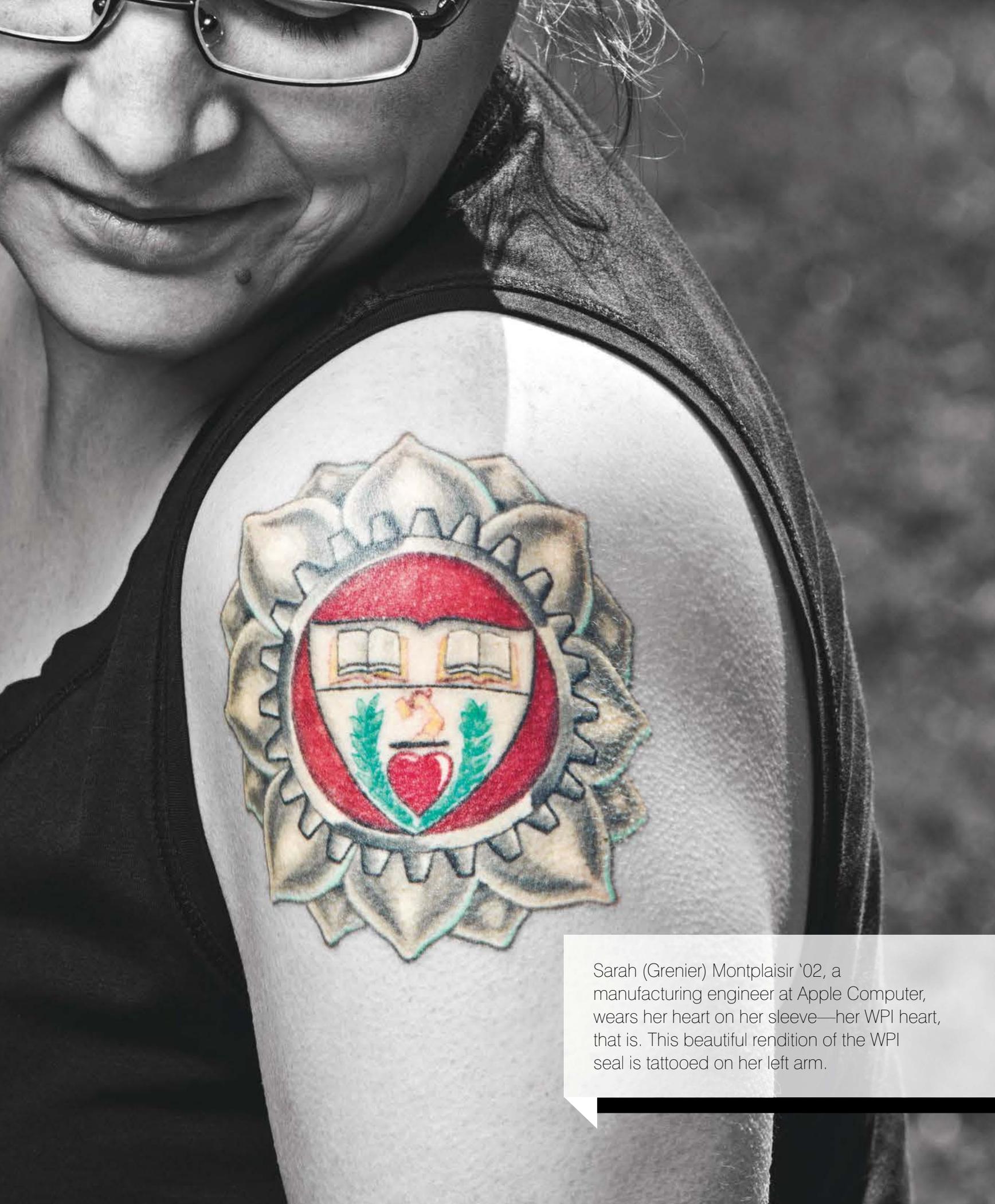
THE ALUMNI MAGAZINE OF WORCESTER POLYTECHNIC INSTITUTE



SUSTAINABLE THINKING

Kathy Loftus '86
Brings Fresh
Ideas to
Whole Foods





Sarah (Grenier) Montplaisir '02, a manufacturing engineer at Apple Computer, wears her heart on her sleeve—her WPI heart, that is. This beautiful rendition of the WPI seal is tattooed on her left arm.

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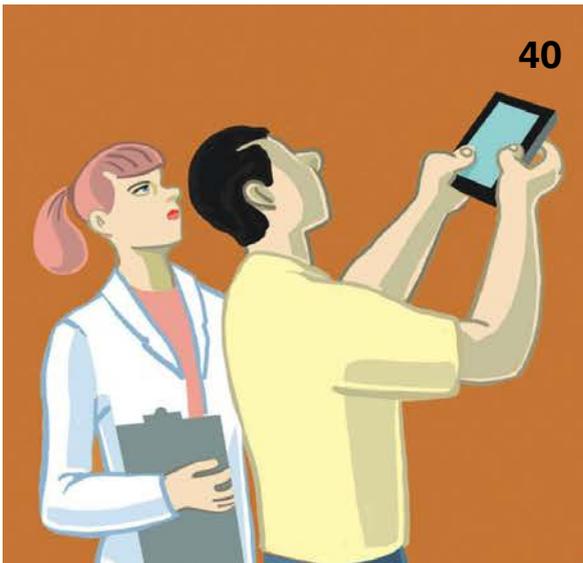


Worcester Polytechnic Institute

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WPI

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Fresh Perspective

Perhaps the time has come to cease calling it the 'environmentalist' view, as though it were a lobbying effort outside the mainstream of human activity, and to start calling it the real-world view.

—E. O. Wilson

Perspective can be tricky, especially when it involves large numbers. Take the volume of consumption currently under way in our modern world. The numbers show up on the evening news, but what do they actually mean? A million styrofoam cups here, a billion aluminum cans there, and pretty soon you're talking real waste, to paraphrase a U.S. Congressman.

To visualize such scale, I sometimes point to Seattle-based photographer Chris Jordan, who uses digital technology to capture what previously had been just a big number. Jordan photographs consumer waste, but digitally manipulates his photos to accurately portray the numerical units at hand. For instance, *Cell Phone #2* is a photograph of 426,000 cell phones—which is the number of mobile phones "retired" in the U.S. every day. But to get that many phones onto his 45-square-foot canvas, Jordan had to pull the camera back just a bit, resulting in a photo that resembles grey sand. Zoom in closer, however, and the image becomes surreal—426,000 is a lot of cell phones. Every day.

When Kathy Loftus '86, our cover story this issue, attended WPI, a degree in Environmental and Sustainability Studies wasn't an option since the program wasn't offered then. Nor were cell phones attached to the hip of every man, woman, and teenager in the country, which speaks to how quickly environmental issues can arise.

Loftus forged her own path while a WPI student, finding herself attracted to a mix of courses while getting her degree in mechanical engineering. Her instincts were spot on, as the Environmental and Sustainability Studies program, created nearly two decades later, is an interdisciplinary degree, requiring a mix of math, natural science, environmental engineering, social science, and the humanities.

"We work both sides of the brain to induce creative, multifaceted solutions to environmental problems," says Professor Rob Krueger, WPI's director of environmental and sustainability studies. "It's an intense mix of technological and social policy training."

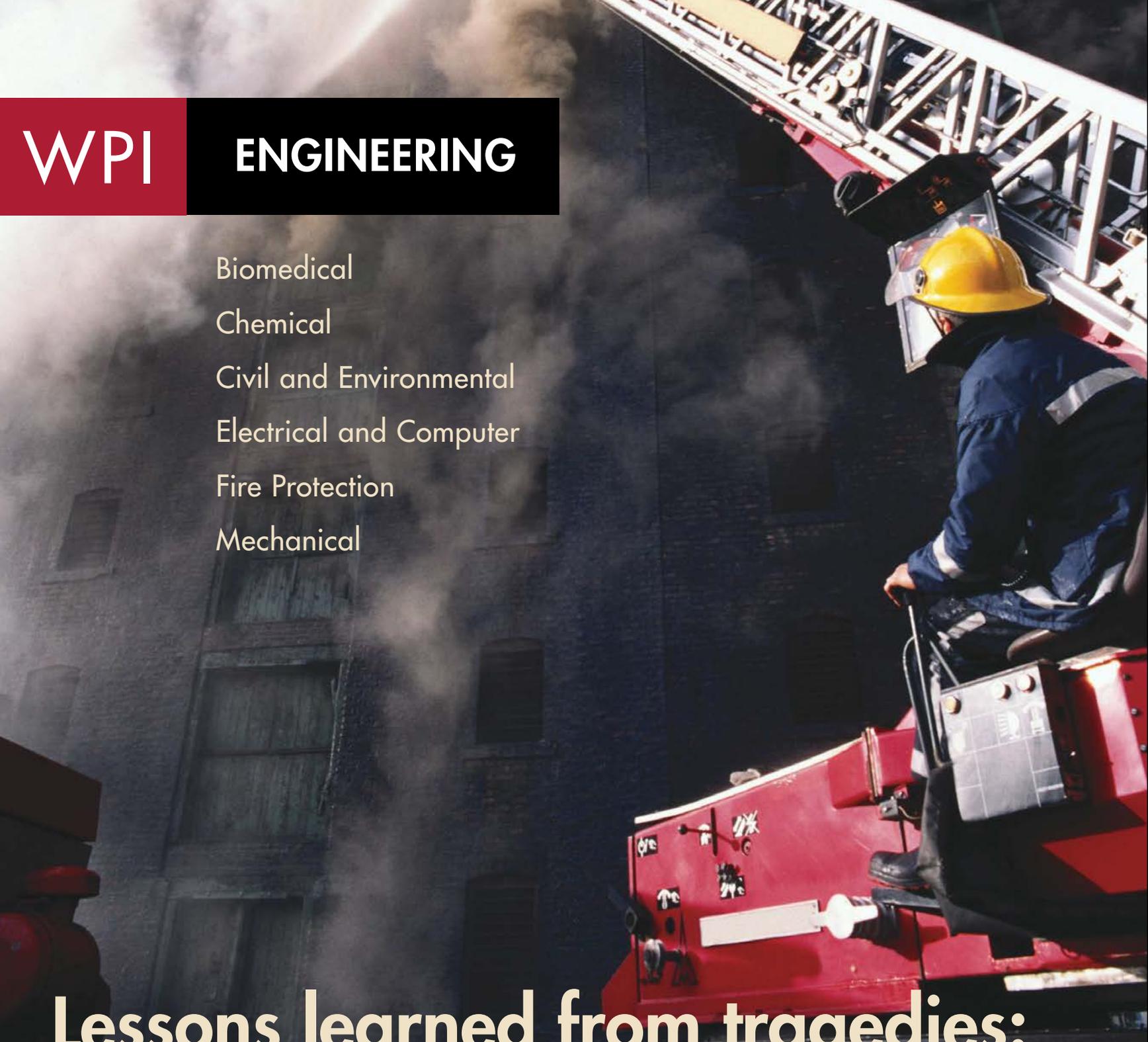
Another big focus within the program, says Krueger, is cross-disciplinary communication. While technology knowledge is a must, communicating across a broad spectrum is a big part of the job and vital to one's success.

As Loftus knows from firsthand experience, turning the attentions of corporate boards and busy executives toward environmental issues is no easy feat. But it's critical if we're going to solve some of the more imposing environmental issues before us. Among the insights Loftus shares from her years in the business is her belief that environmental solutions are not trade secrets. Those types of solutions, she says, should be shared. (Chalk up another win for collaborative education.)

Sustainability is firmly entrenched in our vernacular, but unlike some buzz words, this one isn't going away anytime soon. Water, energy, consumer waste, climate change, cell phones—the list of environmental challenges is lengthy. So, too, is the opportunity to make a profound difference in our world.



JAMES WOLKEN, EDITOR



WPI

ENGINEERING

Biomedical

Chemical

Civil and Environmental

Electrical and Computer

Fire Protection

Mechanical

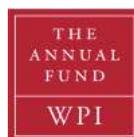
Lessons learned from tragedies: Protecting those who save lives

The Department of Homeland Security Science and Technology Directorate is sponsoring the 7th Annual Precision Indoor Personnel Location and Tracking International Technology Workshop at WPI, Summer 2012.



Learn more: wpi.edu/+protecting

Estimated percent of U.S. adults who could pass an aerobics activity test: 47
 Percent who could pass muscle-strengthening test: 22
 Percent who could pass both: 18
 Percent of U.S. adults, age 45-64, prescribed exercise by their doctor: 42
 Number of cell phones thrown away in the U.S. each day: 426,000
 Number of aluminum cans recycled in the U.S. every minute: 113,204
 Percentage of aluminum cans not recycled: 49.3
 Total revenue from satellite industry in 2005: \$89 million
 Total in 2010: \$168 million
 Total number of manned Apollo missions: 12
 Total number of manned space shuttle missions: 135
 Total number of working satellites orbiting Earth: 974
 Total belonging to the U.S.: 429
 Total financial aid awarded by WPI in 2008: \$38 million
 In 2012: \$60 million
 Total number of WPI students receiving financial aid in 2008: 2,641
 Total number in 2011: 3,468
 Number of lines in a sonnet: 14
 Number of lines in a sestina: 39
 Rank of Poetry.org website based on visitors: 13,937
 Rank of OkCupid, an online dating site: 206
 Median U.S. salary of engineering majors: \$75,000
 Median U.S. salary of humanities majors: \$45,000
 Number of undergraduate applicants to WPI in 2005: 3,315
 In 2011: 7,049
 Amount of cholesterol in cow's milk (mg/100ml): 15
 In goat's milk: 12
 Cost of a three-year subscription to *Dairy Goat Journal*: \$49
 Recommended first-time gift to the Annual Fund: \$50
 Total number of students enrolled in WPI for 2011-12: 4,544
 Number of WPI students the Annual Fund will help this year: 4,544



Errata

The last issue of *Transformations* contains a Sujiken puzzle by Professor George Heineman on page 86 that offered no solution as printed. The cause looks to be an alignment error in the puzzle's numerals, which is probably not the author's fault.

I spent several minutes trying to solve it before realizing the printing error. Perhaps you could use some editing help by eager and precise WPI undergrads in reading such material? Just a suggestion, no offense intended.

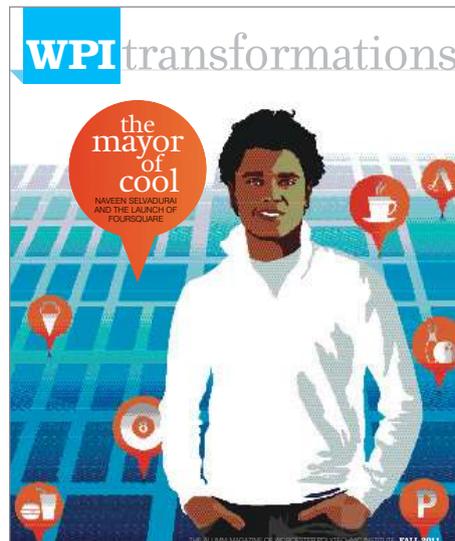
ROBERT HALE '61

Editor's Note: No offense taken, and we thank you and many other readers for bringing the mistake to our attention, the responsibility for which lies solely with your humble editor who inadvertently caused the misprint during layout. A special thank you is owed to Sujiken's creator, Professor Heineman, for his gracious understanding. Special attention, including the use of eagle-eyed WPI undergrads as proofreaders, was deployed to ensure accuracy with the Sujiken puzzle in this edition of Transformations.

Inside Skull

I am a member of the Skull class of 1984, an honor and distinction I have always been proud to carry. Skull members are selected by the exiting senior class members and faculty based on a number of factors, including academics, on-campus involvement, campus achievements, and community leadership. Most of the students selected are singled out for their ability to drive initiatives at the student level without seeking personal recognition.

While there is some "mystery" that comes with the Skull—the robes, the ceremony, the Tomb—most of what occurs during initiation are lessons about the history of WPI and the responsibilities of "noblesse oblige"—meaning any privilege you carry in title or honors bestowed upon you comes with responsibilities to lead, manage, and, in today's language, "give something back"



without credit or compensation.

There is much good that the Skull does for WPI and its related communities. They ask for nothing in return by way of credit, praise, or lauding. They are instructed and bound to serve the WPI family and community with whatever means, both personal time and financial donations. They are also in many ways keepers of the traditions, the lore, and the historical elements of WPI.

WPI is a unique and special learning environment, in large part because of the people, both students and faculty, who contribute to its fabric. The Skull and other societies on the campus are a wonderful part of that culture.

DANIEL FARRAR '84

WPI Trustee

Just received my copy of *Transformations* and enjoyed the wonderful article on the Skull! Author Joan Killough-Miller (oops, I meant Polly Teknik) did a great job. The article captured the dignity of the organization and, on a personal note, I was thrilled (as was my Mom) to see my great-grandfather, Willard Hedlund '10, referenced right up front.

MATT FRIEND '93

Kudos

I was impressed with the last issue of *Transformations*. Before even opening the magazine, I was struck by the new dimensions and the cover stock. The layout was very smart. In particular I enjoyed how photos in Class Notes were tied to the relevant news via numbers.

Part of my excitement over the new magazine was I never thought anything was particularly wrong with the old one. This was an exceptional debut and I hope to see more in the near future!

WILLIAM HERBERT '05

The last issue of *Transformations* provided wonderful reading. I was surprised and pleased that a new editor could so quickly grasp and embrace the elements that the alumni look for in our publication.

I will admit that starting your first "Notebook" column with a quote from a Harvard publication startled me, but the following text and the magazine's articles illustrated and proved the premise—that taking risks, stepping outside one's comfort zone, and engaging in lifelong learning are the keys to a full life. Examples of alumni who are living this life abound in this issue. It was wonderful to see evidence of the height and breadth of experience that a WPI education makes possible.

The extraordinary number of alumni updates was also notable, no doubt a focus by the entire staff. It is deeply appreciated!

ANNE McPARTLAND DODD '75

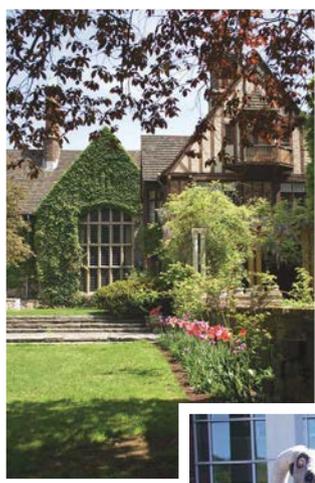
I was impressed with the last issue of *Transformations*. The article on Skull's 100th anniversary was great, as was the overall layout and writing. Don't get me wrong, I always enjoy reading *Transformations*, but I liked the subtle changes in this issue. For instance, the picture of the WPI football team inside the front cover was just gorgeous. I also enjoyed the editor's letter, and especially all of those terrific class notes. In all, a job well done!

NAOMI BOATRIGHT '03

Save the date for Homecoming Weekend 2012 October 5 & 6

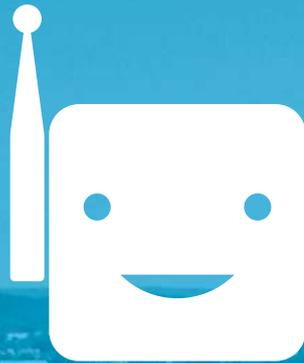
Visit wpi.edu/+homecoming for updated information.

Classes celebrating anniversary years:
1987, 1992, 1997, 2002, 2007, 2012



TOUCH TOMORROW

A FESTIVAL OF SCIENCE, TECHNOLOGY, AND ROBOTS AT WPI



NASA COMES TO WPI

Have you ever wanted to pilot a space rover? Or launch a rocket? Or step in a real space suit?

Join us on **JUNE 16, 2012 | 10 A.M. - 3 P.M.** for TouchTomorrow at WPI, a family-friendly celebration of science, technology, and robots, as WPI hosts the NASA Sample Return Robot Centennial Challenge, a national competition with a **\$1.5 million dollar prize.**

HERE'S
YOUR
CHANCE!

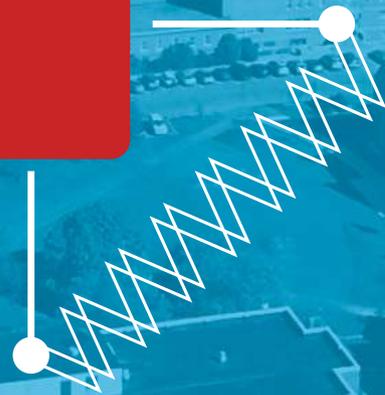
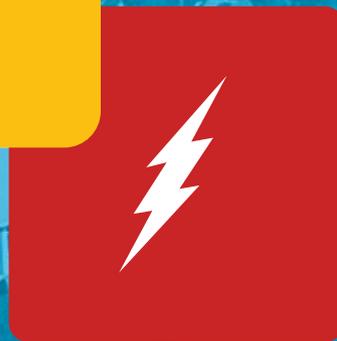
To learn more, visit:
TouchTomorrow.wpi.edu

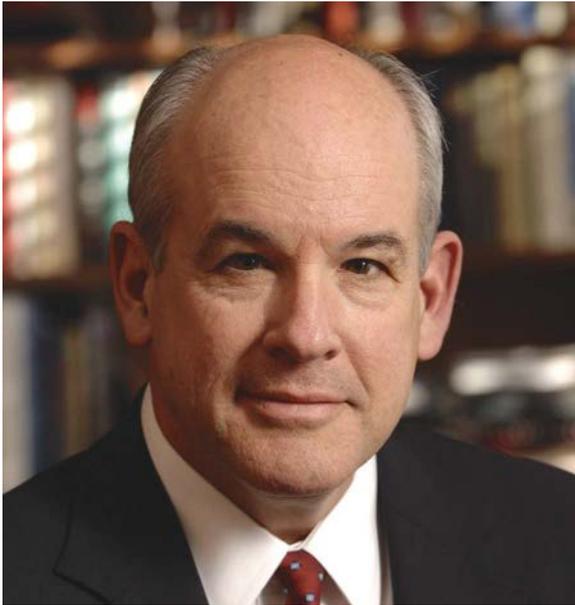


TouchTomorrow at WPI is a daylong celebration of science and technology, offering you and your family a wonderful opportunity to explore a wide range of hands-on exhibits and interactive events, as well as watch the top robotics teams in the country compete for this prestigious prize.

NASA will be there, too, giving you a chance to enjoy any number of **NASA** exhibits and displays, including wearing an actual astronaut suit and a chance to pilot a space rover. Enjoy music, food, games, and cutting edge technologies. TouchTomorrow at WPI is **FREE** and open to the public.

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Teaching the Whole Student

No problem can be solved from the same level of consciousness that created it.

—Albert Einstein

Higher education remains in the media spotlight, which is not without cause. American universities have been the envy of the world for many decades, but of late higher education has taken it on the editorial chin so to speak, in part because rising costs have caused some to question the value of a college degree. Hence, it's only natural for the media to examine the issue and draw some conclusions about the strengths and shortcomings of American universities.

What is concerning about the recent attention, however, is the increasing tendency to reduce the argument to simple concepts that do little but muddy a complex issue. The simplified argument goes something like this: Colleges should do a better job of preparing students for employment, hence, they should reduce requirements in so-called soft skills—like English, history, or philosophy—and tailor the curriculum to courses that produce employable skills.

The argument is not limited to newspapers, as some politicians and opinion leaders have even called for government funding of higher education to be directly tied to disciplines that produce jobs.

Make no mistake, workforce development is a critical issue, particularly at a time of high unemployment, and it is an area that our

colleges and universities are uniquely qualified to influence. But to narrow the merits of higher education to just employable skills paints a false dichotomy and does a disservice to students and families who may be grappling with this issue. A quality education is not an either/or proposition.

Consider your alma mater. Here at WPI, a university that has an outstanding reputation for providing employable skills and, hence, is well positioned to benefit from these simplistic arguments, we are not reducing our commitment to the humanities. Instead, we are increasing our investments in this area.

Why?

The value of the humanities should be plain to all, even when viewed through the prism of employable skills. The humanities have a long history of successfully imparting critical thinking skills to those who plumb its depths. When done well, the humanities teach us what it means to be human. They teach us new ways of thinking, new ways of seeing. The humanities ask students to confront some of the fiercest minds in history, which not only broadens one's horizon, but inherently teaches students how to distinguish seminal thinking from mere cleverness. They raise our consciousness, not by teaching "truths," as is often claimed, but by teaching students how to conduct a reasoned search for truth.

These skills are vital to everyone, but especially to WPI graduates, whose professional work so often involves grappling with complex problems. Indeed, the underpinning philosophy behind WPI's very successful IQP program is to expose our students to the complex intersection where societal needs meet technological solutions. As so many WPI students have discovered from their IQP experience, the best technological solution is often not available due to complex societal matters that must be examined and accounted for before a solution can come forth.

Among my own concerns for American higher education has been the devaluing of civics in our modern curriculum. All but gone are general courses that expose students to the workings of government and the role of the citizenry in a healthy democracy. The humanities, for better or worse, are the last vestiges of that education. Political science, history, literature, philosophy—these disciplines teach the discernment of values. They teach us how to peel back the layers of human issues, how to expand our reach and vision, how to dream, and how to live, love, and work with the complexities of our fellow humans.

At WPI, we have known for a long time that the challenge is to teach the whole student. WPI's pioneering curriculum stressed the importance of both theory and practice, recognizing from the start that a college education should be grounded in both the pragmatic and the aspirational.

We have witnessed wondrous achievements since those days. Science and technology have greatly expanded the boundaries of human imagination. It is course work in the humanities that helps us make sense of these achievements and empowers our graduates to ask—and then answer—the difficult questions that can change the world for the better.

Dennis Bubeck



► NATIONAL RECOGNITION

Ms. Demetry Goes to Washington

WPI Professor Earns White House Honor and Teacher of the Year.

CHRYSANTHE DEMETRY '88, ASSOCIATE PROFESSOR of mechanical engineering and director of WPI's Morgan Teaching and Learning Center, has collected an impressive list of awards and achievements since joining the WPI faculty in 1993. Her role as a faculty advisor for student projects has taken her to Australia, Namibia, Thailand, and Hong Kong.

But in November she traveled to Washington, D.C., to receive two exemplary awards: the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring for 2011 on behalf of Camp Reach; and Professor of the Year for Massachusetts, given by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education.

Camp Reach, one of several of the university's K-12 programs aimed at math and science education for girls, was founded in 1997 by Demetry

and the late professor Denise Nicoletti. Celeste Nicoletti, Denise's daughter, traveled with Demetry to accept the Presidential Award. President Obama greeted nine award recipients from around the country in the Oval Office and, according to Demetry, he made a strong case that "innovation in STEM is essential for our nation's economic renewal, and that STEM education is a key part of that." Demetry also said she was impressed by "his sincerity and presence in the moment."

Demetry said it was fitting that Celeste Nicoletti could be with her to see her late mother's vision and work validated at such a high level.

"Denise was so passionate about Camp Reach, and the program might not have been sustained were it not for her commitment," she said. "Celeste was a perfect choice because she had participated in Camp Reach as a 7th grade student. Having her there made Denise's presence more tangible."

►Q&A

Teaching the Future

WPI's New STEM Education Center Will Make a Difference.



WPI RECENTLY ANNOUNCED the launch of its STEM Education Center, intended to improve the skill set of primary and secondary science and math educators in order to attract more students to these disciplines. *Transformations* sat down with Professor Martha Cyr, executive director of the new center and director of WPI's K-12 outreach programs, to learn more about the new center and its goals.

Why a STEM Education Center?

STEM careers drive our economy, and right now we don't have enough students pursuing degrees and careers in those areas. This is due, in part, to the way math and science are taught in the early years of school. Classes aren't exciting or hands-on, so students don't learn why math and science are relevant and important. Hence, these students don't end up selecting STEM-related majors in college. WPI's STEM Education Center can make an important difference in this area.

In what way?

The STEM Education Center has the potential to impact three focus areas: licensure and degrees, research, and professional development. At the undergraduate level, I'm hoping to see a significant increase in the number of students prepared to be STEM educators if they so choose. The Center will also develop master's programs for in-service secondary-level teachers, which—pending faculty approval—will allow them to take the classes required by the state for professional licensure. Right now there are very few appropriate master's programs in science and math, and many of those available are for research, not teaching. The center's focus on teaching and learning is extremely important.

What does the STEM center mean to you personally?

I'm excited to see WPI making a strong commitment to this area, and not just because I've spent the past 18 years working on STEM education. As an institution we want our students to be the next set of technical innovators and problem solvers. STEM education, however, is a big problem, and so needs to be approached that way. The Center will allow us to make a difference by engaging and empowering STEM educators and help them do the critically important job of fostering the next generation of scientists and engineers. Our nation is relying on these teachers to succeed, so it's gratifying to see WPI dedicate expertise and resources to this important area.

►QUOTABLE

"Just made my last student loan payment. If I could do it all over again... I would do it all over again. Money well spent."

IRVING LIIMATTA '00

►GOOD DEED

Campus Folk Take It All Off

De-moustaching for cancer research



AN EAGER CROWD of students, faculty, and staff were treated to the public "de-moustaching" and "de-bearding" of Assistant Dean of Student Programs Jim McLaughlin (left) and Professor Emeritus Van Bluemel for WPI's *Movember* event, which generat-

ed more than \$3,000 for cancer research during No Shave November. The two agreed to part with their trademark facial hair in exchange for pledges from the WPI community, portions of which went to the Prostate Cancer Foundation and LiveStrong.

► NEWSWORTHY

NYTimes Lauds WPI

Projects boost retention rate of STEM students

NATIONWIDE, ABOUT 40 percent of students who plan to major in engineering and science end up switching to another major, or fail to get a degree. Even students who excel in STEM courses in high school often wash out in college. So why do 74 percent of WPI undergraduates earn bachelor's degrees in four years, and 80 percent in six years?

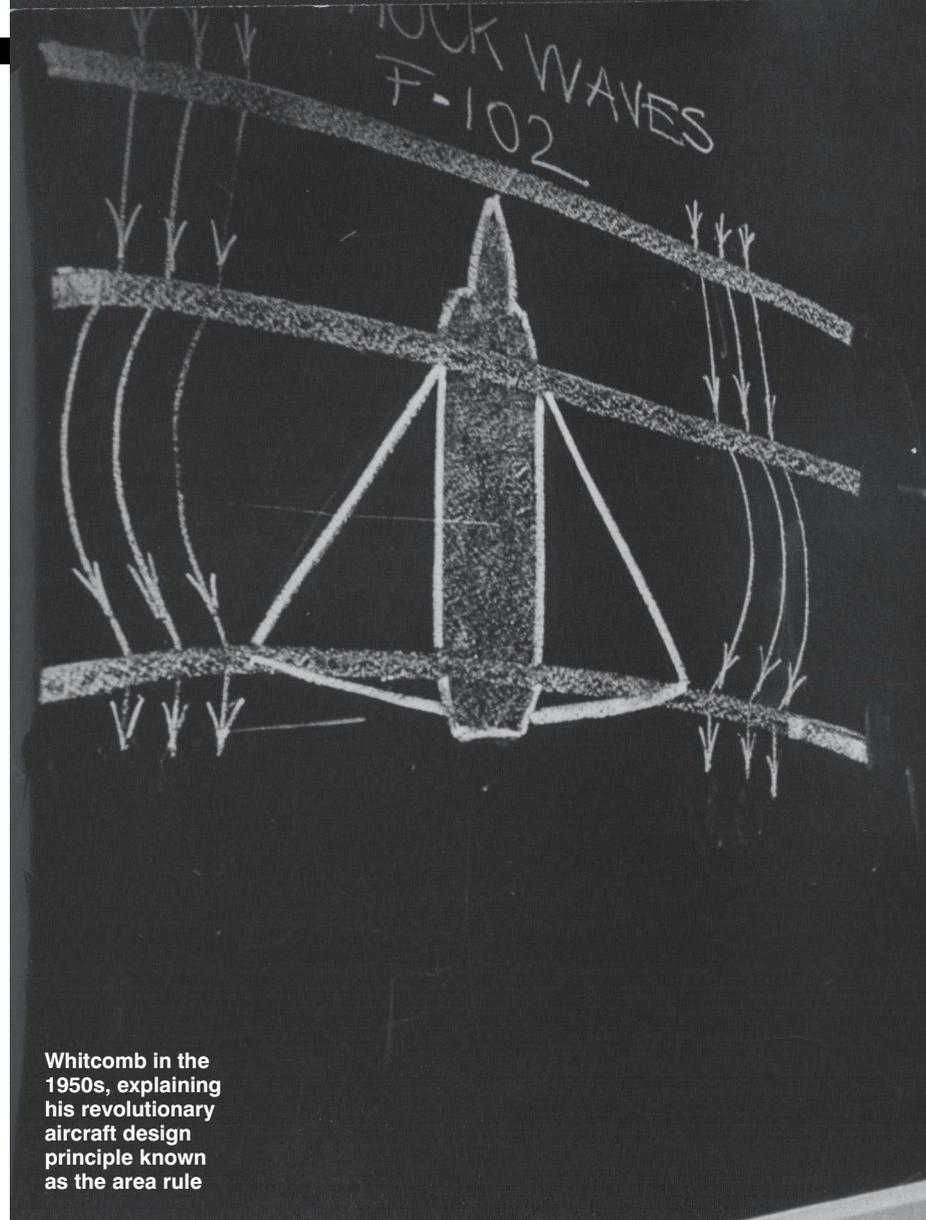
An article in the Education Life section of the Sunday *New York Times* explored why so many students who are strong in math and science during high school change their minds or drop out after the first year of college. The

article, "Why Science Majors Change Their Minds (It's Just So Damn Hard)," ran in the Nov. 6, 2011, print edition and was widely discussed online.

One professor described the "math-science death march" that occurs in large freshman lecture classes at other schools. WPI's antidote was succinctly put: "Projects keep students engaged." Dynamic photos of an IMGD student project on human motion illustrated the point perfectly.

Art Heinricher, dean of undergraduate studies and architect of WPI's First Year Experience programs, is quoted in the article and reveals the strengths of WPI's project-based approach. "That kind of early engagement, and letting them see they can work on something that is interesting and important, is a big deal. That hooks students."

Apparently, it also hooked the attention of the *Times*.



Whitcomb in the 1950s, explaining his revolutionary aircraft design principle known as the area rule

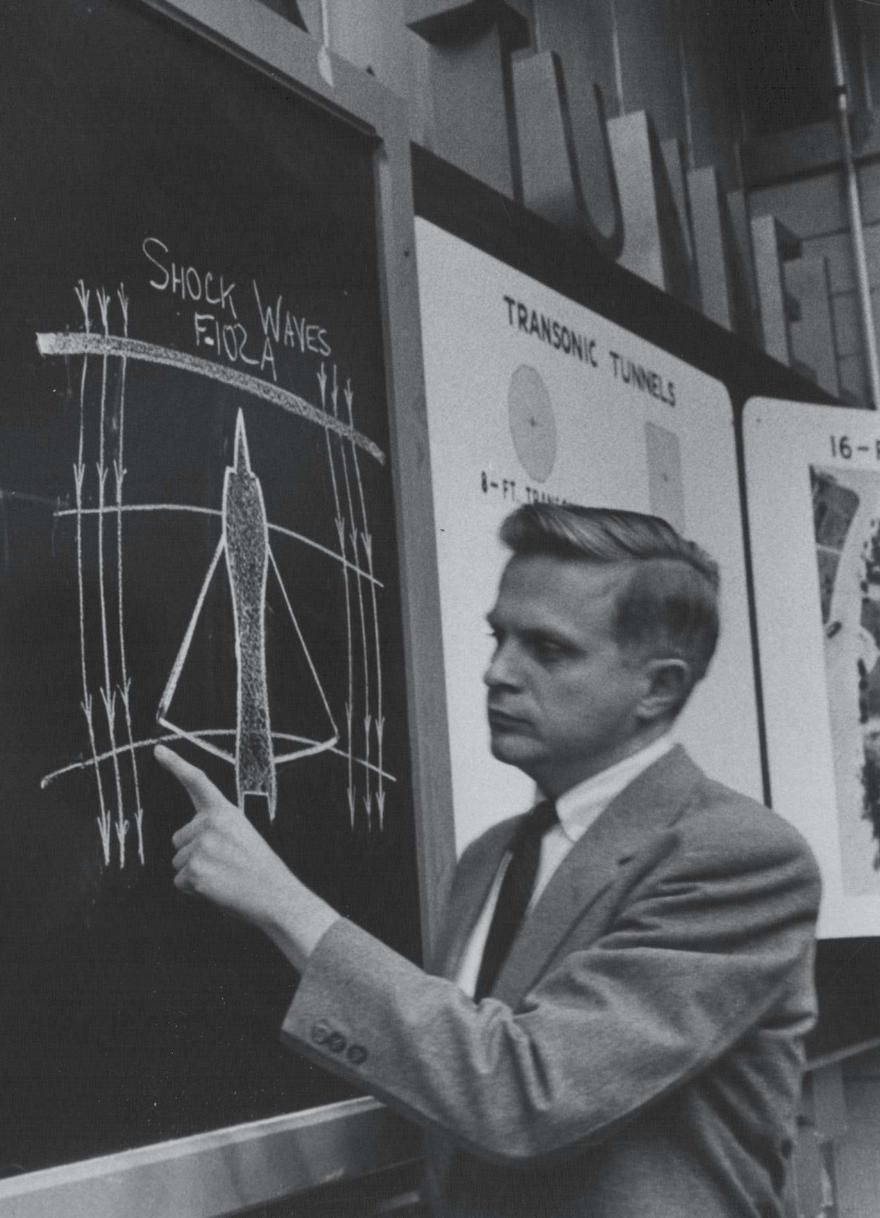
► WELL EARNED

The "Leonardo da Vinci of American Aerodynamics"

Richard Whitcomb posthumously joins Robert Goddard in National Aviation Hall of Fame

IN 1947 **CHUCK YEAGER**, flying the rocket-powered Bell X-1, became the first pilot to achieve supersonic speeds in level flight. But crossing the sound barrier would prove considerably more difficult for jet aircraft. As they approached the speed of sound, shockwaves formed along their wings and fuselages, causing drag and bleeding power. The solution to this vexing problem came in the form of a brilliant insight by aeronautical engineer Richard Whitcomb '43.

Working in the transonic wind tunnel at NASA's Langley Research Center, he discovered that at high speeds, drag is a function of an airplane's total cross-sectional area. Wings and tail assemblies increase that area locally, so Whitcomb reasoned if you narrow the fuselage where they stick out, you'll reduce the cross section and drag. He called it the Area Rule, and it finally made supersonic flight practical.



Next December, Whitcomb, who died in 2009, will join Robert Goddard, Class of 1908, in the National Aviation Hall of Fame. He'll be honored as the most influential aeronautical scientist of his time, a visionary whose other major inventions—the supercritical wing, which delays the onset of drag at

high speeds, and winglets, airfoils that jut up from wingtips and reduce drag-inducing vortices—have produced huge fuel savings in military and commercial aviation.

Whitcomb was known for his intuitive sense of air flow. “I didn’t run a lot of mathematical calculations,” he told *Transformations* in 2002. “I’d just sit there and think about what the air was doing.” Jim Hansen, biographer of Neil Armstrong, who endorsed Whitcomb for the Hall of Fame, concurs. “In his uniquely imagi-

native and powerful mind’s eye, he could literally ‘see’ airflow and how it would affect different aircraft shapes. If anyone could rightfully be called the Leonardo da Vinci of American Aerodynamics, it’s Dick Whitcomb.”

Whitcomb left his alma mater a collection of his papers and awards, including his Collier Trophy, aviation’s highest honor, the National Medal of Science, and his WPI Presidential Medal.

“He called it the Area Rule, and it finally made supersonic flight practical.”

▶ RANKINGS

By the Numbers

No. 1
MBA program in Northeast
(BusinessWeek)

10 Best Colleges
for Females in STEM Fields
(BestCollegesOnline)

15 Colleges Where
Geek Is Chic
(Huffington Post/InsideCollege)

No. 35
Best Value Private College
(Kiplinger's 100)

B+ for diversity among
25 Best Schools
for Foreign Students
(Newsweek/Daily Beast)

90% employment (or in military
or graduate school) for
WPI's Class of 2011 (within
six months of graduation
(Reuters)

TOP 50
Enrollment Choice
(Parchment.com)



From left, Ramsey Abouzahra, Pat DeSantis, Alan Lazaros

►INGENUITY

Campus Libre Removes Middleman

FRUSTRATED WITH THE high price of textbooks—and dismayed by the low return on re-selling them through a middleman—four WPI alumni have launched an online platform where college students can post and purchase books directly from each other. Campus Libre's pilot site for the WPI community went live in A-Term, and has more than 400 registered users.

Pat DeSantis '11 had the brainstorm for the service in his first year at WPI. He enlisted his three best friends—classmates Alan Lazaros, Ramsey Abouzahra, and Manu Bhalla—and fellow ECE majors who bonded early in their freshman year on the first floor of Riley Hall.

At campuslibre.com, books can be searched by title, subject, or WPI course number. Type "calculus" into the search box and full product information shows up, all keyed to the appropriate WPI class.

"Students love it," says DeSantis. "I get enthusiastic emails from students who've saved more than \$100 per book, and the WPI faculty has been very supportive. The company was a finalist in the Technology Track of the WPI Venture Forum's 2011 Business Plan Contest, and it was listed as one of 10 start-ups worth watching by *Boston Globe* columnist Scott Kirsner. The *Boston Business Journal* dubbed Campus Libre "a campus Craigslist."

"The old way of selling textbooks—tacking up flyers on telephone poles and bulletin boards—was messy, wasteful, and not scalable," says DeSantis, who recently added a phone app. Campus Libre is now working on sites for several dozen other colleges. They envision expanding beyond textbooks to offer everything a college student could want—from apartments and dorm essentials to roommates and tutors.

►PEDAGOGICAL

Educating Engineers

WPI pens a user's manual for the 21st Century

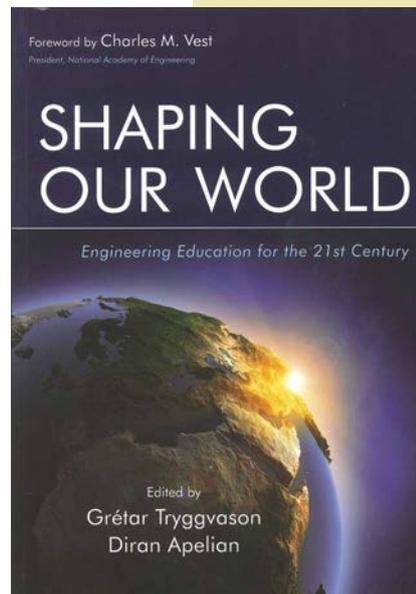
MUCH HAS BEEN WRITTEN about the need for new approaches to engineering education, but little has changed, notes National Academy of Engineering president Charles Vest, in the foreword to *Shaping Our World: Engineering Education for the 21st Century* (Wiley, 2012). The WPI Plan, however, with its 40-year history of project-based education, offers a roadmap for the future. "In the 1970s, WPI started down a path that many U.S. engineering schools are just now attempting," writes Vest.

Edited by Diran Apelian, Howmet Professor of Engineering and director of the Metal Processing Institute at WPI, and Grétar Tryggvason, former department head of Mechanical Engineering, the book is intended to serve as a teaching tool and a user's manual for educators. In each

chapter, WPI faculty and alumni outline the need for change and the effective practices and outcomes of WPI's educational model. The book also features an essay on holistic education by President Dennis Berkey. In the concluding chapter, Eli Fromm of Drexel University broadens the focus and looks to the future.

Apelian says, "*Shaping Our World* goes beyond just identifying the problem. This book actually provides solutions for how best to educate the engineer of the 21st Century. It represents the belief

that through a holistic education we will ensure the development of the next generation of successful global leaders and engineers."





► RESCUE

It's A Dog's Life

Turning T-shirts into donations

SOMETIMES, LOVE CHANGES everything. Take the case of Elaine (Warner) Sanfilippo '02. She was feeling a bit stressed from her job at a Boston start-up when a four-legged beauty named Daisy trotted into her life and opened up a whole new world for her. It wasn't long before she found herself leaving her career in data analytics to design and sell T-shirts to benefit animal rescue organizations.

Sanfilippo, who graduated with a degree in

biomedical engineering and earned an MBA from MIT's Sloan School of Management, says her business, AdopTee's, was inspired by Daisy's story. As are so many rescued dogs, the basset hound/golden retriever mix was transported from a high-kill shelter in the southern United States to the northeast, where demand to adopt pets is higher. Sanfilippo wanted to help the cause, so she left her job and applied her business expertise to the task of fundraising. She launched AdopTee's (adopteesonline.com) in August 2011, designing dog-themed T-shirts and donating 50 percent of net proceeds to shelters. When 31 service members, including 17 Navy SEALs and a military dog named Bart,

were killed in a helicopter crash in Afghanistan that month, Sanfilippo created three more designs under the name Project: Bart. Proceeds from sales of those shirts go to the Navy SEAL Foundation, which supports families of fallen SEALs. In just two months, Sanfilippo raised \$1,000 for the foundation.

Though the new venture hasn't given her opportunity to use her biomedical engineering talents yet, Sanfilippo says the education she received at WPI has proven invaluable. "A WPI degree gives you a great background in critical thinking, problem solving, and working logically to find solutions," she says. "Those are the skills I use every day."

▶ TRADITIONS

Happy Birthday, You Old Goat!

FOR A GENTLEMAN of his vintage, Gompei the Goat still knows how to kick up his hooves when it's time to party. Student Alumni Society past president Nick Mondor '12 declines to divulge the true age of WPI's beloved mascot, but it's well known that this "kiddo" has been on the scene for more than a *century*—since 1893, to be exact!



Intrepid reporter W. Polly Teknick spotted the capricious party animal Whoopee-ing it up on his Third Annual Birthday Celebration, Feb. 27, in Alden Memorial. "All who attended had an excellent time," says acting SAS president Tim O'Neil '14. "Gompei was truly appreciative of the love and support given to him all day long."

More than 200 Gompei's Birthday T-shirts were awarded in under two hours to students competing in events like "Pin the Beanie on Gompei." Students and faculty alike gave generously to the SAS-sponsored "Gifts for Gompei" toy drive for the Ronald McDonald House. "For the third year in a row," says O'Neil, "Gompei's Birthday was a spectacular success."

▶ LITERARY MASTERS

Dickens Goes Digital

Project Boz shares Dickens serials with the world.

THE WORLD CELEBRATED the 200th anniversary of Charles Dickens's birth on Feb. 7, 2012, and WPI was busy wrapping a birthday gift for the world—Project Boz.

This two-year initiative by WPI's George C. Gordon Library is digitizing many of Dickens's novels published in their original serial form, including roughly 12,000 pages of text, original advertisements, and illustrations. *The Pickwick Papers*, *Oliver Twist*, *Nicholas Nickleby*, *David Copperfield*, *Bleak House*, *Hard Times*, *A Tale of Two Cities*, and *Great Expectations* are just some of the famous works being digitized.

"Boz" was the early pen name of Dickens, and Project Boz will allow for greater access and appreciation of Dickens's work by offering an online source for researchers and students, according to Tracey Leger-Hornby, dean of library services at WPI.

The Dickens collection was generously donated to Gordon Library in 1995 by Robert D. Fellman, a friend of WPI, establishing the university as the premier source for Dickens materials in Central Massachusetts. The collection recently obtained a rare oil portrait of Dickens painted in 1874, which now hangs in the WPI archives above a desk used by Fellman.

The portrait and many other items from WPI's Dickens collection will be on display at the Boott Gallery in Lowell National Historic Park until Oct. 20, 2012, as part of yearlong celebration of Dickens's birth. Alumni can learn more about Project Boz and the Robert D. Fellman Dickens Collection at dickens.wpi.edu.



WORCESTER
POLYTECHNIC
INSTITUTE

GREAT PROBLEMS SEMINAR 2011

REAL-WORLD SOLUTIONS
FOR REAL-WORLD CHALLENGES

55

teams,





250

students

▶ PROBLEM SOLVING

Great Problems Seminar Hits Home

GPS winners have strong local focus

WPI STUDENTS ARE WELL KNOWN for solving real-world problems in faraway places. This year, the fifth annual Great Problems Seminar pitted teams of first year students against global challenges in four areas: Feed the World, Power the World, Heal the World, and Grand Challenges in 21st-century engineering. Students spent two terms finding ways to improve life in locales from Haiti to the South Sudan. But a surprising number of projects focused on problems of nutrition, disease control, and affordable energy right in our own backyard.

Of the five top posters selected by judges, four had a local focus. Two addressed "food deserts" in neighborhoods of Worcester. (The USDA defines a food desert as a low-income census tract where either a substantial number or share of residents has low access to a supermarket or large grocery store.) "More than a Mirage: Oasis in the Desert" and "More to Your Door" tied for first place in that area, proposing ways to make healthy, affordable food available in low-income neighborhoods.

The top entry in the Heal the World group was "Cleanliness and Sanitation in Morgan Dining Hall," assessing trouble spots such as the salad bar and the self-serve milk dispensers. Other projects in that category investigated "Sanitation Practices in Alumni Gym Weight Room" (a runner-up), and "Smoking at WPI." In the Power the World category, "Economic Feasibility of Geothermal Heat Pumps in New England" was named the top poster.

Trustee Phil Ryan '65 also addressed the group, comparing the hands-on projects to his more textbook-based education at WPI. "What you've accomplished is well beyond knowledge. You've discovered practical solutions that could transform the lives of real people."

▶ STAGED

Flying Drones to the Rescue

POOR CINDERELLA. Tormented by her evil stepsisters, she hasn't a friend in the world—except for a rag-tag flock of talking birds. In Broadway productions of Stephen Sondheim's musical "Into the Woods," the birds are dangled on strings, in an intentionally low-tech comedic effect. Onstage at WPI, they hover atop a Linux-operated robotic quadricopter remotely piloted by wireless joystick controls on an iPod Touch.

VOX, WPI's student-run musical theatre company, performed Sondheim's "Into the Woods" last September, directed by theatre instructor Kristy Chambrelli. The play weaves together familiar fairytales in a dark comedy that challenges the meaning of "happily ever after." Robotics engineering major Chris Whipple '12 served as "bird wrangler" for the production, maneuvering his own Parrot AR.Drone Quadricopter from offstage, guided by onboard cameras and sensors. The 'copter—which he uses in real life to test flight code commands for his MQP—was dressed up for the play with cut-out paper birds.

"WPI has a tradition of being geeky, and doing things the hard way," laughs VOX advisor Thomas Collins, who served as executive producer for the show. Other tech effects in WPI theatre have included a fiber-optic hairpiece, an onstage shower with working plumbing (used in "South Pacific" for "I'm Gonna Wash That Man Right Outta My Hair,") and virtual reality projections to dramatize the inner madness in Ken Kesey's "One Flew Over the Cuckoo's Nest."



Chelsea Miller '13
as Cinderella

▶ DREAM TEAM

Three Deans, One Course

Innovative new class covers leadership, creativity, innovation and entrepreneurship

WHAT'S BETTER than taking a class with the dean? How about an interdisciplinary course co-taught by all three of WPI's deans?

In B-Term, 25 undergraduates had the opportunity to take an experimental course called "Leadership, Creativity, Innovation, and Entrepreneurship," with School of Business dean Mark Rice as lead instructor, Karen Kashmanian Oates, dean of arts and sciences, and Selçuk Güçeri, dean of engineering, as co-instructors. The course explored different approaches to the world's great problems, and students began by acquainting themselves with the National Academy of Engineering's 14 "Grand Challenges of Engineering" in areas such as food and energy supply, healthcare, and global sustainability.

The curriculum included readings on creativity, design thinking, and radical innovation, as well as an opportunity to conduct



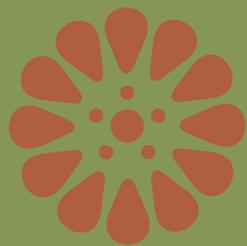
Güçeri, Oates, Rice

students were challenged to analyze and improve on the actions of CEOs in case studies. During the final class, they reflected on leadership lessons gleaned from Sir Ernest Shack-

leton's ill-fated expedition to the South Pole.

"It is good to learn from my mistakes, but it is also very valuable to learn from the good and bad experiences of others," says MIS major Luis Quiroga '12. "The examples presented by the deans were unique, and the conclusions were invaluable." Another important lesson? "Contributing innovation is simple compared to the difficulty of selling your invention," Quiroga says. "Without sustainability and good human capital management, the invention may not make it." The course was designed to help students see beyond just the technical solution.

"The learning experience in this course," says Quiroga, "was to see beyond a singular technical solution and to appreciate the challenges of implementation. We focused not only on converting technologies into innovative products and services, but then on how to bring those products to the global marketplace."



KATHY LOFTUS '86
LEADS THE GLOBAL
CHARGE TO REDUCE
ENERGY CONSUMPTION
AT WHOLE FOODS

a sustainable whole foods attitude

by michael blanding  photography by kathleen dooher





TANDING IN THE WHOLE FOODS DAIRY AISLE IN WELLESLEY, MASS., KATHY LOFTUS IS MENTALLY RECONFIGURING A COOLER FULL OF ORGANIC YOGURTS AND SOY MILK.

“We could save even more energy if we had doors on these,” she remarks, pointing to the open display case. “But sometimes we’re limited by the way the store is set up. Here, we’d need space to stock the shelves from behind.” She adds, “The good news is, we’re using doors in a lot of new stores and retrofitting them in existing stores across the country.”

Turning the corner to a row of frozen foods, she perks up. “These are LED lights,” she observes happily, poking her head into a freezer stocked with boxes of garlic and basil gnocchi and wild chanelle ravioli. “A lot of the stuff we do you can’t see, like these electronically commutated motors. They cost a little more, but they save a lot of energy.”

Loftus sees much more than most people when she walks into a supermarket. As global leader for sustainable engineering, maintenance, and energy for Whole Foods Market, it’s her job to set the standards to drive down energy usage and reduce natural resources consumption in the chain’s more than 300 stores in the United States, Canada, and Great Britain. She’s led the charge to reduce overall energy consumption by 5 percent—which may not seem like much until you consider it equals some 40 million kilowatt hours, enough to power 3,500 homes for a year. Now she’s on a path to help the company achieve a 25 percent-per-square-foot reduction in energy consumption and greenhouse gas emissions by 2015.

Loftus says her upbringing and subsequent education prepared her for her current role in ways she didn’t always recognize while growing up. Her grandparents were Irish immigrants who emphasized family and frugality, as well as education. Their anti-materialism rubbed off on her, creating a natural interest in conservation. “My mom’s favorite saying was ‘The best things in life aren’t things,’” she says.

At WPI, Loftus was inspired by Intro to Engineering Problems

taught by the late Professor Roger Borden. “It was all about thinking big and sharing with the rest of the class what could be considered crazy ideas,” she remembers. Among the ideas she explored were telecommuting, a virtually unheard-of concept in 1982, and energy conservation in buildings and transportation, which were just beginning to gain traction. “I liked the way everybody shared and collaborated,” she says, referring not only to that class, but to WPI’s emphasis on teamwork and projects.

We, Not Me

After earning her degree in mechanical engineering, Loftus started out designing office buildings. It didn’t take long before she balked at the waste she witnessed. “We were taking old designs and kind of regurgitating them,” she says. In the rush to get things built, heating and cooling systems were often too big for the buildings, or were done cheaply with an emphasis on short-term savings over long-term efficiency.

She left after two years and moved on to jobs in energy engineering and utility management, where she honed her talent for collaboration. Delicate negotiations between clients, utility companies, and contractors were required to ensure that the plans for saving energy would work. “My whole approach was collaboration,” she says. “I felt if these programs were going to be successful for the cus-

tomers or the utility, you couldn’t just design them in a vacuum.”

Among the clients she impressed with her designs was Shaw’s, one of the largest supermarket chains in New England, where she accepted the position of director of energy and regulatory affairs. She implemented innovative approaches to conserving energy in the Shaw’s stores by installing sub-meters in each of the various departments in order to track usage and identify waste, eventually reducing the size of air-conditioning and other building compo-

“That’s what WPI teaches—how to think creatively and handle situations where there are no set answers.”

nents that were oversized. Again, her approach emphasized collaboration.

“She works in a way that says partnership,” notes WPI classmate Mark Gilday, an account executive at Select Energy. “It wasn’t just, ‘Hey, give me the best rate.’ We were a small company, and Kathy was an advocate for us.”

At first, Loftus operated from a position of pure efficiency and cost-savings, but during her eight years at Shaw’s, her environmental consciousness began to grow. She worked hard to convince management to put savings into renewable energy credits and looked for ways to improve the chain’s environmental impact in other areas, such as waste, water, refrigerants, and packaging. As her awareness expanded, however, she became increasingly disillusioned with shifting priorities, especially after the company was acquired by a national conglomerate. “Watching priorities change, all in the name of Wall Street profits,” she says, disappointed her.

She went on to serve as director of business development for EnerNOC Inc. in Boston, where she received top sales awards and brought in big clients like Cargill, Pfizer, International Paper, Stop & Shop, and National Grid, as well as Whole Foods Market’s Northeast Region. Loftus was already aware of employees—even the environment—on equal par with investors. When a friend told her that Whole Foods was looking for someone to head its energy policy, she jumped at the chance.

Making the Case for Change

Loftus arrived at Whole Foods in 2006 with her sleeves rolled up, eager to make a difference. She already knew the company would have its own challenges, specifically its decentralized model. Even though she is the one who sets the standards and goals for sustainable engineering, it’s up to the individual regions and stores to implement them as they see fit. After Whole Foods acquired several different companies in the 1990s, the company found itself with many different store designs and management styles, which meant that one-size-fits-all solutions wouldn’t work. Loftus found new value in her persuasive and sales skills to convince regional managers to consider specific design innovation, always demonstrating a “we’re-all-in-this-together” approach.

“Rather than telling people what to do, Kathy makes the business case for change. She is the type of leader who not only can convince people, but can lead them through the implementation,” says Paul Torecellini ’86, principal engineer at the Department of Energy’s National Renewable Energy Laboratory. The DOE works with retailers across the country to implement sustainable engineering, giving Torecellini the opportunity to observe Loftus’s persuasive skills firsthand. If local or regional managers are resistant, she’ll sidestep confrontation by working with other regional leaders more amenable to experimentation. Eventually she’ll get other regions on board,



A TEACHABLE MOMENT

Sustainability is everywhere at WPI—from President Berkey’s Task Force on Sustainability to the Student Green Team, whose members dig through garbage cans to assess recycling. Last year WPI received an A– on the 2011 College Sustainability Report Card. (Only 52 schools in the nation got grades of A– or higher.)

“Many institutions are doing a greenhouse gases plan, or a carbon footprint,” says WPI sustainability coordinator Liz Tomaszewski. “At WPI, we have students and faculty who have the interest and the passion, and a curriculum designed to ensure that all students leave campus with the ability to develop sustainable solutions to the world’s problems.”

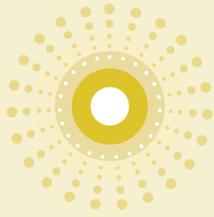
Sustainability wasn’t even a word when Kathy Loftus was at WPI; now there’s a BA program in Environmental and Sustainability Studies already developing a new generation of professionals to assume roles just like hers.

once they see what they’re missing. “Sustainability initiatives work best when managers completely buy in,” says Torecellini. “So Kathy is careful to show how it works, stressing that she can replicate that success in hundreds of other stores.”

Loftus has had particular success close to home in the North Atlantic Region, where stores using the sub-metering system she first implemented at Shaw’s have gradually reduced their energy usage through technology upgrades. The improvements, documented by metering, won a coveted Mass Savers award this past November. “When other regions see concrete evidence of progress, that success brings other regions on board,” she says

Torecellini didn’t know Loftus at WPI, but has since come to admire her multidisciplinary approach to engineering goals. “With her technical foundation, she takes a broad look at a problem and asks how are we going to solve it—but she wisely takes into consideration that there are other factors in play, like personalities or budget restraints.” Often, he says, she calls him for advice on how to implement an innovative idea.

“That’s what WPI teaches—how to think creatively and handle situations where there are no set answers,” Torecellini says.



OUT OF THE FRYING PAN

With falafel, chicken cordon bleu, and other delicacies sizzling 'round the clock in the Whole Foods kitchen, reusing cooking oil as fuel is a natural. This spring another of Loftus's "crazy ideas" became a sustainable reality, when the nation's first on-site waste vegetable oil-powered electricity generation system was switched on at the Whole Foods Markets regional commissary in Everett, Mass., taking the entire 45,000-square-foot building off the power grid.

The modified diesel generator, designed and installed by Lifecycle Renewables of Marblehead, Mass., is connected into the commissary's electric distribution system and operates in parallel with National Grid's utility lines. The installation is currently operating at a continuous output of 250 kW. "Based on past electrical demand of the commissary, that will provide nearly 100 percent of our needs," says Loftus. "For efficiency purposes we have enabled the generator to 'load follow,' meaning that the generator will follow the load of the building so that we are always making efficient use of even low-demand days, like Sundays."

In a typical week, the commissary uses more than 1,200 gallons of canola oil per week to produce 240,000 pounds of prepared foods and other products for the North Atlantic and Northeast Regions. Oil from 28 stores is also collected and refined for use in the generator.

"Their waste is now their energy," says Lifecycle Renewables CEO Rory Gaunt. "This renewable energy installation is the first of its kind in Massachusetts, and to our knowledge a first in the USA." By putting "yellow grease" back to work, Whole Foods also gains economic stability and increased financial return.

Loftus compares the commissary's annual savings of two million kW-hour to the energy usage of 200 average households. After years of hard work, she's gratified to watch delicious food being cooked up so cleanly.



From lighting to heating and cooling, Loftus looks for alternative solutions to conserving efficiency.



One of Loftus's creative ideas now powers a Whole Foods facility with waste cooking oil. Drawing upon her previous experience with utility companies and supermarkets, she developed a combined heating and power plan for the company's North Atlantic Regional Kitchen in Everett, Mass., selecting a location where the energy grid was overtaxed. (See sidebar).

Another "crazy" idea Loftus pushed through was the use of hydrogen fuel cells, a technology more commonly used in outer space than in terrestrial buildings. Fuel cells convert natural gas into energy through a chemical process whose only emission is water vapor. Loftus not only spearheaded the use of fuel cells to power Whole Foods stores (currently there are four in the U.S., including one in Dedham, Mass.), she also helped implement programs to turn waste heat from the fuel cells into coolant for refrigeration. "I knew we could do it, but it would take the right engineers," she says. "Here's where my 'big thinking' came in: I wasn't designing it, and I knew some of our existing engineering partners weren't up to it—but knowing who could was the key."

Sharing the Vision

Loftus serves on the steering committee of the DOE's Commercial Buildings Energy Alliance, a task force that Torecellini advises. The group disseminates alternative energy solutions to retail stores, which account for 20 percent of all business space in the country. Working with more traditional retailers such as Target and Walmart to design more efficient stores has put Loftus's collaboration skills to the test.

"Previously, companies didn't want to give away secrets to another company because they felt it would be competitive advantage," Loftus says. "But there are plenty of different ways to compete. How businesses can lessen their impact on the environment shouldn't be a trade secret. Those types of solutions we should share."

Whole Foods has already contributed new ideas to the alliance, sharing plans for a newly built model store in North Carolina that uses a giant cistern to recycle rainwater for the store's plumbing, plus innovations in refrigeration, HVAC, and lighting that use 40 percent less energy than even the minimum recommended by ASHRAE's building and energy codes.

Loftus's success has inspired Whole Foods to create a new task force of executive leaders to pursue high-level energy strategy, including the expanded use of fuel cells, solar, and other technologies in its stores. Loftus leads that task force, as well as the company's Green Mission Leadership Group. In her hometown of Scituate, she serves on the Renewable Energy Committee, lending her expertise on a wind turbine installation and on a solar array at the town landfill.

Every day, Loftus uses the creative thinking and collaboration skills she first learned at WPI to push innovations, not only at Whole Foods but in her hometown and at other chains across the country. LED light bulbs and energy-efficient coolers for the soy-milk might not seem like much to the untrained eye—but put together with dozens of other innovations across thousands of retail stores, they make a huge difference.

"Making a difference is what it's all about," says Loftus. □







Whole new ballgame

THE NEW RECREATION CENTER WILL BOOST WPI'S COMPETITIVE EDGE—
IN WAYS THAT GO FAR BEYOND SPORTS. **by John Shaw**



Director of physical education, recreation, and athletics Dana L. Harmon remembers how things were when she first arrived at WPI back in 2002. Though it had been three decades since the passing of Title IX, the 1972 landmark decision mandating that women's athletic teams receive resources equal to those of men's teams—a ruling WPI had long embraced—Harmon couldn't help but notice a few peculiar features of the old gym.

"For starters, there were more urinals in the women's locker room than in the men's," she recalls with a laugh. "I hadn't expected that."

While the plumbing situation could be fixed, it couldn't solve a more pressing issue—namely, Alumni Gymnasium was nearly a hundred years old, built in a time when the undergraduate population was all male, recreational sports were few, and the student participation rate was nowhere near today's levels. Today, WPI has over 30 club sports (1,300 students), a thriving intramural program (1,620 students), and over 90 physical education courses each year, in addition to 20 percent of the students involved in 18 varsity sports. Compare that to 1968, when the newly built Harrington Auditorium, together with Alumni Gym (built in 1916), could meet the needs of just 1,649 male students. With more than 4,000 students enrolled today, it's understandable that demand is outpacing supply.

"It's the growth in recreational sports and campus events that has driven this need for additional space," says Harmon. "Varsity sports will surely benefit, but the new rec center has been designed to meet the needs of the entire campus, first and foremost." The Center will allow WPI's robotics teams to host major events, and immediately upon opening its doors, it will become the largest meeting space on campus.

The \$53 million Sports and Recreation Center encompasses 145,000 square feet, and contains a four-court gymnasium, a fitness center, a jogging track, an indoor rowing tank, a 38-meter pool, dance studios, racquetball and squash courts, meeting and conference rooms, and office space for coaches, trainers,





and staff. The 29,000-square-foot gymnasium with its elevated quarter-mile jogging track that overlooks four regulation basketball courts is a showcase for WPI. The expansive space gives the university an area that can accommodate admission open houses, career fairs, national academic conferences, and robotics competitions that draw budding engineers and scientists from around the globe.

Built into the hill on the west side of campus, adjacent to the Park Avenue ball fields, the four-story, brick-and-glass structure appears to be only two stories high when approached from the Quad, and aesthetically complements the surrounding buildings. Upon entering the Fuller Atrium (the rec center's main entranceway – and a gift from the trust of longtime WPI trustee George F. Fuller and his wife, Sybil), visitors will have easy access to most areas of the center, including a spectacular view of Bancroft Hill and Park Avenue.

Engineering Excellence

It's only natural that a school with an environmental engineering program would construct a building that meets Leadership in Energy and Environmental Design (LEED) standards. Environmental highlights of the rec center include 35 rooftop solar panels that will heat the pool, saving an estimated \$50,000 and reducing 4,400 pounds of carbon dioxide emissions a year; two 50,000-gallon tanks that will collect water for the building's cooling system, which will reduce yearly water consumption by 800,000 gallons; and a portion of the building's electricity supply will be generated by students using the dozens of cardiovascular machines in the fitness center. With several other environmentally friendly features, including Forest Stewardship Council (FSC)-certified paneling and furniture, school officials believe the rec center may garner a Silver LEED designation, at the very least.

Fred DiMauro, WPI's assistant vice president for facilities, who oversaw the construction, points to the natatorium as the rec center's chief engineering marvel. Originally designed to be on the same level as the gym, the pool was quickly modified for the



building's lower two levels.

"We would have needed a lot more real estate for two large elements on the same floor," he says.

Stacking the gymnasium atop the swimming pool made the Sports and Recreation Center more cost effective. But it created engineering challenges. "If you're going to have a big space like that, you need a lot of columns to support it," says DiMauro. "But columns bring their own problems, such as compromising sight lines and seating issues." The solution was a pre-cast concrete ribcage that gracefully arcs over the pool, completely removing the need for support columns.

WPI students then got involved, traveling to Pittsfield to see how the nine precast concrete ribs were made. Each rib consists of five sections that were shipped separately to WPI and then assembled. The end result is a two-story enclosure with a dominating sense of open space that few other pools can claim.

"Our students got to learn how the ribcages were made and then see how they would be used," says DiMauro, who says the solution may end up winning awards. "It was a great experience for these kids. They got an in-depth look at how a building is put together."

Guermillo Salazar, associate professor of civil

and environmental engineering, concurs. He's spent the past two years using the Sports and Recreation Center as a practical teaching tool.

"My classes have been involved since the project began, and they've turned in some very interesting MQPs," says Salazar, using the popular acronym for the Major Qualifying Project that encompasses research, development, and application of a real-life project that all WPI students are required to complete.

"My students attended the weekly project meetings, which gave them a firsthand look not just at the building's progress, but at the human side of how all the parties must work together to get things done," says Salazar. "I didn't have to tell them stories about how something was built. They saw it for themselves."

Civil engineering major Christopher Baker '12 agrees. "The rec center project has definitely helped prepare me for professional work," he explains. "We'd learn about something in class, but then see it applied in a real-world situation. That's a great learning experience."

This past year, Baker and his classmates focused on the various advantages of incorporating 3D building information modeling software into the project, which he says is quickly becoming the norm throughout the industry.

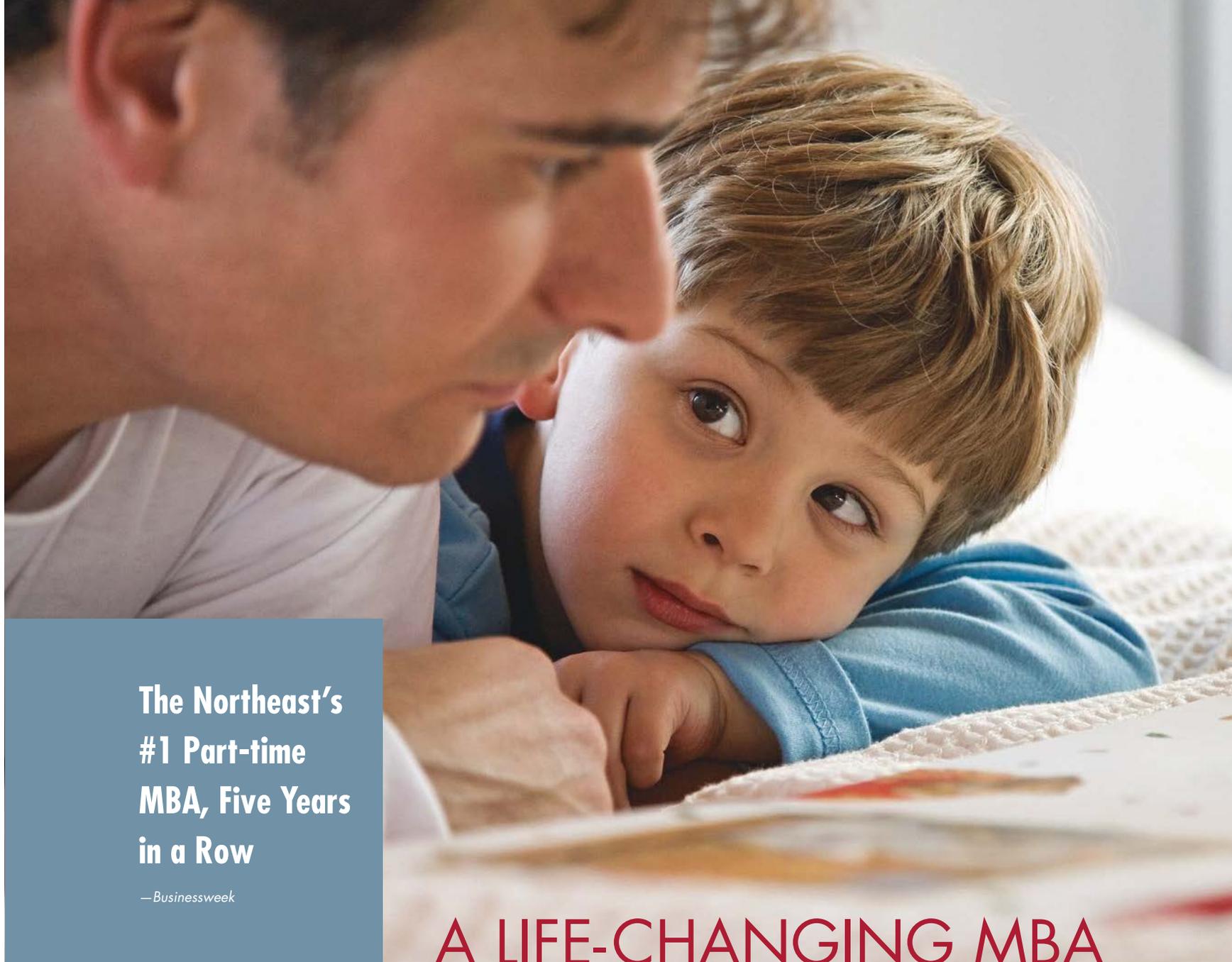
Baker's student team also worked on how best to link the new center to adjacent Harrington Auditorium.

Salazar says student contributions ranged from updating spec sheets that were modified on the fly, to creating a project management schedule that allowed the construction team to compare cost estimates to actual charges in real time. Students also helped install three water-usage meters to measure not only the amount of evaporation but its source, which will be a valuable asset in ensuring the natatorium's air and water temperatures remain at a consistent 80 degrees. And they documented the Center's progress via web cameras.

Student contributions to the new rec center also include Moonraker 2.0, the \$500,000 award-winning, student-designed robot for NASA that was used to break ground for the Center in May 2010. Moonraker 2.0 is believed to be the first non-human to break ground on a construction project here on planet Earth.

Beyond Sports

The Center will allow WPI's robotics teams to host many events, though a home-field advantage doesn't exist in robotics competitions, says Colleen Shaver '04, '08 MTI, assistant director of WPI's Robotics Resource Center.



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“Robots are strangely indifferent to cheering,” quips Shaver, who points out that each competition brings its own unique challenge. “For instance, you may be required to manipulate a robot located a thousand miles away. So the event’s location may be secondary.”

Adequate space, however, is primary. “We just hosted a competition with 48 high school teams,” says Shaver. “But we had another 32 teams wait-listed because we just didn’t have the room.”

The rec center will offer ample room to grow—and Harrington Auditorium is part of the reason. Among the last build-outs of the rec center will be a short walkway connecting it to Harrington, allowing competitors to prepare in one building while the actual competition takes place in the other.

“It will be a major improvement for spectators, too,” says Shaver. “We often cut back on seating to accommodate more teams. Soon we’ll be able to accommodate both.”

Robotics competitions, even at the high school level, offer valuable learning experiences for WPI students, says Shaver. “They serve as coaches, mentors, and sometimes accountants, as they advise right down to the cost-benefit analysis of a certain design or technique.”

A natural byproduct of robotics competitions

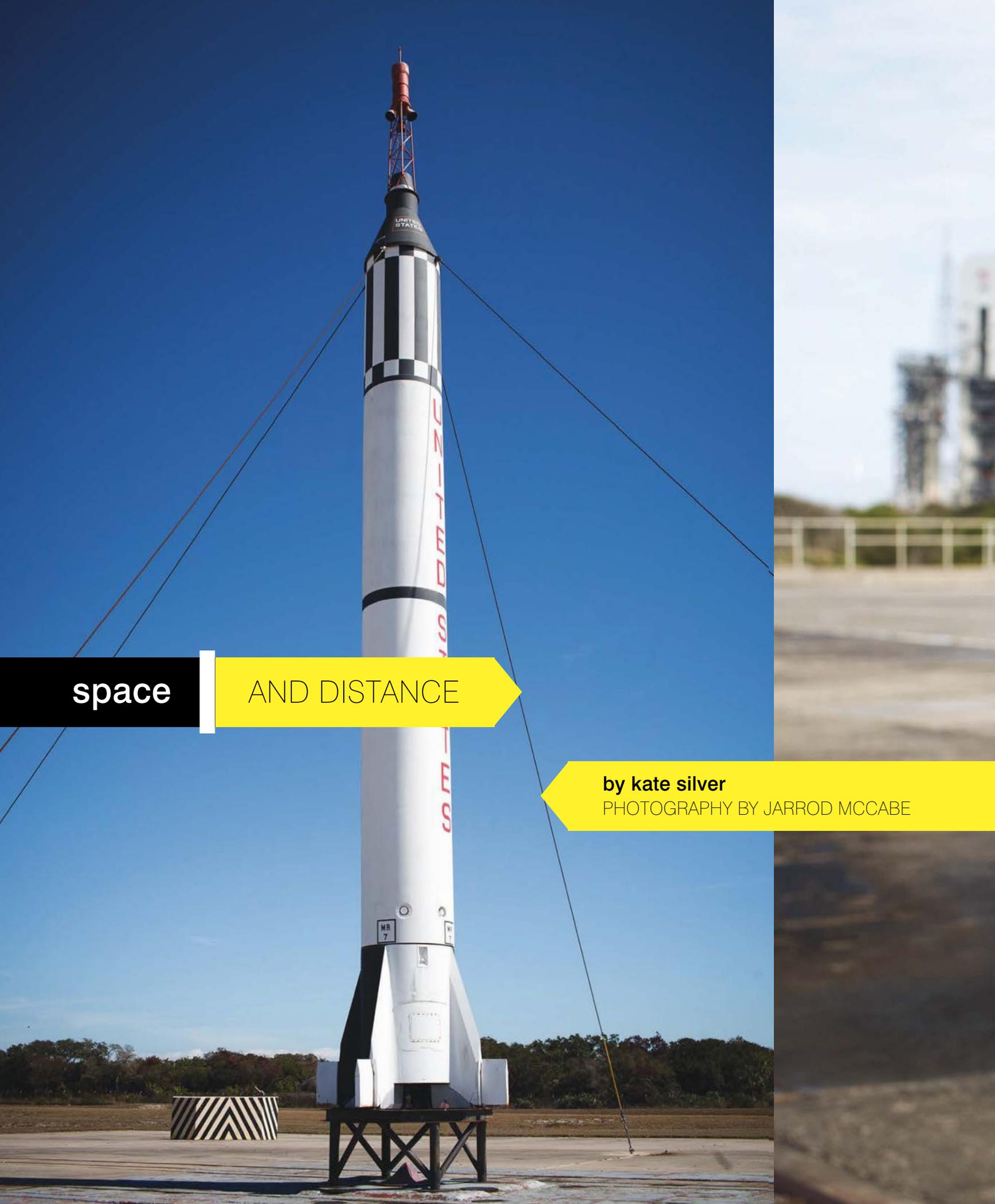
is college recruitment, as high school students arrive on campus by the busloads, often getting their first look at a university dedicated to science and engineering. Dean of Admissions Ed Connor ’92 sees the new center as a powerful recruiting tool. “Tour stops at the old gym were increasingly counterproductive,” he says. “We would talk about our excellent coaches, the dedication of our student-athletes, and the many successes of our teams. But the facility itself was not a strong selling point.” Connor says he can envision campus tours beginning with the rec center come fall, as it will be a major selling point for prospective students.

While many colleges have the advantage of state-of-the-art athletic complexes, WPI’s varsity teams have learned to compete under less than optimal circumstances. A lesser program

might have deflated from a lack of facilities, but WPI athletics have continued to be successful, evidenced by winning the Worcester Cup Challenge three years running, and six of the last eight years.

“Our coaches are outstanding and they have never used our facilities as an excuse,” says Harmon, citing the swim team’s success despite never hosting a home meet because the pool, constructed in 1916 and affectionately known as “The Tub,” was simply too small. “We have always demanded the best of our players even though we haven’t had the facilities some other teams had.”

Now, a century after alumni banded together to build Alumni Gym, and 45 years after the construction of Harrington, it’s about to be a whole new ball game. □



space

AND DISTANCE

by kate silver

PHOTOGRAPHY BY JARROD MCCABE



For Vice Commander Rory Welch '90, WPI paved the way for a 22-year military career in space operations



A: A communications console in the Morrell Operations Center the Launch Decision Authority uses to communicate with range and launch personnel as well as launch customers, mission directors, and NASA. **B:** SureTrak display 45th Space Wing operators use to track military, private, and commercial aircraft as well as ocean traffic. (The LDA is ultimately responsible for ensuring the launch corridor is clear of air and sea traffic prior to giving his final clear to launch). **C:** Col Welch strikes a pose in Mission Control Room #2 of the Morrell Operations Center. **E:** The heat sink nosecone, located in the Air Force Space & Missile History Center, Cape Canaveral Air Force Station

P

erhaps no one is surrounded by space more than Colonel Rory Welch.



On the one hand, it's his job. The 44-year-old, who graduated with distinction in 1990 with a degree in mechanical engineering with aerospace interest, serves as the vice commander and launch decision authority with the 45th Space Wing, a unit of Air Force Space Command located at Patrick Air Force Base, near Cocoa Beach, Fla., that provides rocket launch services for the Department of Defense, NASA, and commercial endeavors at nearby Cape Canaveral.

But space defines his life in other ways. For more than two decades Welch has endured the roving life that comes with a military career, which includes some heavy sacrifices. For the last three years, more than 800 miles of space has separated Welch from his wife, Nancy, and their two kids. Every day he works hard to make both senses of space just a little more navigable.

When most people think of space, they think of NASA. And while that's not wrong, it's not entirely correct. NASA handles many operations that deal with space (including the now-defunct space shuttle program), but the 45th Space Wing is a partner in all launches that leave Kennedy Space Center, and has its hand in all unmanned launches that leave Cape Canaveral. Those launches serve many purposes that affect everyday life, including the launch of GPS satellites that enable use of your Garmin and credit cards; telecommunications satellites that allow your cell phone to function; and television and weather satellites that keep you up to date.

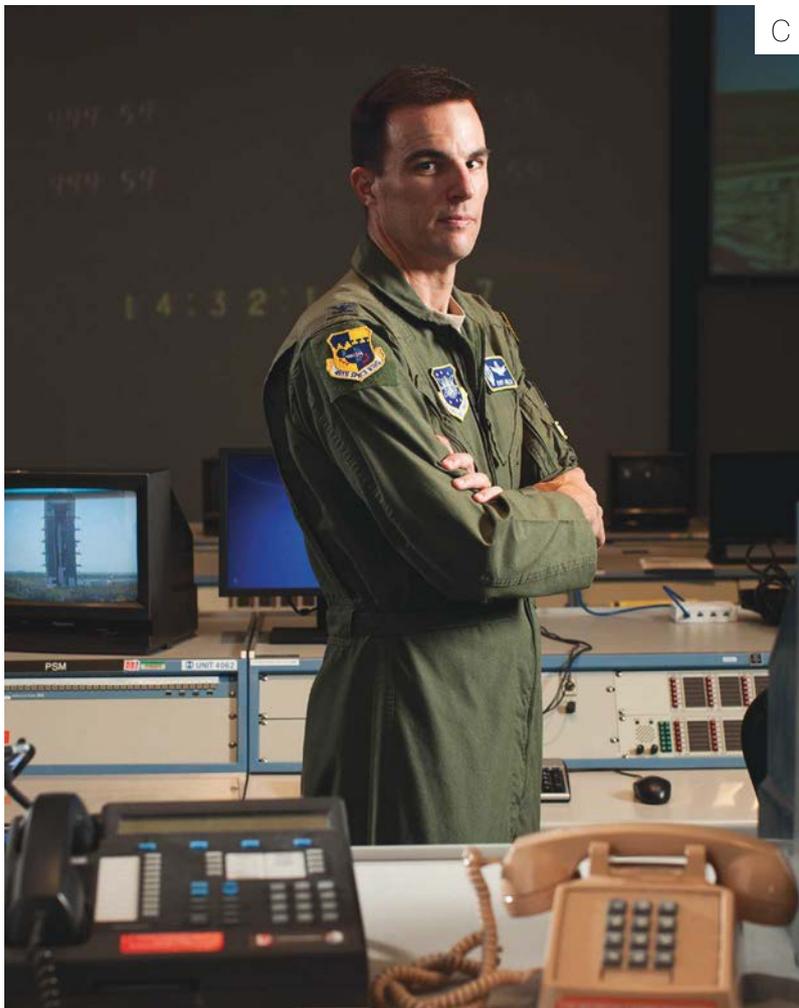
In addition, the 45th Space Wing, and Welch in particular, is responsible for the entire surrounding area's safety as it relates to launches and satellites. And it's a humongous area. Referred to as the Eastern Range, it includes 15 million square miles of air and sea space, from Florida to the coasts of Europe and Africa, to tiny Ascension Island in the South Atlantic. As Americans watch a launch on TV, or listen to the authoritative countdown before blastoff, it's Welch who gives the final "Clear to launch!" for each mission. His vigilant team operates radar, optical, and telemetry instrumentation systems to track each launch. They monitor the weather, evaluate the potential safety risks, ensure nonessential people are away from the launch area, and coordinate with the



A



B



C



D

U. S. Coast Guard and Federal Aviation Administration to clear traffic from the sea and air space along the rocket's intended flight path. The team also closely tracks the launch vehicle's flight toward orbit, and they're prepared to perform what is called in military-esque terms a "command destruct capability" – that is, blow the vessel to smithereens if it veers off course and seems headed for civilization.

Welch says he's used to explaining these responsibilities to people and differentiating between the Air Force's role and the role of NASA. In fact, he says, he regularly has to clarify who-does-what to nearby residents and even to his own family. "Quite frankly," he says, "nobody really cares that much about the range part, because it's not very sexy."

That is, until you start thinking about those launches. As Space Wing vice commander, Welch, along with the wing commander, gives final approval on up to 20 launches a year. In September 2011 he oversaw a Delta II rocket that carried NASA's tandem Gravity Recovery and Interior Laboratory (GRAIL) spacecraft to the moon. GRAIL will map the moon's gravitational field to determine the structure of the lunar interior. In January 2012 he served as launch decision authority on a Delta IV rocket that carried the Air Force's fourth Wideband Global SATCOM (WGS) satellite to geostationary orbit. WGS provides greater satellite communications capacity to U.S. military users around the world.

Welch says that with each launch he's so close to the action he can actually feel the rocket's rumble. "I'll tell you, it's pretty fascinating. It's a bit of a rush at the time, because it's not just seeing it. You can see it, hear it, and *feel* it because you get the pressure wave coming off the rocket," he says, a hint of boyish excitement in his voice. "It's pretty phenomenal to see it go."

To Worcester ...

Welch's path into the military began in Montpelier, Vt., where he grew up. He learned about the Air Force Reserve Officers Training Corps (AFROTC) at a high school career fair. "I knew I wanted to go to college, but my parents didn't have a lot of money," he says. "So the draw to the AFROTC was initially about getting school paid for."

After enlisting in AFROTC, he received a scholarship to attend WPI—a school he chose because it meshed well with his technical mindset and interest in engineering. Welch says that WPI helped refine his technical problem-solving skills, and the hands-on aspect of his project work made a significant impact. For his MQP, he worked with dynamic airfoils to find out what happens to them in a wind tunnel. In addition to actually building the structure and putting sensors on it, he also learned how to plan out and finish a large assignment—from project management to resource allocation to writing the final report—"all things you have to do as a professional engineer or as a professional military officer," he says. "WPI makes you think about science and technology in the context of the larger world."

During his time at WPI, Welch also developed a deep respect for the military. He was impressed by the professionalism of his fellow AFROTC members, and the camaraderie that came with the territory. By the time he graduated in 1990, he knew who he was and where he wanted to be. "For me, the military first was about education," he says, "but then it became a calling."

... and Beyond

His life became nomadic, as it does with so many military professionals: Colorado, California, Montana, Virginia, England, Alabama, Washington, D.C., Florida, and Iraq.

Cape Canaveral Tours Set the Record Straight

When NASA officially ended its space shuttle program last summer, the misconception spread that the entire United States space program was shutting down. That's not true. While manned NASA space shuttles will no longer be launching, the Air Force will continue to schedule launches for the Department of Defense as well as commercial enterprises. Officials at the Cape Canaveral Air Force Station say they actually expect to see an increase in launches in coming years.

To educate the public about the past and present of the space program, the 45th Space Wing Public Affairs Office offers free bus tours of Cape Canaveral Air Force Station twice a week. The tours, offered Wednesdays and Thursdays (unless affected by military commitments, federal holidays, or a scheduled launch) are open to the general public.

Highlights of the three-hour tour include the Air Force Space and History Museum; active and retired launch pads, including the launch site for Alan Shepard, the first astronaut in space; Cape Canaveral Lighthouse, the only active lighthouse on a military installation, and more. The tour works to dispel myths about the history of the space program and inform the public about the Air Force's historic and ongoing role in shuttle launches and in protecting the Eastern Range.

Tours begin at 8:30 a.m. Seating is limited and reservations are strongly encouraged. For more information, call 321-494-5945.

The heat sink nosecone, located in the Air Force Space & Missile History Center, Cape Canaveral Air Force Station

Along the way, his rank rose: second lieutenant, first lieutenant, captain, major, lieutenant colonel, and, in 2009, colonel. And with it, his education and job responsibilities grew. He earned two degrees (master of airpower art and science and master of science in organizational management), both paid for by the Air Force. He also got married and started a family, who joined him in his travels for years.

In December 2004 he was deployed to Iraq for four months, working as a strategic planner in the strategy division at the multinational force headquarters under General George Casey. He says he didn't see any direct combat, but there were frequent rocket and mortar attacks. "Fortunately, most of those attacks were brief and wildly inaccurate," he says. All but one, that is. While serving, his building was struck once, killing and wounding several people.

In just those few months, Welch saw firsthand profound changes within the country. "We were there for Iraq's first national election," he says. "It was amazing to see so many thousands of Iraqis proudly line up to cast their votes in defiance of the insurgents and terrorists who sought to intimidate them through violence."

While there, he also helped lay the initial plan for rebuilding the Iraqi Air Force. "I was fortunate to work with a terrific team of U.S. and international officers from all of the military services," he says. "I learned a lot from them."

By 2009 his children, then 16 and 13, were settled in school in Virginia, just outside of Washington, where the family owns a home. So when Welch was transferred to Florida, they decided that the best thing to do was for the family to stay put. Welch would become a "geographic bachelor" until they could be together again.

While the distance has been hard on the family, Welch's superiors say that he is, hands down, the best fit for the job as vice commander of the 45th Space Wing. Brigadier General Ed Wilson, who has worked with Welch on multiple occasions in multiple states, is effusive about his abilities.

"He's one of the smartest guys we have in the satellite space business," says Wilson, who then ticks off accolades about Welch as if reading a shopping list. "He's outgoing. He's very focused on mission success. And a real thinker, a visionary in a lot of ways. He's good at dissecting and identifying how we're doing business today and how we can do it better."

When asked how Welch manages it all, Wilson doesn't hesitate. "I know Rory would point to WPI as really setting the foundation for him. Now, he's continued to build on it, but without that foundation there'd be no way that he could do what he does today."

After rocketing forward in his career for more than two decades, Welch says he's now taking the day-to-day challenges of the 45th Space Wing in stride. When asked what's next, his tone changes. "To be quite frank, my next priority is to get back together with my family," he says, firmly.

His son, Ryan, is a member of the WPI Class of 2015 (and high school daughter Lauren is considering applying to WPI in the near future). Welch says he texts back and forth with both kids a lot, and talks on the phone with Nancy every evening.

"It's been tough for our family to live apart," he says. "My wife and kids have been amazing through it all. I've been fortunate to get home to Virginia about once a month. I also follow what they're up to via Facebook, and we Skype frequently."

The irony is that these devices — as well as the Garmin that guides him home — rely on the satellites that Welch and his division helped launch. That which keeps them apart also has the power to bring them together. □



... THEY'RE
PREPARED TO
PERFORM WHAT
IS CALLED IN
MILITARY-ESQUE
TERMS, A
"COMMAND
DESTRUCT
CAPABILITY" —
THAT IS,
BLOW THE
VESSEL TO
SMITHEREENS.

an artful experience

Forty-two years ago, the faculty approved a radical shift in the curriculum that elevated the humanities into an integral part of a WPI education.

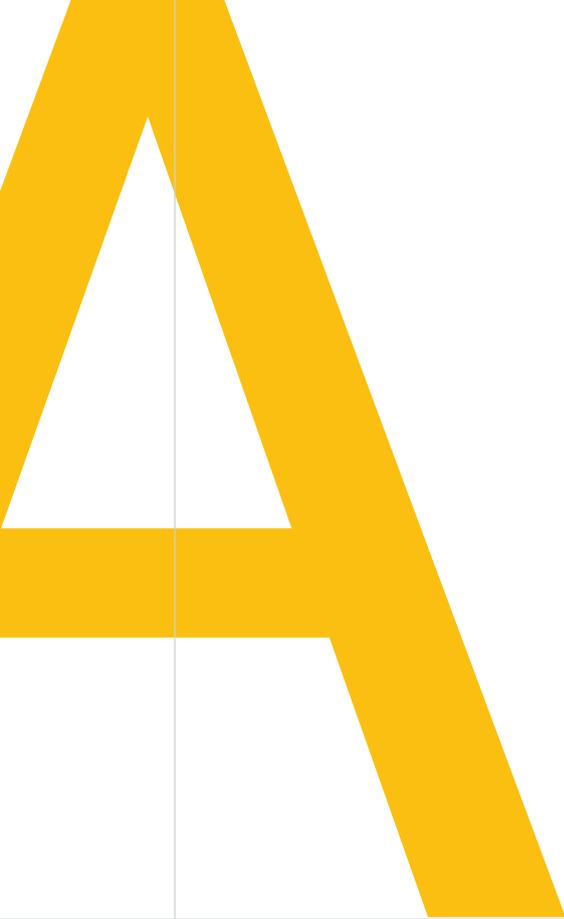
By Sharron Kahn Luttrell
Illustrations by Alison Seiffer



IT'S LATE AUGUST. A thousand WPI freshmen are twitching in their seats in Harrington Auditorium while Humanities and Arts (HUA) department chair Kristin Boudreau describes the humanities requirement.

She doesn't know for certain what's going through the students' minds, but she suspects it's not unbridled enthusiasm. After all, they didn't come to WPI to study poetry. But Boudreau is prepared. She has the info and she has the technology. Specifically, she has four professionally produced videos of WPI seniors describing how their humanities experiences broadened their minds and enhanced their technical prowess.





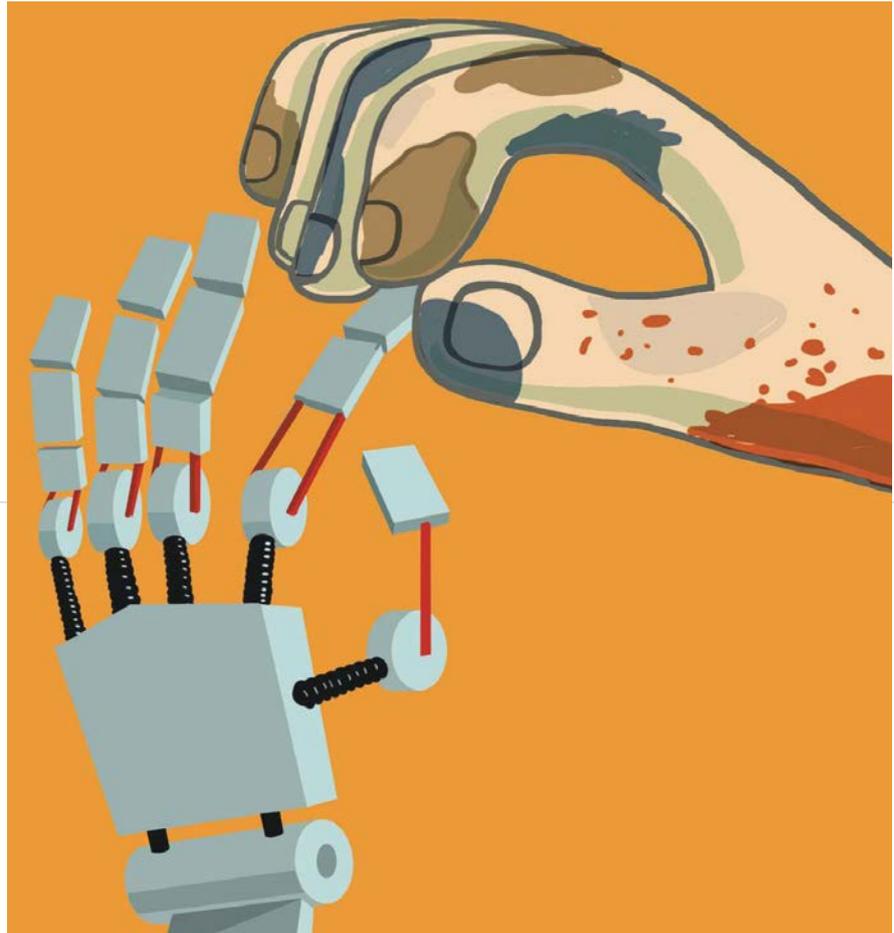
AND IF THAT ISN'T ENOUGH, she has one more trick up her sleeve—a final video featuring a silver-tongued, tuxedoed poet [it's her brother Gordy] who will demonstrate quite literally how a facility with language can inspire others toward a specific goal. It's a classic case of the medium being the message. Boudreau clicks her mouse, the video comes to life, and the poet begins:

*Let's lift up a glass
to the incoming class
— the freshmen of WPI
You're young and astute,
ambitious to boot
And your mother's so proud she could cry*

Students begin to sit up. This is different. A few verses later, everyone is transfixed by the poet on the screen:

*Yet, what's this distraction
that hampers your actions?
This pesky humanity crap?
Seminars, practicums,
what moron thought of them?
Give him a punitive slap!*

So, what is this humanities, um, requirement? Though the story goes back much



further, you could say it started four decades ago (1970, to be specific). That's when the faculty voted to adopt the WPI Plan, which set forth the goal that students should gain not only “an understanding of a sector of science and technology, but also a mature understanding of himself.” To put it plainly, all WPI students would be required to minor in the humanities.

“The original vision of usefulness and being part of a human community was always here,” says Boudreau, “so it wasn't a radical departure from that, but it was radical for an engineering school to adopt a very specific humanities focus.”

The requirement meant that WPI students sample a breadth of courses outside

their major and delve into one area of interest with an inquiry seminar or practicum. Fostering the students' ability to think critically about the world and the technology they create and manage was a key goal of the WPI Plan. The hope was that WPI students would carry this humanistic sensibility far beyond their college years.

According to Professor Lance Schachterle, it has worked.

Schachterle was among the first wave of humanities faculty to be hired the year the Plan was implemented. A few years into the job, he created the course Science and Scientists in Modern Literature, which he still teaches. He starts off each semester with a cautionary tale for future innovators: Mary

Shelley's *Frankenstein*.

"I often tell students that Victor Frankenstein would never have received his diploma from WPI because while he did a beautiful MQP, he did a terrible IQP," says Schachterle. "He never considered the moral implications before creating the creature and, in fact, he ran away from those questions."

In the four decades Schachterle has been teaching modern literature, students have applied its lessons to all sorts of sticky ethical, moral, and social situations—including developing a code of ethics for robotics engineers. Four students took on that task for their IQP, with Schachterle and Professor Charles Rich advising.

"Since robotics is a new field, and we're making products that can make decisions on their own," says IQP team member Brandon Ingram, "we felt there was a need for an ethical code."

The students modeled their work after the ethics developed by the Institute for Electrical and Electronics Engineers and the Association for Computing Machinery. They submitted their final paper in 2010. Since then, their code of ethics has been cited in several research papers.

"It's pretty gratifying to know that people have actually read our IQP," says Ingram.

SPINNING SHADOWS OR DIRTY HANDS?

Charlie Mezak was in full retreat from the humanities when he transferred to WPI in 2006 from the University of Edinburgh, where he had been a philosophy major. His epiphany came one morning when he woke up with what he calls an "intellectual hangover" resulting from a night of arguing with a visiting professor who contended that the shadow of a spinning object also spins. The utter pointlessness of the debate convinced Mezak to find a more practical outlet for his energy.

"I awoke wondering what I spent the last

12 hours of my life doing?" he remembers. "It felt so irrelevant and unimportant. I wanted to find a way to study that would actually uncover something new and useful and not just a bunch of ivory tower stuff about how we should speak about things." He left Edinburgh and began searching for a school where he could "get his hands dirty."

Mezak's father, Steve, a 1978 graduate of WPI, reminded his son that Dad's alma mater offered a project-based curriculum, which will surely get his hands dirty. It seemed just what Charlie Mezak was looking for. He enrolled as a system dynamics major. Because his prior course work in philosophy satisfied the HUA requirement, he planned to stay far away from the hu-

manities. Except he couldn't rein in his interests—assistant professor Thomas Robertson's class in U.S. environmental history caught his eye.

department building [Salisbury Labs] is located literally in the center of this campus."

CREATING A BETTER TECHNOLOGIST

With the nation's competitive edge beginning to shrink in the fields of science and technology, many question the value of teaching the humanities at the expense of a more rigorous STEM curriculum. Boudreau argues that ignoring history, literature, philosophy, languages, and the arts comes at a great cost to society; there must be room for both.

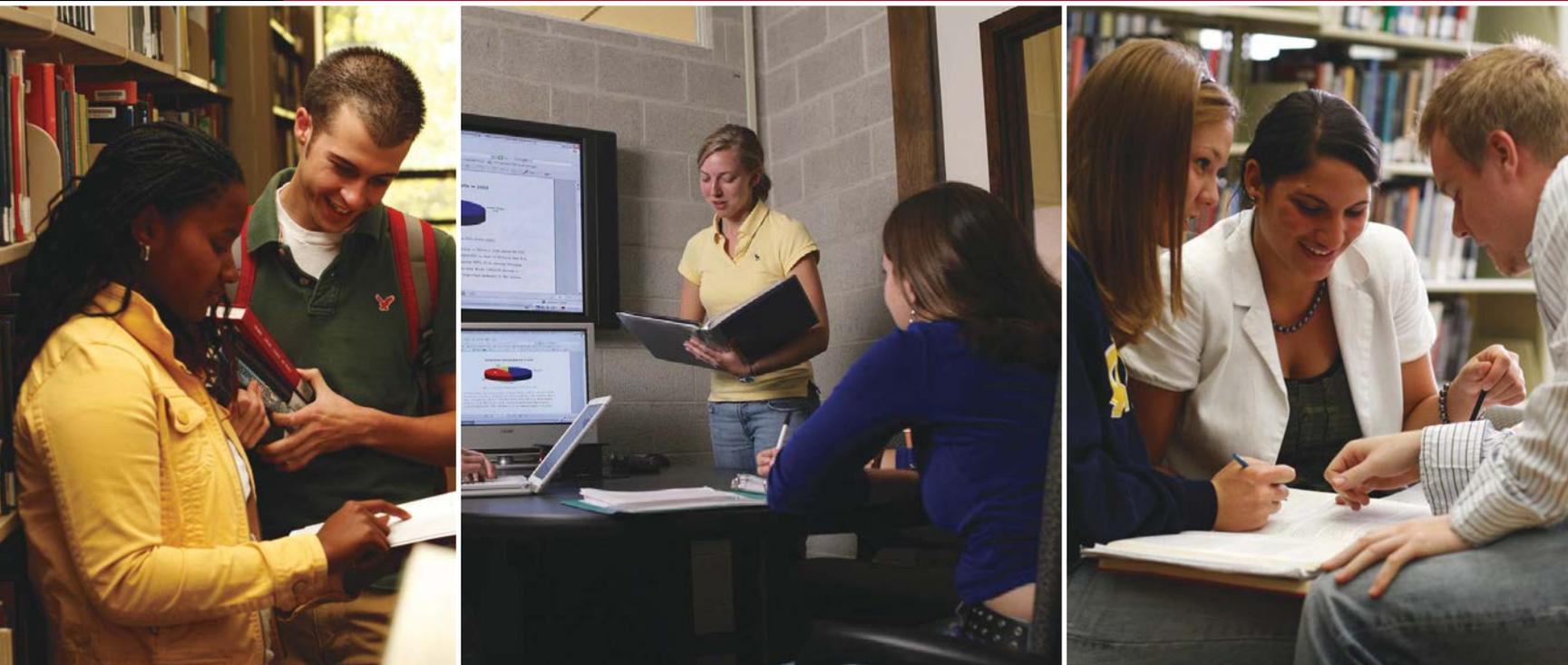
"There's a lot of hand wringing about whether the liberal arts are relevant any-

"Victor Frankenstein would never have received his diploma from WPI because while he did a beautiful MQP, he did a terrible IQP."

It didn't take long for Mezak to discover that while he wanted to immerse himself in the technical, he was most engaged when he could step back and ask what he calls the "really big questions." And WPI was the perfect place for him to do that.

"The humanities department is constantly responding to and interpreting things that are going on in science and technology," says Mezak, who graduated in 2009 with a degree in environmental history. "I don't know if it was intentional, but the

more, especially in a failing economy," she says, "but at WPI it's really woven into the fabric. There's an understanding that if you don't know something about the human context, you're probably only going to be a second-rate engineer or scientist." Mezak says he learned that lesson in Namibia, where his IQP team worked with the Desert Research Foundation to help identify water management issues in the Fish River Basin. Using waterless toilets was an obvious solution, but, as it turns out, one that was culturally unacceptable. The students quickly understood that their recommendations were worthless unless they took into account the population's cultural beliefs as



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well as societal issues, such as poverty, governance, and corruption.

“That was a wake-up call,” says Mezak. “It doesn’t matter how good your technology is. In order to actually change the world, you need to be able to understand the people who are going to use it. And studying the humanities is a great way to do that. How are you going to change the world if you don’t understand where it’s been?”

Linnea Palmer Paton ’11 fulfilled her HUA requirement in Morocco, where she filmed students at Al Akhawayn University reflecting on cultural and interfaith tolerance. Palmer Paton graduated with a double major in civil engineering and environmental policy and development. She says her one regret is that she didn’t take more classes in history and ethics. Learning lessons of the past and developing the capacity to think critically help people in her field be more effective advocates for scientific and engineering solutions to social problems, she says.

Ingram, who co-authored the robotics engineers’ code of ethics, played French horn in the WPI Concert Band and trumpet and sousaphone in the Pep Band. He focused on jazz history for his arts and humanities requirement. And while he says he honed his writing and research skills in his humanities seminar, he doesn’t expect his eventual career to require much in the way of jazz history. But to Ingram, that’s not the point.

“Does the fact that I know how to play the trumpet matter in my job? No,” he says. “But being musically oriented helps with creativity, which is an important part of my job.”

Studying the humanities also pays off in more immediate ways. Professor Susan Vick, director of WPI’s theatre program, says her students gain important self-confidence and communications skills from the program, whether they’re on stage or

At Thirty, New Voices Still Strong

TO SAY THE ORIGINAL PLAY FESTIVAL NEW VOICES had a shaky beginning is a dramatic understatement. That first year, one of the students cast his play but never got around to writing it. He and the actors salvaged the production by treating it as an improv. Original submissions were scant in the first few years, so festival founder Susan Vick, professor of drama and theatre, sprinkled the field with well-known works while encouraging her students to continue writing and submitting plays. By the sixth year, *New Voices* had firmly taken hold. This April, it celebrates its 30th anniversary and the distinction of being the nation’s longest continuously running collegiate new and original play festival.

Vick didn’t set out to establish a drama festival when she came to WPI in 1981 to direct its theater program. *New Voices* evolved from a student’s request to fulfill his Sufficiency (now called the HUA requirement) by writing a play. Vick was receptive, but told the student she expected him to stage a reading of it as well.

“It was a cast of, like, three and we had an audience of three,” she says with a smile. But word soon got out and Vick says she was “inundated” with students who wanted to write and act as part of their Humanities requirement. She was charged with staging two productions each year, so she decided to devote the fall performance to a well-known play, and save D-Term for the kind of serendipity and experimentation that student-penned and other original works exemplify. *New Voices* was born.

Each year *New Voices* attracts between 50 and 100 submissions from the WPI community, including students, faculty, staff, alumni, family, and friends. In the past, judges would select 10–20 works to produce for the festival. In 2007 the decision was made to choose five to nine plays and repeat the performances throughout the festival week. The only restriction is that scripts be original, unpublished works, be producible on stage, and not require more than 20 percent of the festival time and resources. Entries include monologues, short plays, multi-act plays, and musicals.

In February, *New Voices* kicked off with a look back at the last 29 years. *Hindsight, Three Decades in Two Acts: Voices and Visions from 29 New Voices* featured eight representative selections from the more than 390 *New Voices* productions over the years. A lot of work went into the retrospective, but the past isn’t a place where Vick lingers.

“I don’t look back,” she says. “I don’t dare. I don’t want to jinx this amazing journey. I actually roll up my sleeves for the work ahead and consider what on earth these people will create to go on stage next. And I can’t wait.”

New Voices 30 ran four nights in April at the Little Theatre. —SKL

Boudreau argues that ignoring history, literature, and the arts comes at a great cost to society.



behind the scenes. They know how to command attention, communicate ideas, and show up on time.

"You can't go out in front of an audience on opening night and say, 'I'm sorry we need an extension on this.' The show opens whether you're ready or not," she says, "and our students benefit from constantly working under those hard deadlines"

ALL ROADS LEAD TO SALISBURY LABORATORIES

Those unfamiliar with WPI may not envy the Department of Humanities and Arts, surrounded as it is by technical disciplines. But Boudreau and her colleagues say the connections between the liberal arts and the STEM faculty run deep—and they travel in both directions. WPI faculty members borrow heavily from one another to make their lessons resonant and relevant. And it's the students who benefit most from the cross-pollination.

Back in Harrington Auditorium, the video is winding down. Soon, the students will head over to the campus center to meet with liberal arts faculty and begin to make decisions about which courses to take. And in case they haven't figured it out, the poet on the screen makes it quite clear that while they may have come to WPI for a technical education, they will be leaving in four years with a whole lot more:

*When you nurture what's human
You build a communion
And that's what makes us unique.*

*So forgive us for raising
Such high expectations
I know it's a tax on your freedom
But at WPI
Our standards are high
And we rather expect you'll exceed them. □*



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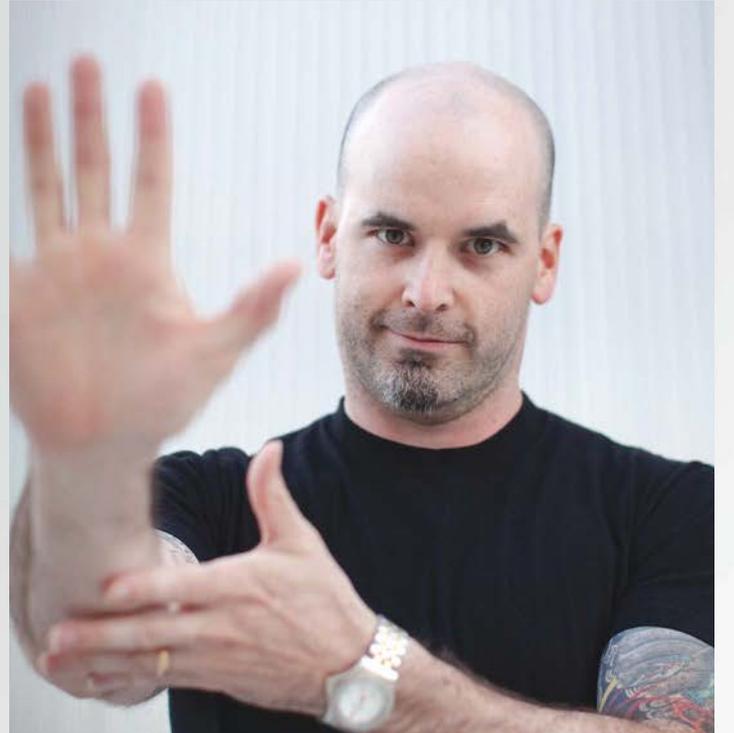
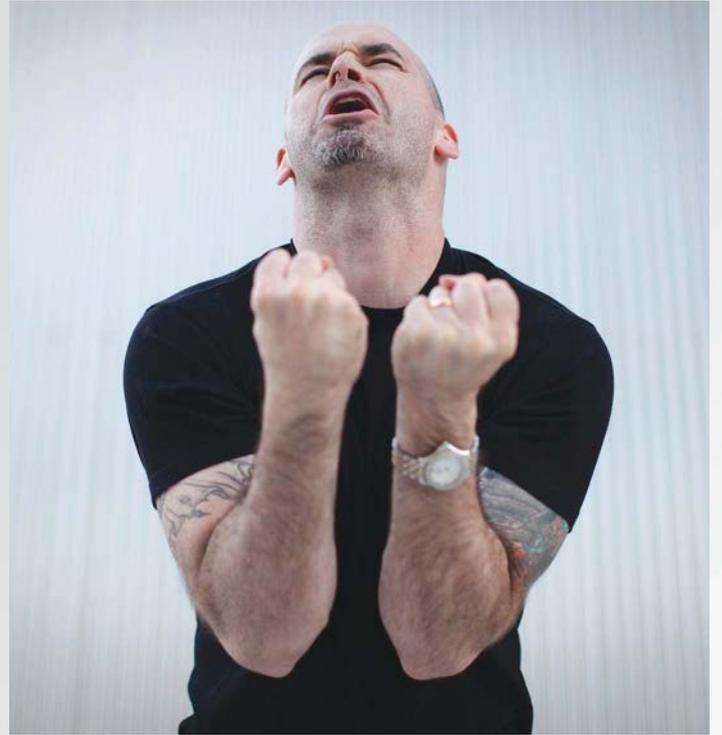
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Life Rhymes

by leticia perez

Improv master
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Jesse Parent '96
acts out

photography by kathleen dooher



Y

ou wouldn't expect to hear the words improv and mathematics in the same sentence (unless an audience member shouts them in order to challenge a comedy troupe).

But it turns out that the two disciplines have something in common. They're both anchored by formulas and patterns, which, once mastered, can guide you safely into new territories. Math might help you navigate through engineering or computer science; improv could launch you into slam poetry.

Which is what happened to Jesse Parent '96, improv master and second-place winner of the prestigious Individual World Poetry Slam (IWPS) competition in 2010, and again 2011.

"Improv is about pattern recognition and understanding how things are supposed to come back to you," explains Parent in a calm voice that belies his commanding stage presence. "You know where you're going because you've seen this pattern before."

Since earning his degree from WPI, Parent's life looks a bit like improv: grounded in the formulaic (marriage, two kids, technology career) with side trips into the exotic and creative (Ultimate Fighting, Jiu Jitsu, improv, slam poetry, tattoo artistry).





“Improv is like playing a sport in that sometimes you run plays. You have no idea how that play will come out, but you hope it will be successful.”



“WPI is not just about getting your math done. You have to go out and make yourself well-rounded. And that means getting out of your comfort zone.”

In many ways, WPI was the perfect incubator for Parent’s wide-ranging interests. While studying computer science, he competed on the wrestling and rugby teams, acted in WPI’s main theatre group, Masque, and performed with Chain Link Fence, the university’s improv group. He also was inducted into the theatrical honor society Alpha Psi Omega and earned his tattooing license while an undergrad.

“What WPI really gave me was the knowledge that the humanities do matter. You can be a nerdy guy and still have art in your life,” he says. “WPI is not just about getting your math done. You have to go out and make yourself well-rounded. And that means getting out of your comfort zone.”

In addition to an excellent education, one of the best things to come out of his WPI experience, says Parent, was his marriage. He met his wife, Julia Moench, when they were undergrads. She later transferred to the University of Utah to study art. When they reconnected a few years later, Parent says the light went on immediately. “I was sitting there with my best friend in the whole world, which is Julia, and that’s when it hit me. I should just ask her to marry me.” Which he did, and today he and Julia are the proud parents of three kids, Alec 12, Jasmine 10, and Kai 3.

The couple moved to Salt Lake City 15 years ago when Parent landed a job writing software. Now he’s a director at Sorenson Communications, a company that makes video phones and provides American Sign Language translation services and live captioning for the deaf and hearing-impaired. “It’s a pretty neat position,” he says. “We create video phones and give them away to our customers who use them to talk to each other using sign language, which is a language quite different from English.” Sorenson Communications’ efforts are funded by the government, so the company is able to provide these services at no charge to their customers. Parent jokes, “It’s almost like altruism, except we get paid a lot of money.”

The Playbook

Parent dabbled with improv (which he calls “mental athletics”) while a student, but says he began to really take it seriously when Julia was pregnant with their first child and he needed an activity to replace Ultimate Fighting. A perpetual class clown, he took a free workshop with Knock Your Socks Off, a Salt Lake City improv group, and soon was performing with the group for pay. He traveled to the Chicago Improv Festival in 2002, an eye-opening experience that led to his full immersion in the craft. When the group dissolved, Parent formed a duo with the group’s director, Joseph Kyle Rogan.

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Make WPI a Part of Your Plan

They call their improv project “JoKyR and Jesster” after their nicknames. The pair are regularly invited to improv festivals and asked to teach, so that what Parent initially took on as an expensive hobby is now a self-supporting part of his life.

Parent describes the short-form improv he performs as “safe for all audiences,” but his performances at improv festivals can be R-rated. “Festivals can be very risqué, very ribald, very honest,” says Parent, who points out that improv is not always comedy, especially long-form, which is more theatrical and less games-based than short-form. In long-form, subject matter is often drawn from serious personal events and experiences such as illnesses and marital strife. “We bring our whole lives onstage,” he says.

As to how it works, Parent points to the structure found in improv patterns. “The television sitcom *Seinfeld* is based on an improvisational structure called the Harald. It has three distinct story lines that eventually blend together. Each story line has a different beat. The stories progress, and either they tie together or they do not,” he explains. “There’s a lot of math to it. The pattern has beats like music and the form sometimes dictates recurring themes or when to tie stories together.”

In his workshops, Parent teaches improv techniques that allow performers to break down audience suggestions and be funny under pressure. “Improv is like playing a sport in that sometimes you run plays. You have no idea how that play will come out, but you hope it will be successful. There’s a play-book, but like in sports, you don’t always know what play the other performers might call.” Among the tools a performer might use are puns, synonyms, celebrities, and physical traits. And, of course, anything related to audience suggestion. “There are types of deconstructions you can use to train your brain to create good fodder for scene work.”

Hooked

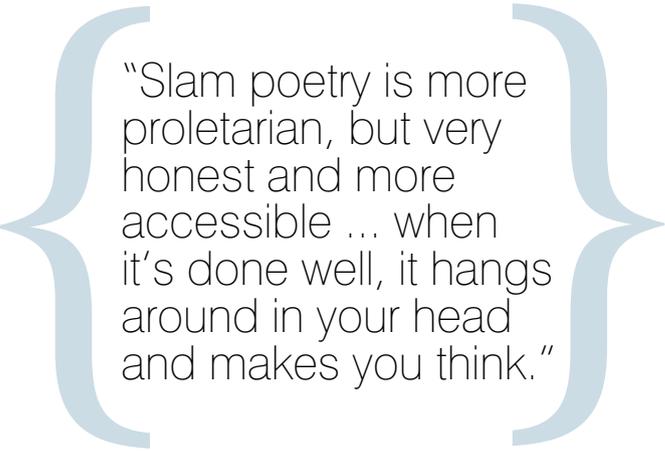
Parent’s passion for improv took a dramatic turn when he stumbled upon the Russell Simmons show *Def Poetry* on cable television. He was inspired, particularly by the group Floetry, who performed poetry to a cappella music. Parent began to experiment, eventually combining a cappella, improvised scene work, and poetry to create a new improv form, which he dubbed “The Hook.”

Interest in his new form led to more invitations to perform and teach, and Parent was among only a handful of innovators to be named an artistic associate of the Chicago Improv Festival in 2006 by its director, Jonathan Pitts.

“We asked Jesse to become a CIF artistic associate because of his passion about improv and the arts,” Pitts recalls. “He’s fiercely intelligent, very talented, and as good a man off-stage as he is onstage.”

Parent considered isolating the improvised poetry pieces of “The Hook” and investigated taking his performances in a different direction – the poetry slam. For the uninitiated, slam poets perform their work before an audience in monologue-type dramatic form. Competitors are evaluated and awarded points based on the impact of the poetry and the artfulness of the performance. Judging is done by audience members selected randomly just prior to the competition. A competitive poetry slam also has a touch of old-time religion to it, as audience members respond in mid-poem with shouts of approval or rapid-fire finger snaps, the latter serving as a sort of micro-applause.

Likewise, slam poetry competitions bring together an interesting mix of American cultures. From hip hoppers to academics to suburban hipsters to rappers, audiences are significantly more diverse than the typical poetry reading. The poems, too, are different. The medium is live performance,



“Slam poetry is more proletarian, but very honest and more accessible ... when it’s done well, it hangs around in your head and makes you think.”

so the poems rely more on imagery and verbalization. But, when it comes to themes and topics, slam poetry and traditional book-bound poetry have much in common.

“Slam poetry is probably more proletarian, but very honest. It’s more accessible than traditional poetry,” says Parent, “But like any good poem, when it’s done well, it hangs around in your head and makes you think.”

That ability to be thought-provoking while taking the audience on an emotional journey is Parent’s real reward. He recognized this at the 2010 IWPS. He had just finished what he considered an imperfect performance, when he was pulled from his self-recriminations by a tap on his shoulder. It was Taylor Mali, a legend in poetry slam circles, and someone Parent hoped to meet one day. Mali was impressed by Parent’s performance and told him there was greatness in what he’d just heard and seen.

“I’d actually placed second that day,” Parent says with a chuckle. “But it felt like I’d won.”

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news from HIGGINS HOUSE



LANDING ATLANTIS WITH WPI ALUMNI

Alumni and friends were among the special guests at the Franklin Institute in Philadelphia on October 4 to hear Scott Ferguson, NASA astronaut and commander of the final shuttle mission. Ferguson discussed the end of the shuttle program with the flight of Atlantis and the future of the U.S. space program. Derrick Pitts, chief astronomer at the Franklin Institute, moderated the discussion. Selçuk Güçeri, WPI's Bernard M. Gordon Dean of Engineering, was instrumental in bringing this event to WPI alumni.



▶1 Trustees chair Steve Rubin '74, left, and Selçuk Güçeri, WPI's Bernard M. Gordon Dean of Engineering, presented an award commemorating WPI alumnus Robert Goddard to Scott Ferguson, NASA astronaut and commander of the final shuttle mission.

▶2 Alumni enjoyed a reception with special guests at the Franklin Institute.

▶3 Alumni explore the future of the U.S. space program.

BOSTON CHAPTER SPOTLIGHTS FACULTY AND ALUMNI EXPERTS

On November 9 the Boston Alumni Chapter welcomed approximately 100 alumni and friends to a special event at the Charles River Museum of Industry & Innovation in Waltham, Mass. The evening reception featured Craig Wills, computer science professor and department head, who gave a talk about Internet security. His research has demonstrated that more than half a billion social network users are at risk of having their personal information "leaked" to third-party sites that track their web browsing habits. Wills is a nationally recognized expert on Internet privacy and was part of a Federal Trade Commission Panel on this issue.

The well-attended event in Waltham was part of an effort by the Boston Alumni Chapter to reinvigorate its programming with events in unusual locations that showcase WPI faculty, alumni, and students and their work on a topical subject. Another event, held at the Larz Anderson Auto Museum in Brookline, Mass., featured alumni and faculty in a panel discussion on alternative energy. These events are offered in addition to the chapter's popular social events and recreational activities.



▶1 Craig Wills, computer science professor and department head, captivated Boston area alumni with a talk about Internet security

▶2 Alumni turned out in large numbers at the Boston Chapter event

WPI Mourns the Loss of Alumni Friends

The WPI community was saddened by the death of former football team captain **Harold A. Melden Jr. '49**, a founding member of the Poly Club, on July 27, 2011. Known as "Harry The Horse," he was inducted into the Athletic Hall of Fame in 1987 for his leadership on and off the field. He was also a member of Sigma Phi Epsilon and Skull. Melden returned to WPI to earn a certificate from the School of Industrial Management in 1965 and retired from Commonwealth Gas as a vice president in 1985. Survivors include his wife, June, and three children. • Another Poly Club supporter, **Richard C. Lawton '46** of Pittsford, N.Y., died Feb. 11, 2012. Predeceased by his first wife, Virginia, his wife, Eleanor, and a son, he leaves two sons, a stepdaughter, and a stepson. Lawton was co-founder of Buell Automatics, a contract machining company. He belonged to

Phi Sigma Kappa. • **Howard J. Dworkin '55** died Jan. 27, 2012. After serving in the U.S. Navy as director of nuclear medicine at Bethesda Naval Hospital, he relocated to metro Detroit, where he helped start Beaumont Hospital's Nuclear Medicine Department. In conjunction with his brothers, Larry Dworkin '58 and Eli Dworkin '59, he established the Dworkin Family Scholarship at WPI. He is survived by his wife, Gina Gora, and five children. • **Howard G. Sachs '65**, former provost at the University of Maine at Farmington, died April 5, 2011. After leaving UMF in 1987, he joined Penn State Harrisburg as associate dean of research and graduate studies, a position he held until 2002. Sachs later returned to the classroom as a professor of biology and engineering law. Survivors include his wife, Martha, and two children. He belonged to Alpha Epsilon Phi.

THE VIEW FROM THE HILL

From the Alumni Association President

DEAR ALUMNI AND FRIENDS,

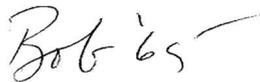
I write to you today with Commencement around the corner and the WPI community bustling with activity. Students are particularly busy wrapping up their project work. WPI's project-enriched curriculum continues to be a source of pride for our worldwide alumni community. This was especially apparent at our Project Center events in Worcester, Silicon Valley, Hong Kong, and Bangkok this spring, featuring the remarkable work of WPI students. The positive feedback from these events underscores how much alumni enjoy hearing from our fabulous students.

Another area of focus for the Association and the Office of Alumni Relations has been invigorating alumni networks at corporate sites. Typically at these events, there are many alumni who have worked together for years and are amazed to learn that they share the WPI experience. I want to thank Bill Alexander '81, John Kelly '82, Lynne Handanyan '86, and all our alumni at Pfizer for hosting one of our recent interactive corporate events at their Groton, Conn., facility. Pfizer has been and continues to be a great WPI partner. Microsoft welcomed Dean Karen Oates and Professor Janice Gobert at a corporate alumni event at its Redmond, Wash., campus. Many thanks to recent Washburn Award recipient and Microsoft senior manager Megan Wallent '91 for hosting the event.

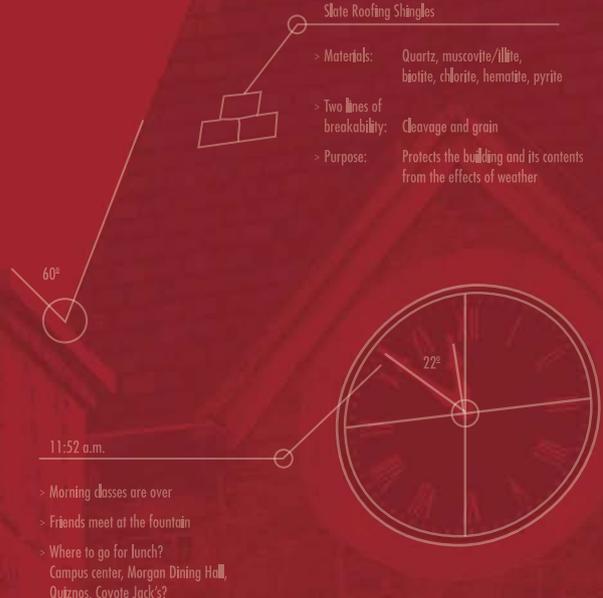
This spring offered many exciting engagement opportunities. On April 10, Boston-area alumni gathered at the Larz Anderson Automotive Museum in Brookline, Mass., for an interesting forum on the future of the automobile. Community Service Day on April 21 was a great success in Philadelphia and in Worcester, where it was followed by the Alumni Association's Annual Meeting.

The event not to be missed was the opening of the new Sports and Recreation Center and the official launch of *if...The Campaign to Advance WPI* on May 31. Exhibits, demonstrations, performances, and more were featured at this very special event, held throughout the Center on May 31. Following the campaign launch event, we enjoyed a wonderful Alumni & Reunion Weekend on campus.

All the best,



Bob Cahill '65



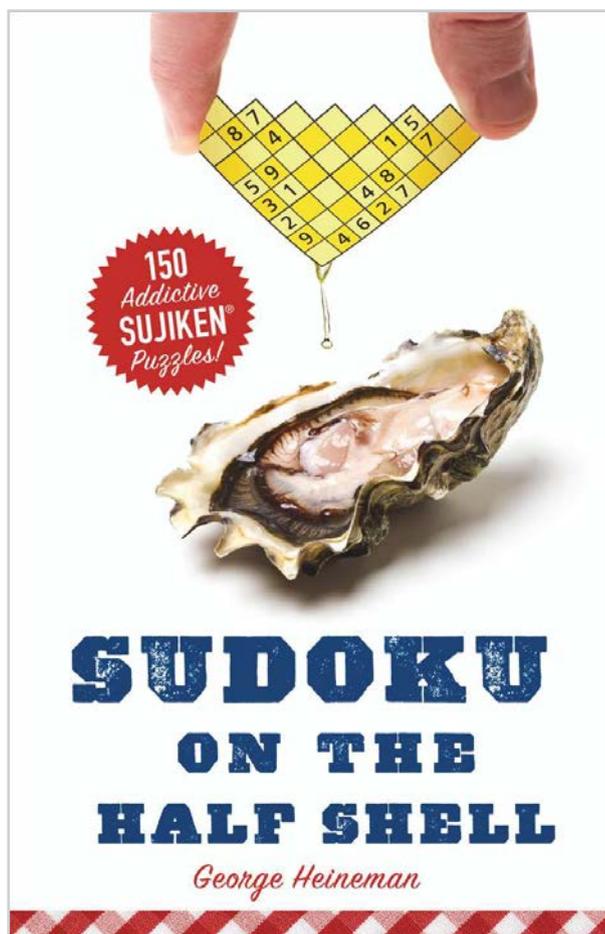
Now seeking innovators.

Help us find aspiring innovators in your area. Our Alumni Ambassador Program not only will bring back fond memories of your WPI experience, it will make an impact on the future generation. Become an admissions volunteer today.

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What happens when you slice a Sudoku in half along the diagonal? You get Sudoku on the Half Shell and hours of challenging fun, as the remaining 45-cell triangle requires you to think outside the usual “square” in one of the coolest variants of this popular puzzle.

Written by WPI professor George Heineman, *Sudoku on the Half Shell* offers 150 puzzles, with 5 levels of difficulty, providing you so much fun, you’ll be hungry for a second helping of Sudoku on the Half Shell!

CAREER CORNER

Calibrate 01609

He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may cast.

Some 350 years before the founding fathers of WPI recognized the integration of theory and practice as the driving philosophy of our university, Leonardo da Vinci voiced this timely and critical message. We each may be incredibly talented, replete with our matchless, individual fingerprint of potential; but without using the tools available to explore that potential—to set a course, cast off, and journey—who knows what possibilities exist for us? How timeless da Vinci’s recognition that doing without thinking, that boarding without the use of available navigational tools, is not only a conceivable loss, but an unnecessary one.

Whether a graduate of many years or May, 2012, even the most talented WPI alumni can encounter a career issue that will make them feel like a sailor whose ship is suddenly just sitting there. All of that potential, all that knowledge. The rudder seems detached, not quite as functional as it once was, or could be. Sometimes the rudder is revealed as actually boring now or outgrown, no longer fitting the needs of the ship anymore. And then the compass feels stuck, or demagnetized. All you know is that you want to sail (or at least need to), but aren’t quite sure about assessing the equipment, taking aim, setting the course, and re-embarking.

Finding and then *using* the navigational tools to sustain ourselves professionally, to nurture the continued growth of our career and sense of professional development, sometimes seems the most daunting challenge. But, in “practice,” we at the CDC provide state-of-the-art tools, resources, and consultations—a prism of sorts—to help you think through the issues of moving forward with the strong rudder and fully calibrated compass needed to “cast” the talents of your potential, your capabilities, your “fingerprint” on a satisfying journey. Just email cdcalumni@wpi.edu or call to arrange an in-person or phone appointment at 508-831-5260. Calibrate 01609.

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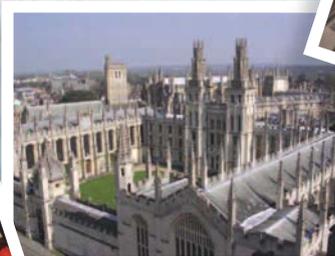
Italy

Nov. 5-17, 2012

Venice Project Center

Nov. 14

The WPI Alumni Association is proud to announce the 2012 travel program. Trips include an exclusive opportunity to visit the WPI Project Center in each location. Best of all – 10 percent of the total cost will be donated to the Alumni Association Scholarship Fund for undergraduates. We invite you to choose from these destinations for a once-in-a-lifetime travel experience!



More information is available online at alumniconnect.wpi.edu. Check this web page and watch your email for details about special information sessions about each trip. Questions? Contact the Office of Alumni Relations at 508-831-5600 or alumni-office@wpi.edu.

Of Campus and Community

Foundations Strengthen
WPI's Global Studies Program
and Project Centers

WPI RECENTLY RECEIVED GRANTS TOTALING \$1.3 million from the Stoddard Charitable Trust, Fletcher Foundation, and Hoche-Scofield Foundation to restore the historic campus building that houses WPI's Interdisciplinary and Global Studies Program (IGSD), and to support the work of the university's Worcester Community Project Center. A \$500,000 gift from the Fletcher Foundation renovated on-campus headquarters for the university's distinctive IGSD and its network of project centers around the world. A \$750,000 gift from the Stoddard Charitable Trust supports the renovations and helps establish an endowment, also supported by a \$20,000 grant from the Hoche-Scofield Foundation, to leverage the work of the Worcester Community Project Center for greater impact on the city and its community.

"These splendid gifts support WPI's stewardship of a group of buildings of historical importance to the Worcester community and create renewed enthusiasm around WPI's project-based curriculum, which empowers student teams to use their scientific and technological knowledge to help develop solutions to real societal issues around the globe," says President Berkey. "The Fletcher Foundation, Stoddard Charitable Trust, and Hoche-Scofield Foundation are longtime supporters of WPI's project-enriched curriculum, and we are grateful for their continuing confidence in our distinctive approach to engineering and science education."

Constructed in 1902, the IGSD building, known on campus as the Project Center, was originally named the Iron Foundry. Designed to accommodate both instructional and com-



mercial needs, the facility was a model for its time. Its large windows were a prominent feature on the WPI campus and contributed to the university's atmosphere of practical learning. In the 1950s, the foundry was closed and converted to office space. At that time, its signature two-story, arched, multipane windows were removed and the openings partially bricked over. Smaller rectangular windows were installed, dramatically altering the appearance of the building. The net result of the compromised architecture was inefficient use of energy and natural light.

As the IGSD administrative hub, the Project Center is heavily trafficked by students and faculty who use the space to prepare for two highly successful educational innovations: the Interactive Qualifying Project (IQP), and

the Global Perspective Program. A unique interdisciplinary requirement, the IQP brings together students from across the campus to research and address challenges affecting people and communities at home and abroad. Through the Global Perspective Program and the IQP, WPI students address local issues, develop an understanding of other cultures, and see how their lives and work might play out on a global stage.

The Project Center renovations include replacing the building's windows with high-efficiency windows that feature sightlines resembling the original steel windows. These new windows will result in improved airflow and dramatically increased natural lighting in the interior of the building. Other minor façade improvements to the exterior include

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WPI's online community for alumni, gives you access to:

- A searchable alumni directory
- Enhanced networking opportunities based on your profession, interests, geographic area, or WPI affiliation
- Up-to-the-minute class notes
- Quick and easy ways to register for events and maintain your contact information



Register at alumniconnect.wpi.edu and make sure we have your current email and mailing addresses.



There are many opportunities to stay involved with your alma mater — from your local alumni chapter and regional events, to career development offerings, mentoring opportunities, and a range of affinity programs. Learn more at wpi.edu/alumni.

masonry repairs, the replacement of entrance canopies, new doors, and a general reinvigoration of the landscape. These improvements have restored the Iron Foundry to a facsimile of its original appearance.

Endowment Focuses on Community Issues

Closer to home, many WPI students complete their IQP through the Worcester Community Project Center (WCPC), which now will be enhanced by a new endowed fund. Since its establishment in 2000, the WCPC has been a critical resource for greater Worcester organizations. Student teams, supported by faculty, have made remarkable contributions to a breadth of state and local government offices, NGOs, and community-based organizations through a variety of projects, including alternative energy, land-use planning, brownfields assessment, curriculum development, green building design, and online community databases. The Worcester philanthropic community invested in the founding of the WCPC because it recognized the center's potential as a unique resource for the community. In the last decade, this investment has resulted in 65 projects, with 12,000 faculty hours and 75,000 student hours contributed to organizations across the greater Worcester community.

The new endowment will further leverage the work of student teams and their faculty advisors on projects of consequence to the Worcester Community by providing the resources to coordinate multiple sponsors and student project teams; identify more community needs and define potential projects; analyze data; and plan and implement solutions. These important components are currently hindered by the time project teams are able to spend on each project and their capacity to undertake new tasks, as well as limitations in sponsor capacity to work with the student teams and to implement solutions after projects are completed.

"This endowment allows us to provide even greater focus on community issues," says



WPI TRUSTEE WARNER FLETCHER AND HIS WIFE, MARY

Rick Vaz, dean of WPI's Interdisciplinary and Global Studies Division. "With a mandate to address challenges identified by the community, while integrating the work of our student project teams into effective strategies, the Worcester Community Project Center will play an increasingly important role in the growth and well-being of our region. We extend our deepest thanks to the Stoddard Charitable Trust and Hoche-Scofield Foundation for their continuing support of the Worcester Community Project Center and the remarkable work of our students and faculty in our community."

The Fletcher Foundation was established by the family of Warner Fletcher, a WPI trustee and longtime friend of WPI. The Stoddard Charitable Trust was founded by Fletcher's grandfather, Harry G. Stoddard. Fletcher is a trustee of both charitable organizations, as well as the Hoche-Scofield Foundation. Through their personal philanthropy at WPI,

Fletcher and his wife, Mary, are members of WPI's 1865 Society, which recognizes the university's philanthropic leaders. Fletcher is a particular advocate of WPI's Worcester Community Project Center and the role of WPI and its students and faculty in advancing the Worcester community.

"The work of the Worcester Community Project Center, together with all that WPI is doing in its development of Gateway Park, the university's PILOT agreement with the City, the further contributions to the restoration of Institute Park, and the extensive engagement with the Worcester Public Schools have contributed immensely in recent years to an enhanced appreciation of WPI in the city," Fletcher said. "The Fletcher Foundation, Stoddard Charitable Trust, and Hoche-Scofield Foundation are pleased to be able to support WPI in these important endeavors that are making a difference for so many in our community."

George Bingham '40 rode by the campus on June 3, 2008, right after celebrating his 89th birthday in Lunenburg with over 40 relatives. "We were on our way to Mark Twain's house in Hartford. The day before, we visited Gloucester and Rockport, from the days of my youth. I plan to come back for my 95th in 2014, but my doctor won't guarantee that far ahead." George is still busy with the Global Warming Realists and making progress in defeating the hoax of Anthropogenic Global Warming.

Esther and **Howard Freeman '40** celebrated their 70th wedding anniversary last June and are living in their home of the past 50 years, in Worcester.

Bill Walsh '43 is still working at getting his start-up, VGA Nozzle Co., going and says he has no intention of retiring. "As I've had three new patents in the past three years, it looks more promising than ever. One relates to retrofitting of industrial power plants for flue gas cleaning; another is for a method and injection nozzle for joint combustion of biomass and fossil fuels. The third, for a method and apparatus for solar greenhouse production and harvesting of micro-algae, has just been allowed and is not yet issued. I'm seeking licensees to whom I can transfer my variable gas atomization technology." Bill spends his winters in Florida and summers in Connecticut and New Hampshire.

"Good news first," writes Marion Lebourveau, wife of **John Lebourveau '44**. "We have two great-grandchildren. Bad news: John now lives in a nursing home due to Alzheimer's disease. However, he is remarkably good natured, still plays his cello, and participates in choral groups. We moved to a retirement community 16 years ago and have never looked back. It is excellent, and we are grateful for the care he receives."

Ernie Kretzmer '45 writes, "Still hangin' in there in sunny Sarasota at age 87, enjoying our beautiful beaches and countless cultural offerings, including our fabulous opera company, ballet, symphony orchestra, theaters, and more. Unfortunately, I can't attend class reunions and other events at Tech because of my wife's health. But I do follow with interest what's going on up on the Hill. Greetings to all classmates!"

▶ **George Comstock '46** writes, "My wife, Anne Hillman, and I took a long-dreamed-of trip to Rwanda and Tanzania, consorting with a family of Dianne Fossey's gorillas, and learning plenty about genocide. This photo by Anne shows a leopard coming down out of a tree where he'd stashed his dinner. I organized an all-electric "Flight Night" for the town of Portola Valley, Calif., and I'm planning a "second annual" for June. I'm honing my skills in flying these fascinating model



planes and helicopters. I also have a part in a local production of "Our Town"—in my 89th year! The sad thing about being the age I am is the increasing tempo of loss of old friends, like classmate **Tom Foley** and **Gordon Gurney '41**. But that's one aspect of life, isn't it? Anne and I are involved in an Inter-faith Book Club, which includes Hebrew, Muslim, Christian, and Atheist members, leading to intriguing philosophical churning. If you ask what my guiding principles are these days, aside from trying to stay healthy, it would be "Keep involved, learn to love better, and stay in contact with friends old and new!"

John Knibb '46 writes, "Still active at 85; married 61 years. I've been an ordained minister for 60 years and am still preaching. Last July I attended the General Assembly of the Christian Church (Disciples of Christ) in Nashville."

Frederick Kull '46 writes, "I am living alone now in my home of over 35 years, looking to sell and move to a seniors facility where I will have friends and bus service. My wife of 61 years died two years ago. My wonderful WPI education served me well through my working years. That is how I ended up in the Greater Atlanta area working for the Southern Railway System, which became Norfolk & Southern Railway. Before that I was in the space program at Patrick AFB in Florida. My three children all live within 50 miles of me. I am sorry that I have missed the last few reunions, with the chance to see some of my classmates. To all of them I send my very best wishes."

Richard Lawton '46 reports that he is now a widower, and retired. "My son is running my company, Snell Auto, which I started in 1966."

Allen Mintz '48 says, "I am busy in the winter forcing daffodils—I have one pot with five blossoms right now. I keep in shape with daily exercises, walking at 5:30 a.m., then some gardening in the condo's beds, and in Reading, where a friend and I have about 50 tomato plants that we've grown from seed. I also grow rhubarb, zucchinis, squash, and peppers. I'm enjoying the children and grandchildren—and hope so see great-grandchildren someday."

Hal Gruen '49 '65 SIM writes, "I am thoroughly enjoying my retirement with newfound friend Annette, playing golf, traveling, and doing lots of volunteer work."

Jeremiah O'Neil '50 says, "Still alive and breathing!" He lives in Scotch Plains, N.J., with his wife, Vivian.

Victor Chun '51 has published *American PT Boats in World War II, Volume II*. He lives in Los Angeles with his wife, Susan.

Jack Reid '51 writes, "Bev and I have been in a continuing care facility in Juno Beach, Fla., for the past four years. Don't know how we had time to go to work in our previous life. Always something going on around here. Just came back from a seven-day cruise to the western Caribbean."

George Sanderson '52 lives in Staatsburg, N.Y. "Still moving, waiting for the Higgs," he says.

Ed Diamond '53 retired in 1977 from a career that included "working, sometimes in a small way, on every major space project from Mercury to the Space Shuttle as part of the cast of thousands. After leaving Aerospace, I managed the design and construction of some very sophisticated laboratories for the USDA. Retirement is great!"

Harriet and **David Hathaway '53** enjoyed a winter respite with Boston-based Overseas Adventure Travel along with 14 others to learn about the Mayas and their ruins in El Salvador, Honduras, Guatemala, and Belize. "There were three PhDs and two medical docs with us. Probably the closest harmony of all the many groups we have been with and truly the best guide ever, a young Mayan who learned English on his own—and it was perfect."

Michael Hoechstetter '53 has completed his seventh year as an adjunct instructor in chemistry at Columbus State Community College in Ohio.

Milton Meckler '54 published "A Generalized Exergy-Based Framework for Sustainable Design of IT Systems" in the *International Journal of Exergy*, in collaboration with Amp Shah, senior research scientist at Hewlett-Packard Laboratories.

Walter Stewart '54 enjoys the weather in Venice, Fla., where he lives with his wife, Harriet.

Henry Strage '54 writes, "When my publisher persuaded me that I should reconstruct my planned biography of Dr. Chaim Weizmann into a two-act historical drama and I agreed, I was totally unprepared for having to devote the next three years of my life to this ambitious literary venture. The final play was recently read in London by a distinguished professional cast in front of a paying audience and received favorable reviews. The next hurdle is to find some investors who would be prepared to fund a full-scale production. In the meantime, Volume One of my autobiography is due in the publisher's hands by the end of the month and my book of collected poems should be out by the end of the year. A second historical romantic two-act play is in progress, exploring the relationship between the Balfour Declaration, and Arab-Israeli conflict."

Roger Wildt '54 says, "My wife (and business partner) and I finally retired from our marketing consulting business. We are now residing in a small Ardennes village on the banks of the River Meuse, near the French border with Belgium. We have nearly finished restoring a 1950s house and garden to our liking, so retirement has not been just sitting on the porch and watching the world go by—although from our windows we can watch both commercial barges and pleasure boats going up and down the river. Brussels is about an hour away—by car or (with very inexpensive senior rates) by rail. We shop for food and wine in France and get our specialties from local family shops and farms."

Earl Bloom '55 is chairman and CEO of Emb Investments in Sarasota, Fla. He has developed a revolutionary investment system he calls MAPS—Major Analytical Paradigm Shift—which he claims produces exceptional returns with low risk.

Robert Holden '55 says, "I received my MS in mechanical engineering from WPI in 1959 and 50 years ago I began my

career as the engineering instructor at Grossmont College. After earning a BA in political science and history in 1970 and an MA in Latin American history in 1995 from SDSU, I finished my career teaching politics and history at Grossmont College's sister institution, Cuyamaca College, in 1998."

Dick Lindstrom '55 joined 80 other guests to celebrate the 50th wedding anniversary of classmate and LCA brother Bob Olson in Connecticut. Dick recalls sports fishing with Bob in Palm Beach, back when he worked for Pratt & Whitney and Bob worked for the UTC Research Lab. "On one occasion, I asked our church youth worker to join us at the theatre as Bob's companion. This innocent pairing resulted in a wonderful, dedicated couple involved with their church, family, and extensive world travel."

Joe Alekshun '56 reports, "Under the lead of the late Vladimir Chobotov, I co-authored two textbooks on astrodynamics by providing executable Windows programs for the CD-ROM accompanying each text. *Orbital Mechanics, Third Edition*, was published by the American Institute of Aeronautics and Astronautics, and *Spacecraft Attitude Dynamics and Control*, by Krieger Publishing."

Paul Schoonmaker '56 celebrated 50 years of Christian ministry in the American Baptist Church. He is the retired pastor of Calvary Baptist Church in Providence, R.I.

Charlie Sullivan '56 writes, "My wife, Donna, and I moved from Cape Cod to North Carolina last year. Our address is 1938 Sossoman Springs Road, Midland NC 28107. We live in the country with plenty of open space and horses on one



side as our next door neighbors. Four of our five children live nearby. Donna and I have been married since 1956, right after graduation. It seems like it was just yesterday that we were all having a great time at WPI, with football and basketball games, playing in the band, and fraternity (PKT), to name a few wonderful WPI memories. On the Cape I used to play golf with the WPI alumni group headed up by **Mike Stephens '57**, and am now looking for a similar group in my new neighborhood. With seven wonderful grandchildren in high school and college, we're hoping we can keep up with all the graduations and family activities ahead!"

Jack Taylor '56 has been helping math professor Neil Hefernan with WPI's ASSISTments project by programming middle school math materials. Jack's other computer interest is the genealogy of his many Massachusetts ancestors. He was surprised to learn that he is descended from 14 contemporary families in the same town. He also does committee work at RiverWoods, the continuing care retirement community where he lives in Exeter, N.H.

Bob Galligan '57 continues as an adjunct faculty member at Grand View University in Des Moines, Iowa.

Carole and **John Hoban '57** celebrated their 47th wedding anniversary in February, and in March, they took a five-island cruise to the Caribbean. "All is well in our retirement. See you in June!"

George Long '57 says, "To celebrate our 55th wedding anniversary last year, Linda and I went skydiving."

Spike Vrusho '57 reports that he is fundraising chair of his Vero Beach (Fla.) Unitarian Universalist Fellowship. His committee had set an ambitious goal of \$16,000 (up from last year's \$12,000) for their 20th Annual Auction. The final tally showed the revenue was \$16,249.

Bruce Storms '58 is "more or less retired" but would like to hear from those around the Class of 1958.

▶ **Robert Wolff '58** retired from Naval Reserve as lieutenant commander. His career included management positions at Con Ed, four years as power delivery editor of McGraw Hill's first magazine, *Electrical World*, and executive director positions at Eastern Utilities Associates. He is now retired after four years as CEO of the New England Power Pool. "My wife, Cindy, had a stroke four months into retirement," he writes. "We were forced to give up skiing and our 40-ft. sailboat. Plan 'B' resulted in my getting a pilot's license and instrument rating, and then a Cessna 182 plane. We now live on an air park and have flown 1800+ hours all over the states. In 2005 we chartered a plane in Australia and flew all over the country for 14 days. Seated in the captain's chair on the USS *Yorktown* brought back many memories of my OOD watches spent on the bridge of a minesweeper."

Frank (Skip) Pakulski '59 writes, "I'm finally taking a leave of absence from tutoring/teaching duties at the local high school. Pat and I will be taking a needed, extended vacation to Florida shortly. We plan to drop in on some of the other alumni on the way."

David Sawin '59 and his wife, Lois, moved from their home of 45 years to Briarwood Retirement Community in Worcester.

Larry White '59 is still working full-time as CEO at Friedman Bros. Decorative Arts and living in South Florida. "After my wife's passing, three years ago, I remarried last October. Life is good!"

Ray Abraham '60 says, "My brother, **Don Abraham '58**, and I are spending the winter in Cape Coral, Fla. We live in Don's three-bedroom ranch and play golf several times a week. We belong to Coral Oaks public course and have made many new friends there. We enjoy watching the UConn men's and women's basketball games and all the PGA golf tournaments. Every day is like a Sunday for us."

Peter Zilko '60 says, "I'm retired and living in Bonita Springs, Fla., with my wife, Fran. We keep busy with tennis, kayaking, bike riding, and community involvement. Since we live in an HOA community, there is very little need to do outside chores, thank goodness!"

Thomas Pantages '61 writes, "I volunteered for the local Medical Reserve Corps. Have been to several meetings and started taking some interesting online courses."

Bruce Woodford '61 says, "Barbara and I celebrated our 50th wedding anniversary earlier this month with a family lunch at the Rusty Scupper in Baltimore. There will be a further celebration in the spring, when we plan to go on a river cruise in Europe."

Jim Forand '62, '64 MS MTE writes, "Guess what? After a 50-year hiatus, I've decided to pursue a teaching position at WPI in the MBA program. It is my sincere wish that after 35 years in international business, I might find my way to become a member of the faculty at Tech. I left WPI with an MS and received an MBA at Lehigh University in 1974. In 1976 I moved from a career in metallurgy into the field of intellectual property licensing business. I look forward to catching up with my classmates at our 50th Reunion."

Ralph Johanson '62 scaled back to part time at GRW Engineers, where he is vice president. "Still swimming," he writes, "I made the top 10 in the US Masters."

Casimir Matonis '62 writes, "My bride of 48 years and I spent a fantastic week skiing in Snowmass, Colo., with the Sun Cities Ski Club ('geezers on skis'). On the way back we stopped in Arches National Park for some hiking."



Bob Craig '63 says, "I'm working full time at Integrity Management Consultants, a small business supporting TSA, GSA, and DHS in acquisition. My role is applying the skills and knowledge I acquired supporting the DoD for many years to these non-DoD agencies."

Fred Jacoby '63 is "happily retired—playing golf, racquetball, running, rowing sculls, and enjoying six grandchildren. Live near Annapolis and would enjoy having a visit from any classmate that happens to be in the Baltimore/Washington area. Retired from ARINC Inc. after a wonderful career of 36 years. With the proper number of strokes provided to me, should we happen to have a friendly wager, I would love to play golf with any visitors. I belong to the US Naval Academy Golf Club."

George Vittas '63 retired from AECOM as global aviation director. He continues as a consultant.

Bill Ferguson '64 writes, "After a rewarding career—mostly at Bristol-Myers Squibb in New Jersey—Dee (my wife of 48 years) and I have moved to Plymouth, Mass., where we're happily retired. Over my work lifetime, I have gotten advanced degrees in chem eng and chemistry; taught college chemistry; worked on new chemical processes for manufacturing; managed design and construction projects; done strategic facility planning for the BMS Research Institute, and, finally, actually designed labs, scale-up plants, and manufacturing facilities. I credit WPI as the springboard to all of this. We have been very involved with our churches along the way. Our three children are enjoying good careers. We are fortunate to have four grandchildren. I particularly enjoy being a home handyman, and in my spare time, build toys for the grandkids."

Maurice Silvestris '64 says, "I've been retired since late 2010 after a career in environmental engineering at a few manufacturing outfits and a few consulting firms in New Jersey and Pennsylvania. Trying my hand at volunteering—

tutoring kids and adults in math at the Allentown Public Library and the local community college. Also joined a jazz workshop to improve the guitar playing skills I never really had. And having a great time giving something back to the 'tute by serving on the WPI Alumni Association Board of Directors."

Carl Youngman '64 provides support to Mark Rice, dean of WPI's School of Business. "He's a great leader," Carl notes.

Peter Christensen '65 says, "Well, finally received our Prius and have completed a measured mile test run at over 75 mpg! Rather impressive. Hoping to upgrade to a plug-in and link it to our installed solar array. We need to invest more in technology and renewable energy to make the changes that will allow us to slide through peak planetary production of oil with a transfer to other forms of energy. I am happy that WPI is still growing and innovating. Keep up the good work." Peter is an instructor of mathematics, Academy of Design and Engineering, Lake Region High School, Naples, Maine.

Gene Dionne '65 writes, "I've had a couple of retirements and am probably getting close to my third. The first was in 1994, after 26 years in the Air Force, where I was stationed in New Mexico as director of Space and Missile Technologies at the AF Research Laboratory. The second was in 2005 from Lockheed Martin in the Denver area, where I was a program manager and VP, engineering and operations, of the Space Systems Company's classified line-of-business. I'm now starting to taper off from six-plus years of consulting for LM and a few other aerospace companies. Still living in the foothills southwest of Denver with my wife of 34 years, Peggy, near our son, Jeremy. We enjoy long-distance cycling, mountain climbing, skiing, and adventure travel."

Pat Moran '65 says, "My daughter Meg's husband spends every other month in Asia, so I spend half my time in Dallas helping with her two boys, 5 and 1. It's great fun in an exhausting kind of way. My wife, Mimi, and I greatly enjoy spending time with classmates, especially at the annual Mashpee Muster held by Colette and **Walt Lankau '64**."

Mike Oliver '65 has enjoyed 10 years of retirement from IBM, keeping fit with golf, trout fishing, and traveling. He says he and his wife, Patricia, live in Hurley, N.Y., and winter in Hilton Head, S.C., with a congenial group of retirees.

Bob Stow '65 reports, "I retired from BAE Systems in 2008 as CTO and senior engineering VP at the corporate office in Rockville, Md., after 40 years with the company. Patricia, my wife of 43 years, passed away from pancreatic cancer in November 2009. While I miss her every day, I have great memories of our life together and continue to maintain close contact with our three married children and our four grandchildren (three more on the way). Retirement is keeping me busy with swimming, rowing, reading, engagement in my local church, and ship model building. I sail my 38-ft. sailboat from my beach house on the Connecticut shore with family

and friends. I maintain fond memories of my time at WPI with great friendships and those special fraternity formal week-ends at ATO with Pat. WPI certainly played a pivotal role in forming both my technical skills and attitude in my professional career and I am not surprised to continue seeing it at the top of engineering college education in America."

Jeffrey Cheyne '66 remains active in the Willams Chorale and the Southeastern Massachusetts Community Concert Band.

David Klimaj '66 says, "Last fall, I visited WPI for the first time in decades. The alumni office gave me a wonderful tour of the beautiful campus and its fantastic facilities. Do you know that there are three students per dorm room? I don't know how that works out. The changes are remarkable. We even found my brick on the Quad. I enjoyed lunch and discussions at Higgins House with Dean Karen Oates and the pre-law faculty. I recommend that alumni return—it's worth the visit. And so was our education at WPI."

John Lauterbach '66 writes a bimonthly column for *TJI* on the scientific aspects of regulation of tobacco products. "I also am a member of the FDA's Tobacco Products Scientific Advisory Committee. My son, Sebastian, turned 13 last June and is almost as tall as I am. He is a student at Montessori of Macon and has interests in aerospace engineering as well as toxicology (he has grown up with my business). Should be WPI Class of 2020."

Russell Morey '66 writes, "Many of you may not know that Sandy and I have retired to the Lakes Region of New Hampshire...Laconia, along Lake Winnepesaukee, to be exact. Although retired, I am a permanent deacon in the Diocese of Manchester and coordinate outreach in the Parish of St Andre Bessette in Laconia. My responsibilities also include teaching and preaching as well as sacramental preparation of teens, young adults, and couples preparing for marriage, as well as the baptism of their children. Life is good here in the midst of lakes, mountains, and forests, and we enjoy it immensely. Anybody nearby is encouraged to give a call or email to reconnect."

William Remillong '66 says, "After graduation I worked for American Cyanamid (ACCO) as an analytical chemist, and I married Mary Gilbert (Mount Holyoke '66). The company transferred me from Bound Brook, N.J., to Agro Research in Princeton, N.J., then to manufacturing in Hannibal, Mo., as site chief chemist. ACCO was taken over by American Home Products, and I retired from AHP in 2000. Since AHP was bought by Pfizer after I retired, I am technically retired from ACCO, AHP, and Pfizer (more companies than I ever worked for). I worked for Koch Membranes in Wilmington, Mass., until it was downsized in 2005. Now retired, again, I'm living in Tewksbury, Mass. Our children, Beth and Gil, live in Portsmouth and Boston, respectively."

Gene Baldrate '67 writes, "Peg and I are living in Palm Coast, Fla., and enjoying family, friends, and travel. We now have five grandchildren."

Robert Kennedy '67 is enjoying a second career as a tenured faculty member in the computer technology department of Massasoit Community College.

Doug Pike '67 retired to organic farming in 2007. "Working hard with my wife, Carolyn (a former WPI employee). Lots of fun, but not π ," he writes.

Charlie Proctor '67 is still working full time as lawyer and realtor. "And am still looking for a young hottie for a girlfriend or wife," he admits. Sports interests include SCUBA, hunting, skiing, swimming, beaches, hot rods, cooking, fishing (I don't watch much TV or videos). He lives in Oxford, Mass.

Alan Suydam '67 reports, "I've been retired from Ford Motor Company since January 2003. We then moved from Michigan to Southern Maryland, and I currently volunteer at the Calvert Marine Museum in Solomons two days a week in its small boat shop, building and repairing boats from the museum collection. I have also been teaching model boat building at the WoodenBoat School in Brooklin, Maine, for a couple of weeks each summer. My hobby of building and sailing radio-controlled model sailboats has taken me all over the east coast, where I have successfully competed in several classes. Last year I drove through the campus and hardly recognized the Quad for the new buildings. I'm glad that WPI has maintained leadership in engineering education and I'm proud to be an alumnus."

Joe Adamik '68 is enjoying retirement in Midlothian, Va., a suburb of Richmond. "I got tired of working and was able to retire (early) about four years ago. I go fishing a lot. I've been married to Gail for 42 years. We have four grandchildren, ranging in age from 1 to 12, who live about 10 minutes away."

Jack Holmes '68 says, "Since retiring from teaching in 2006, I have maintained a studio gallery, Images From Near and Far, at Western Avenue Studios in Lowell, Mass. I concentrate on framed fine art travel images. In addition, I teach travel photography and present digital photo-travel shows."

Carly Palulis '68 reports that he has moved on again, this time as vice president, base oil sales, for Heritage-Crystal Clean, LLC, a public company. "I continue to work out of my home office in Avon, Conn., and am responsible for selling out the base oil production at our new re-refinery in Indianapolis. We will eventually produce 30 million gallons annually of high-quality base oil made from used oil for lubricants. On another note, our daughter, Lauren, began graduate school at Simmons College. My wife, Susan, continues to work at Saint Francis Hospital in Hartford."

Richard Perreault '68 writes that he's enjoying retirement in Chandler, Ariz.

Geof Tamulonis '68 has been in the UK for 20 years, Cambridge for six, with frequent travel to Portugal. He says he is officially retired after a career in satellite communications and location services (including two start-ups), but continues consulting work in wireless communications. "Besides the gym and five-a-side football (soccer), I am keeping fit with tango and swing dancing. I get to the US a couple of times a year and usually pass by the 'tute and visit Weintraub's deli."

Scott Wilson '68 writes, "I retired from federal civil service in 2007 as deputy base civil engineer at McGuire AFB. I'm now a senior fellow at Logistics Management Institute in McLean, Va., currently working on a project with US Customs and Border Protection in support of its Tactical Infrastructure program. My wife, Cathy, and I live in Arlington, Va., and our three children are grown. It's fun having my brother, **John Wilson '65**, move to this area. I run and swim and am fighting off normal aging issues. I still love all sports and get my wrestling fix on Flowresting when I need it (which is a lot). Last fall we vacationed with Mary and **Dave Gumbley '68** in Nova Scotia. All in all, life is very good right now."

Malcolm Wittenberg '68 writes, "Although I've been an IP lawyer for (gulp) 40 years, I've been involved in other projects that help keep the juices flowing. Eight years ago, I founded a company by developing a device capable of testing for mercury at very low levels, with a high degree of accuracy and in a short time period. This provided the basis for Micro Analytical Systems, which tests seafood for mercury, pathogens, and adulterants worldwide. See safeharborfoods.com. More recently, a colleague and I developed a process for the conversion of cellulose to ethanol without the need for high temperatures, pressures, or exotic enzymes. We are in the process of funding our new company."

Chuck Hardy '69 says, "I am currently working on a project in Gunsan, South Korea. Hope to return to the states in a couple of weeks—hopefully in time for the Patriots Superbowl victory parade. My job as a consultant to the electric power industry has taken me everywhere in the US and to many parts of the world. I hope to work full time for about two more years, after which I plan to consult as needed. I was back at the campus for our 40th reunion and was really impressed by the amount of new construction since 1969. I look forward to the dedication of the new athletic facility."

Ed Mierzejewski '69 reports that after 22 years at the University of South Florida Center for Urban Transportation Research (the last 10 as director), he took early retirement and has since joined Gannett Fleming on a part-time basis, as director of transportation research. Ed and Aline continue to enjoy fantastic travel adventures. In 2011 they made a pilgrimage to the Holy Land and then spent three weeks in France.

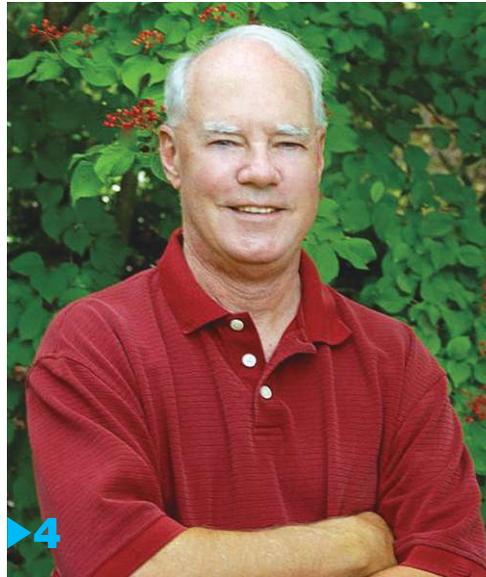
►4 **Dennis Murphy '69** retired after a long career as a systems engineer and entrepreneur. He recently published his first novel, *Brain Waves* (see p.71). He and his wife, Diane, live in western North Carolina with their three cats.

John Paolillo '69 writes, "After 14 years with IBM, I went to work in Nashua, N.H., for Digital Equipment Corp. (now Hewlett-Packard), where I've been an information developer for the past 28 years. I've been working out of my home office since HP's lab was closed four years ago. Judy and I have been married 23 years and we have a teenage son and a 22-year-old daughter. The apples haven't fallen far from the tree: our daughter is graduating from RPI this year with a biomedical engineering degree, and has already secured a job with Epic Systems in Wisconsin; and our high school senior was recently accepted to his first-choice college—WPI! While many of my classmates are no doubt already retired and living a life of leisure, I long for the time when, no longer burdened with college tuition payments, I can finally retire."

Peter Blackford '70 writes that he's enjoying life in "the business no one ever got into on purpose—design and manufacture of high-temperature electrical/electronic wire and cable. It's a great opportunity to actually utilize every discipline studied at WPI on a daily basis, which is just one of the things that keeps it interesting. My firm is weathering the recession under the corporate parentage of Berkshire Hathaway. Our kids are grown, our fourth grandchild is due soon. Passing the 15-year mark in Naples, Fla., we don't miss winter, or four-letter words like snow, cold, spin, and skid. I'm still a car guy, too, with a couple of Lotuses and a 33-year-old Benz in the garage, as well as one of the first Priuses sold in Florida. Yes, our successful Project for the Clean Air Car Race in 1970 assuredly played a part in becoming an early adopter of HEV technology. I belong to the Naples-Marco Island Region of the AACCA (aacca.org) and plan to participate in the upcoming AutoWeek Fantasy Camp in May."

Wally Thompson '70 says he's far from retirement. "I am having too much fun creating and constructing new wind projects in Central and South America, as director of engineering for Arctas Capital Group out of Houston. I just finished a 65 MW wind project in Nicaragua and began construction of the next 60 MW project, adjacent to the first project. I expect to continue with wind project developments in Costa Rica, Honduras, Guatemala, Chile, Argentina, and Brazil. Eventually, I will learn to speak Spanish! I have been working in this field almost since the time I left WPI, and I've enjoyed visiting or working in more than 30 countries around the world."

Joseph Carter '71 is still in Cleveland working in ENT in the county hospital (MetroHealth). He's been married to Alison for 36 years. Son Ben is an engineer in Detroit, and daughter Maggie will graduate in June in special ed. "One more to get through school—Sasha, adopted from Russia 1996, is a senior in high school. I'll go to El Salvador on my fourth



medical mission next January. Would love to hear from any '71 classmates!"

Frank Catanzaro '71 says, "I just finished building a 3D virtual website for the Millennium Project, an international Global Foresight Think Tank. See <http://cyber.mpnodes.info>. Three other projects had me commuting from South Korea to Kuwait. I am head of Millennium's Cyber-Futures Node."

►5 **Gordon Govalet '71** writes, "My wife, Annie, and I recently visited Paris to fulfill a promise I made over 20 years ago: We would celebrate her 60th birthday in Paris. We stayed for a week and walked everywhere, visiting numerous neighborhoods and Paris icons. We found the city to be beautiful and clean. People were very friendly, expecting no more than the polite greetings and goodbyes in French. If you have not been, you need to add this to your life's list of places to see."

Wayne Holmes '71 received the 2011 National Fire Protection Association Standards Medal. Retired VP of HSB Professional Loss Control, he currently provides independent consulting services in fire protection and code compliance. He is a fellow of the Society of Fire Protection Engineer.

Kevin O'Connell '71 of New Haven, Conn., recently passed the IRS exam to become an enrolled agent. He continues at H & R Block as a tax advisor.

Abbas Salim '71 retired in September of 2009 after 26 years at Lockheed Martin Space Systems Company and 40 years as an aerospace power systems architect and expert. The company praised his outstanding leadership in the design and operation of spacecraft electrical power systems. Abbas now lives in New Jersey and consults for Lockheed Martin Corp, Aeroflex, and Aerojet.



David Hayhurst '72 is dean of the College of Engineering at SDSU. A supporter of Project Lead the Way, a nationally recognized program for preparing middle- and high school students for careers in engineering, he also leads two NSF-sponsored programs to transition veterans into engineering. He and his wife, Mari, raise, show and judge AKC champion Great Danes, Whippets and Boxers.

Donald Polonis '72 says, "I am controller at ITT Power Solutions, which is now part of the ITT spinoff called Exelis. This is a milestone year for me: a new company and 40 years since WPI. June also marks our 40th wedding anniversary, and it's been a quite a ride. Pat and I traveled to the Shanghai World Expo, and last year we cruised to Rome and Florence. However, soon most of our travel will be stateside, from our future winter home—a condo in Davenport, Fla., located minutes away from Disneyworld, Seaworld, Universal's Harry Potterland, and LEGOLAND. Our granddaughters Madie (Madelyn) and Ava enjoy making the annual inspection of the condo, and look forward to visiting the Kennedy Space Center on the 50th anniversary of John Glenn's space ride this year."

Jim Tarpey '72 has retired from Orange and Rockland Utilities as vice president, operations, after a 39.5-year career. He is now president and senior partner of Grey Hare Advisors LLC, providing utility and managerial consulting services to the gas and electric industry. He remains as board chairman of the Rockland Community College Foundation and is an active member of the Society of Gas Lighting, as well as a senior member of the IEEE. Jim and his wife, Stephanie, live in Goshen, N.Y.

►6 **Conrad Baranowski '73** says, "I have been working at American Power Conversion (owned by Schneider-Electric) since 2000, currently as a staff project manager in Billerica, Mass. I have done a lot of business traveling, to the Philip-

pinus eight times and China, 17. I really love going to China. I have developed many new friends there and a very good understanding of the Chinese culture. It's been a wonderful experience comparing differences in cities and cuisine (the duck in China is very lean and tasty). Schneider-Electric is a great place to work. I am currently managing product development of rack mount, 1500VA, 1U high, UPS products, having done the Japanese models in 2011. I take products from the concept phase, design them, make them manufacturable, and then release them to sales."

Richard Belmonte '73 writes, "Retirement is wonderful. My golf score is about 10 shots lower that it was before I retired. Besides golf and some traveling, I'm keeping busy volunteering as Grand Knight of our local Knights of Columbus Council. LuAnne and I visit Worcester about four times a year to visit family in the area. WPI's campus is looking great."

Bruce Beverly '73, '75 (MS CE) is managing director of Beverly Management in Auburn, Mass., where he assists small- to midsize A/E firms with management and governance. "Put well over 10,000 miles on my motorcycle touring the USA this year," he writes.

Philip Brodeur '73 works for Solutia, Inc., in Springfield, Mass. His youngest son is a member of WPI's Class of 2013.

David Brown '73 recently retired from Northrop Gruman/Westinghouse Electric, after 37 years, to join Australian firm CEA Technologies as director of international relations.

Dave Cirka '73 has two offspring at WPI this year: Daughter Heather is in her second year of the PhD program in BME. Hillary is a junior majoring in biology/biotechnology. Third daughter, Haley, a high school senior, has been accepted at WPI, along with several other schools, and is weighing her options. Dave is a principal engineer with National Grid in Waltham, Mass.

Jerome Eckerman '73 is retired and living in Potomac, Md. He holds a master's degree and a doctorate from Catholic University.

Bill Haddad '73, '76 (MS CE) works at the Providence VA Medical Center as a clinical psychologist in the PTSD (post-traumatic stress disorder) Clinic providing mental health services to combat veterans returning from the Iraq and Afghanistan wars. He previously worked for the Defense Intelligence Agency in Washington, where he was responsible for screening and evaluating potential intelligence agents and analysts to assess their suitability for high-stress positions, such as operating in a war zone, and to delegate who can be trusted with a Top Secret clearance. As part of his duties, Bill also worked with a team responsible for creating psychological profiles of foreign leaders, which were passed on to military and political leaders when making policy decisions.

Ken Lexier '73 and his wife, Sue Ellen, continue to reside in Cornville, Maine. Ken continues as an attorney with the firm he joined over 20 years ago. They have five healthy and brilliant grandchildren with whom they spend as much time as they can.

Joel Loitherstein '73 reports many changes in the past year. He stopped operating Loitherstein Environmental Engineering Inc. and joined the firm of Tata & Howard Inc. to work with **Don Tata '75** and **Paul Howard '82**, as well as several other WPI alumni. Joel says, "The majority of LEEI's work was in the hazardous waste field for private sector clients, while the majority of T&H's work has been in the public sector environmental areas, especially in water supply, stormwater, and wastewater. On a personal note, my son Jake just graduated from WPI with a degree in management engineering. My other son, Scott, has been a teacher the Bronx for four years, after participating in the Teach For America program. My wife, Karen Spilka, a Massachusetts state senator for seven years, was appointed majority whip. This August will be my 18th year participating in the Pan Massachusetts Challenge for Dana Farber, and in October I will be riding in the Lance Armstrong

Foundation's fundraiser in Austin, Texas, for the fourth time. When I'm not road riding, I try to keep active by mountain biking—even in the snow."

Allison (Huse) and Bruce Nunn '73 report: "January 2011 saw Bruce retiring after more than 50 years in the paper industry (he delivered papers before attending WPI). And with retirement came a move to Brooklyn, Conn., where we are now much closer to many of our family members, as well as WPI friends. It was difficult to leave the spectacular area of Nova Scotia we had called home for almost 10 years, but we are enjoying having the opportunity, and the time, to visit and receive visitors. We've been delighted to be so much closer to our little granddaughter Abbie Mae, as well as her dad (**Will '99**) and mom (Kerri), and our youngest daughter (**April '04**) who also lives nearby, with **Dan Rosen '04**. Our oldest daughter, Heather, lives in Seattle. We've been spending time geocaching, gardening, golfing (just Bruce), and getting projects done on our new-to-us home. Our two cats settled into being American kitties quite readily, and are enjoying their new place."



Jan Pierson '73 says, "I've been living and working in Pittsburgh since graduation in the insurance industry. I married a local girl 35 years ago; we have six children and three grandchildren."

Richard Sargent '73 and his wife, Dianne, have seven children and four grandchildren. They celebrated their 30th anniversary in 2003 with a trip to Italy. They live in Spencer, Mass.

Alexander Vrachnos '73 reports: "Living in Greece in a real Great Depression crisis environment. My wife, Eleana, and I have a daughter who's studying law at Athens University, and a son in sixth grade. I have founded my own company installing photovoltaics, mainly on rooftops, and have also been involved actively with Tropical Green Technologies, developing and getting ready to bring to market hydrogen fuel cell generators and other H2 technology products like H2 refueling stations. I am seeking investors to take part in the upcoming boom for such products in the near future."

Jim Briggs '74 holds the post of implementation coordinator with the Delaware Valley Regional Planning Commission. He manages transportation enhancement projects for the Philadelphia region by day, and works as an amateur magician by night.

Gaspar Buffa '74 serves as president of Meadville Forging Group, supplying products to automotive and industrial markets.

Ken Charak '74 writes, "After 28 years at Procter & Gamble and 10 years at Ethicon Endo-Surgery (a Johnson & Johnson Company), I will retire from Corporate America later this year. On tap is spending more time with family (especially grandson Sir Martin), some creative writing, some travel, and specialized consulting for small businesses seeking to register medical devices and pharmaceuticals with the FDA and other health authorities worldwide."

Baltasar Sanchez '74 says, "After WPI I got my MS in ChE from Virginia Polytechnic Institute and SU, then worked for Procter & Gamble, both in Mexico and in Cincinnati. I quit the corporate world to come to my hometown and help my dad in the coffee roasting and merchandising business. My wife, Heidi, and I have three children. I'm still running the family business in troubled Southeastern México and am contemplating retirement in a couple of years."

Peter Thacher '74 reports, "Sarah and I have enjoyed skiing the slopes of cheap and cheerful Bansko, Bulgaria, with her brother's family. We have also enjoyed skiing the Dolomites in Italy with friends from work. Last September, classmate **Staporn Phettongkam** and his wife, Addy, visited me in North Haven, Maine. The seven-year renovation of our house in Spain has finally been completed. We bought a restaurant called La Luna near our house on the Costa del Sol. At work, I led a cross-functional team that developed an integrated gasification combined cycle (IGCC) project at Jazan, Saudi

Arabia. This plant will supply utilities to a future Jazan Refinery, supply electrical power to the kingdom's grid, and should become the largest IGCC in the world. We look forward to retirement and catching up with our many friends back in the USA."

Vermont Business Magazine has named **Jon Anderson '75** as one of the top business lawyers in the state.

Armand Balasco '75 is vice president of technology consultation at Polestar Technologies in Needham Heights, Mass.

Ray Cibulskis '75 has retired from Maui Electric Company after 12 years as supervisor of commercial services and is now consulting on renewable energy projects. His Maui home is completely solar powered.

David Fowler '75 joined Courion Corp. in Westborough, Mass., as chief operating officer.

John Gabranski '75 recently retired from the partnership at PricewaterhouseCoopers. He joined legacy Coopers & Lybrand in 1978 after receiving his MBA from Columbia University Graduate School of Business. He currently provides business consultation to two of his former clients while enjoying the balance of working while retired. He is honored to have been recently asked by Dean Karen Oates to serve on WPI's Arts and Sciences Advisory Board.

"Want to know what it's like to be a one-man band and do it all?" writes **Peter Hatgelakas '75**, president and CEO of Intrepid Exploration LLC in Pittsburgh, Pa., "from mapping the geology, seismic geophysical acquisition and mapping, leasing, contracting rigs, supervising drilling, design casing program and cementing, stimulating well flowback, pipeline and production equipment design, and production of the gas into line? All that work so I can give the best energy source on the planet away for \$2.47/Mcf!"

Bob Horner '75 writes, "I continue to enjoy my new job as public policy director for the Illuminating Engineering Society in New York City. I work out of my home office—what a difference from the previous corporate world! Several times a month, I visit Washington to "educate" the legislators and regulators. My wife, Pam, is doing well and looking forward to retiring next year. My son James is an accomplished auto/truck technician, working mostly on diesel vehicles, and Daniel is a junior at UMass Dartmouth enjoying economics and business."

Bill VanHerwerde '75 has a daughter, Grania, in the WPI Class of 2015.

Doug Whitman '75 reports, "After working 30 years in the Middle East, I am retiring at the end of March and returning to Worcester. Not sure yet what I will be doing during my retirement, but spoiling the grandchildren is on the list."

David Erickson '76 says, "I live in Topsfield Mass., with my wife, Alexandra. Our daughter, Michelle, has flown the nest.

I am a principal EE at Infraredx in Burlington, Mass., developing optical and ultrasound medical technology for cardiac catheters. My hobbies include sailing, electronics, and mountain biking."

Ed Fasulo '76 joined Morton Salt in 2007 and managed the Perth Amboy, N.J., facility until he and his wife recently relocated to the Tyler, Texas, area. Ed is now plant manager for the Grand Saline facility, which produces all types of salt for various markets in North America and parts of South America.

Bob Grande '76 is still living in Branford, Conn., and working at UIL Holdings Corp. (parent of former employer The United Illuminating Company) in New Haven as a business relationship manager in IT. He writes, "I occasionally rock out on guitar with our appropriately named classic rock band, MidLife Crisis."

Mike Abrams '77 writes, "I've entered the 'work less, travel more for fun' stage of my career. And when I can combine the two, even better! Last year saw trips to Barcelona, Budapest, Bratislava, Vienna, Salzburg, Puerto Vallarta, Vancouver, and a driving tour of SW Ireland. I went back to WPI a couple of times during the year, as well (Homecoming was a blast), and anticipate more visits as a member of the Alumni Association BOD. I've been a self-employed consultant for the last 11 years, mostly doing instrumentation design of seismic data acquisition systems. I've been in Houston for 32 years now, and I find it a great city to live in. Our 35th wedding anniversary is coming up in June, the same amount of time I've been out of WPI. Unfortunately I will miss our 35th reunion, as it coincides with a trip to Scandinavia. Maybe I'll see you at the next Homecoming."

Bill Cunningham '77 is launching OneMorePallet.com and hopes to go live in the spring. It has been selected by the Kaufmann Foundation as one of the top 50 start-ups in 2011. Bill's daughter, Sarah, graduated from Xavier University and landed a job in Boston at InkHouse. Bill says, "So, if you need any public relations work, I'll be glad to connect you!"

Robert Desourdis '77, '79 (MS EE) writes, "I'm a VP for technology and a senior systems architect at Science Applications International Corporation (SAIC), working from my home in Fairfax, Va. I have done a number of public safety communications projects, including a statewide interoperability plan for Massachusetts in which I employed WPI and my former MS thesis advisor, Jim Matthews. Artech House published my fifth technical book in 2009, *Achieving Interoperability in Critical IT and Communication Systems*. In that work, I explore 25 documented failures of leadership and planning, from Pearl Harbor to 9-11 and Hurricane Katrina. I've since added the Gulf Oil spill, otherwise known as "Deepwater Horizon." In all cases, failed leadership and planning were the culprits, not "technology." My other books were about the Internet in Emergency Communications, public safety communications, advanced high-frequency radio, and meteor

burst communications. I recently joined the Dean's Advisory Council for WPI Engineering. In my spare time, I build models for veterans—recently a B-25 twin-engine medium bomber from the Doolittle raid for the family of another WPI graduate whose uncle was the navigator in that 1942 mission. I have three daughters, all now living independent lives, a wife who works as a real estate agent for web-based Redfin company (based in Seattle), and a few old pets still hanging on."

Gary Loeb '77 is a senior staff engineer at the corporate office of Exelon Nuclear in Kennett Square, Pa., where he is an industry-wide subject matter expert in thermal performance of nuclear generating units. He is also the chairman of the Electric Power Research Institute's Plant Performance Enhancement Program coordinators group. Gary currently lives in New London (south of Philadelphia) with his wife, Denise, and researches family genealogy in his spare time. They are avid Phillies fans.

In early November, four alumni got together in northern Vermont for a weekend: **Scott Sieburth '77** (Philadelphia/San Diego), **Jon Anderson '75** (Montpelier, Vt.), **Steve Albino '77** (Hudson, Mass.) and **Michael Sullivan '77** (Essex Junction, Vt.) They took a long tour of the devastation caused by Hurricane Irene's flooding. "Weather was great," says Scott. "Local bridges, not so great!"

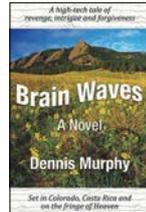
Michael Thorogood '77 retired after 3½ years in the Army and 22 years in the steel industry. He writes, "I'm living in western Tennessee and learning woodworking, welding, gardening, and foreign languages."

Bruce Bertrand '78 was recently chosen as chief of radiology at Heywood Hospital in Gardner, Mass. He and his family currently reside in nearby Sterling.

Rich Bourgault '78 has been selected as MITRE's new department head of G051 and site leader in Tampa, Fla. Rich joined MITRE in 2000, and has worked at the Heidelberg site since then in support of US Army Europe. He joined MITRE initially to provide intelligence systems and architecture support for the deployed Army task forces in Bosnia and Kosovo. His portfolio has expanded to include forces in Iraq, Afghanistan, and Africa, as well as facilities work in support of transformation and rebasing. He is a retired Army Signal Corps officer and served in the 90s as an IT staff officer US Army Europe and NATO, including serving as the first IT director for the NATO "SFOR" headquarters in Sarajevo in 1996-97. Rich earned an MBA from Florida Institute of Technology in 1991.

Brian Clang '78 says, "I am the state bridge inspection engineer with the Massachusetts DOT Highway Division, responsible for managing the statewide bridge inspection and load-rating program. The Federal Highway Administration's National Bridge Inspection Standards mandate that states conduct regular safety inspections, determine load carrying

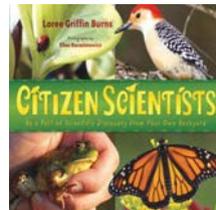
▶ Bookshelf



Brain Waves

DENNIS MURPHY '69 | Dog Ear Publishing (brainwavesnovel.com)

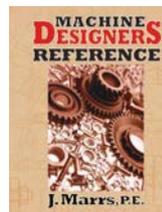
Inventor Mark Farrell finds himself trapped in an extended near-death experience. Unfortunately, the recipient of life-saving data he emails from the fringe of heaven would rather see him dead. *Brain Waves* weaves neuroscience, artificial intelligence, computer technology, physics, and philosophy into an inspirational medical suspense story.



Citizen Scientists: Be a Part of Scientific Discovery From Your Own Backyard

LOREE GRIFFIN BURNS '91 | Henry Holt

Burns's third book for children invites readers of all ages to think of themselves as scientists, encouraging them to begin by tagging butterflies, counting birds, identifying frogs, and hunting ladybugs. WPI physics professor and birder Rick Quimby lent his time and talents to the project and is pictured in the book conducting yearly bird counts with local schoolchildren.



Machine Designers Reference

JENNIFER (WILEY) MARRS '92 | Industrial Press

Conceived with the working mechanical designer in mind, this comprehensive reference manual offers essential charts and tables to provide rapid access to frequently used data. Marris has 18 years of experience in mechanical design and is a registered U.S. patent agent. Professor Bob Norton was a key manuscript reviewer; Charlie Gillis '95 and Gregory Aviza '93 also contributed to the book.

capacities and maintain a bridge inventory for all bridges over 20 feet in length. I am the program manager for the Commonwealth's 5,126 such structures. Bridges are inspected at two-year intervals (more frequent as conditions worsen). MassDOT has 23 inspection teams and a five-person underwater inspection (SCUBA) unit. I also manage consultant contracts for inspection (\$42 million) and load rating (\$20 million) to supplement our staff."

Mark Harley '78 says, "I've changed jobs, effective January 2012 and am now director of engineering for Maponics, LLC in White River Junction, Vt."

Jeffrey Hovhanesian '78 is retired after more than 37 years of government service. He lives in Portsmouth, R.I.

John McGee '78 writes, "I am in my sixth year of enjoying teaching undergraduate mathematics at Radford University in southwest Virginia. My area of research involves the algebraic

geometry of elliptic curves. My favorite academic activity consists of including exceptional students by means of undergraduate research projects. **Donna '80** and I now have four grandchildren, all living close by. We celebrated our 30th anniversary last fall. We wish the best for all of our classmates."

Steve Mezak '78 says, "After almost 35 years of living in Silicon Valley we are moving to Lake County, Calif., just north of the Napa Valley and on the edge of Clearlake. It's a peaceful location where I just started writing the 2nd edition of my book, *Software without Borders*. I don't need to be in the midst of the high-tech mecca anymore the way my business works. I speak with both clients and global software development partners around the world on the phone or online, and even the phone is online with Skype these days."

Gary Sowyrda '78 is still in Houston, recently retired after 33 years in the oil and gas business—12 with Exxon, and 21 with a private domestic oil and gas company. His two older

sons are in the energy business with engineering and finance degrees. "The third son is still in college, not far behind."

Ian Cannon '79 is program manager, Engineering Services, for Pratt & Whitney Rocketdyne. He recently returned to Massachusetts after 33 years in Southern California and currently lives in Beverly.

Thomas Dinan '79 writes, "In October 2010 I went to work in San Jose, Calif., for Twin Creeks Technologies, an equipment company that supplies the solar industry. I help them with process development for customer applications."

Ken Fast '79 is a principal engineer at Electric Boat in Groton, Conn. Over the last 20 years he has been developing visualization and virtual reality tools for submarine design and supporting advanced manufacturing technologies. He and his wife, Linda, and their three children live in "beautiful Stonington," he says. "Our oldest son, Nicholas, will graduate from WPI this May with a degree in mechanical engineering."

Sigifredo Gonzalez '79 retired from GL&V USA in September 2010 and moved to Caracas, Venezuela.

Steve Kapurch '79 is working at NASA headquarters in Washington, D.C., as program executive for engineering programs. "In the past I was the lead for systems engineering and was co-author of the NASA systems engineering handbook," he says. "I've been married to Kim for 28+ years, and we have four children. While serving as a panelist at an NDIA conference in October, I ran into some WPI reps for continuing education."

Mary Farren McDonald '79 has been able to catch up with several friends during her travels, including **Michael Neece '78**, **Allison Avery Powell '80**, **Beth Driscoll Kinney '79**, and **Karen Chesney Honold '78**.

Phil Rubin '79 is currently vice president for supply chain at Sealed Air Corporation. He and his wife, Lynn, recently moved to the Atlanta area, where they are enjoying the milder winters (having left New Jersey behind), and the great nearby outdoor activities. They alternate holiday time between Bethany Beach, Del., where they enjoy fishing, kayaking, and the beach, and Park City, Utah, where skiing and skating consume their time.

John Booth '80 writes, "In 1996, after 26 years of service, I retired as a colonel from the US Army Corps of Engineers. I spent the last 15 years as general manager for two companies providing installation support services to the Army at Fort Monmouth, N.J., but the post was closed in September because of BRAC (base realignment and closure). It's now time to reinvent myself, as I am not ready to fully retire. As a volunteer, I am the founder and steering committee facilitator for the Fort Monmouth Chapel Alumni Association, which has

over 180 individual and family members. I remain active with the Society of American Military Engineers and the Association of the U. S. Army, and serve as chair of the Combined Professional Association."

Chuck Dyke '80 works at Worley Parson in Bellaire, Texas, as senior principal consultant for infrastructure and environment.

Steve Gilrein '80 is deputy director of the Enforcement Program, U.S. Environmental Protection Agency, in Dallas. He is married and the father of three, with two sons in college (University of Texas and University of Arkansas). "My beautiful baby daughter is still in high school," he writes. "And, yes, unfortunately, I've become a Cowboys fan."

Jeff Hebert '80 has joined DataGlance as vice president of business development.

Gareth Kucinkas '80 has been appointed college counselor at College Alpin Beau Soleil in Villars sur Ollon, Switzerland. He continues in his roles as physics teacher and houseparent.

Allison Avery Powers '80 reports, "We've been living in Hudson, Ohio, for the past seven years (on the east side, between Cleveland and Akron). The city has a very New England feel, with a clock tower that plays carillon bells. Hmm... what else do I know that has a clock tower? I've been very active in a newcomers-type group of 150 women called New Clevelanders. I used to be more quiet and shy but I'm over that and love meeting new people. My husband, Jim, has "retired" from First Energy and is now consulting in the nuclear power field for Powers Energy Solutions of Charlotte, N.C. We plan on moving there sometime in the next year or so. I haven't had a paying job in a while but every time we move, I get involved in something else, so who knows? I'm on LinkedIn if you want to connect."

Martin Rowe '80 writes, "Coming up on 20 years as senior technical editor with *Test & Measurement World*. Much has changed, including the magazine/website, which changed hands twice in 2010. We're now part of UBM Electronics, which includes *EDN* and *EE Times*. A lot has changed in technology, too, but—believe it or not—a lot hasn't changed."

Randy Byrne '81 writes, "I am VP of marketing with Malvern Instruments, living in nearby Grafton, Mass., with my wife, Donna."

Thomas Connerton '81 is founder and CEO of Safety Technologies LLC in Simsbury, Conn. He previously served as an expert in high-performance coating systems and polymers for the protection of notable structures in the United States, Europe, and the Far East, including Jubal Industrial City in Saudi Arabia. Later in his career, as international architectural product manager for Chemfab Corporation, he worked on the

roof of the Georgia Dome, The Denver Airport, and the Millennium Dome in London. "It was all about the projects and the responsibility for completion of those projects at WPI that got me to take my wonderful journey!" he says. Thomas's present company develops intellectual property for the safety and medical device industry by combining structural engineering and polymer engineering to create products such as disposable surgical and exam gloves with a very high resistance to puncture, cut, and tear. "In many respects it is the same areas of concern that an engineer or architect would have when specifying a roof membrane. It is all structural! I have been blessed with being involved in a game changing technology!"

Elvis Osei-Bonsu '81 writes, "I am trying to bring WPI's education system into Ghana. Africa needs the WPI Plan to influence the development agenda."

Valerie Boynton Plummer '81 says, "I have recently celebrated my 30th service anniversary as a manager at Verizon Communications. My triplet sons turned 18 and all started college this past fall. One is a freshman at WPI!"

James Connor '81 is director, engineering, technology and environmental management, at UC Berkeley Extension. "WPI alumni in the greater San Francisco/San Jose Bay Area interested in part-time adjunct teaching for UC Berkeley Extension are welcome to contact me," he says.

▶ **Frank Polito '81** is department head for electronic and computer engineering technology at NHTI, Concord's Community College (formerly New Hampshire Technical Institute), where he also runs Animation and Graphic Game Programming departments. He has served as selectman and as town moderator of his home town, Atkinson, N.H. His son, David, is junior at WPI studying biomedical engineering.

Scot Robertson '81 started a new position as executive business manager for smart grid products and powerline communications at Maxim Integrated Products. He lives in Newport Beach, Calif.

Fred Rook '81 writes, "I graduated from WPI with a degree in chemistry, but at Virginia Tech I changed direction and received my MS in electrical engineering. I worked as an engineer at a couple of companies but eventually left engineering entirely. I've worked as an estate and financial professional for over 13 years now. I live in Richmond with my wife. Our three children are all adults now and out on their own."

Kristi Thompson '81 writes, "Our daughter, Sierra, graduates this year from Union College. I have been an independent consultant for almost 14 years, and my husband, Mark, continues his work as a manufacturing engineer."

Jeffrey Smith '81 recently joined Data Computer Corporation of America as SVP. DCCA is based in Columbia, Md.



Dennis Wysocki '81 writes, "I am still with Bristol-Myers Squibb (30 years now!). And I am still married to my wonderful wife of 23 years, Geri. We have two kids (twins boys) in college, one at Lehigh and the other at Carnegie Mellon, both studying engineering. (I tried to get them interested in WPI, but apparently it was too tough for them!). We now have two dogs (Stanley and Stella) to help us deal with the empty nest. Have been in Newtown, Pa., (northeast Philly) since 1996. Wondering what's up with the rest of the Class of 1981 and others... Lambo, Clint, Spaz, Briggsy, Arlo, Hoots, Favey, Ozzy, Godes, Hanner, Mickey, Ginzo, George, etc."

Ken Balkus '82, chemistry professor at UT Dallas, was named an American Chemical Society Fellow.

Brian Dunne '82 wrote, "Mary-Ellen and I are still in Colorado enjoying the mountains and great weather. Our older son is about to graduate from the Air Force Academy, and the younger one from high school."

"I am newly retired and enjoying life," **Lynn Gustafson '82** writes. "My husband, Paul, of 19 years and I are fly fishing all around the Pacific Northwest. We live in the mountains of northeast Washington State, on 100 acres, and wild life surrounds us—including turkeys, bear, white tail deer, and the mighty moose. Sorry I will not be on campus during the class of 1982 class reunion. But great wishes to all who attend."

Andy Huang '82, CEO of HXLS Charity Corp, focuses on research and development of alternative natural cancer treatment. He is also chairman, Public Safety Commission, for the City of Cupertino, Calif.

Tom Murphy '82 is working as an area engineer in construction of utility and roadway projects for the City of Columbus



Ohio. "Married to Jen with four children—Sean (20), Carrie (19), Amber (18), and Vanessa (16)—three of whom are now in college."

Denise Grenier Petersen '82, writes, "After many years in IT, I did an about-face last year and am teaching 7th grade in a middle school in the Jackie Robinson Complex in Harlem. It's the most challenging job I have ever had and is also the most rewarding."

Mark Besse '83 has been employed at Dell in Plano, Texas for a year as a systems integration specialist, working in the health care industry. "Specifically, I support software tools for document imaging. My wife, Kristy, and I still enjoy home-schooling all 3 kids—Jared (14), Audrey (11), and Olivia (6)."

Richard Cass '83 writes, "I have been at Charles Stark Draper Labs in Cambridge, Mass., for the last seven years. I am currently group leader for the quality engineering group. I was recently promoted to principal member of technical staff. We live in Sudbury, Mass., have been married 26 years, and have two children. In my 'spare' time I play violin with the Concord Orchestra."



Deb Weinstein Dean '83 lives in the Raleigh, N.C., area and works for IBM.

Mark Hasso '83, a professor in the Department of Construction Management at Wentworth Institute of Technology, received the Construction Management Association of America's first Educator of the Year Award. He is a past president of the BSCE and a founding member of the Construction Management Association of America-New England Chapter.

Joel Kearns '83 sends this update: "I am completing my master's in mechanical engineering at WPI via Advanced Distance Learning Network, via the Internet. It is great to be able to take classes at WPI while I am either home in St. Louis, or on frequent and long business trips to Asia. I am writing this from Kuching, Malaysia, where I lead a technical team to ramp up a new factory making silicon wafers for solar cells for MEMC. Attached is a photo from my time at NASA, before I joined MEMC; here I am "floating" in free-fall during parabolic flight of NASA's DC-9 weightless research aircraft. As a NASA employee, I managed NASA's Microgravity Research Program in the mid-1990s."

Andy Krassowski '83 writes, "After multiple stints at ultimately unsuccessful start-ups, most recently Aleri (acquired by Sybase, then by SAP), I'm working for Deutsche Bank on Wall Street in its global IT department."

Don Montgomery '83 reports "I am a partner and co-owner of an online marketing agency, WinGreen Marketing Systems, which provides content marketing and email marketing services for technology companies WinGreen was a finalist and runner-up in the WPI Venture Forum's Five-Minute Pitch Contest in 2010. We launched the company on 09/09/09 at 9:09 a.m., at an event in Boston. Later that same day, Denise and I got married on the center field warning track at Fenway Park prior to a victory by the Red Sox over the Orioles. We now live in Downingtown, Pennsylvania."

Jennifer (Toomey) Reily '83 writes, "Still living in beautiful Colorado and enjoying an IT job with Agilent Technologies. Always something new to learn!"

► **10 Bill Abbott '84** says, "Funny that the request for Class Notes mentions solar panels—in 2011 our company, Bio-Detek, in Pawtucket, R.I., completed installation of a 179kW PV solar electric system. For a few months in spring 2011 it was the largest PV system in the state! This system supplies half the electricity used in our factory. Together with other energy-savings projects, we've reduced our demand on the grid by two-thirds in the last four years. (I'm second from left in this photo-op with the governor; he's third from left.)"

Rob Henderson '84 and **Alison Carroll Henderson '87** have lived in Portland Ore. since 1992. "Our four children, Kane (21), Shannon (19), Jessica (17) and Graeme (15) are all honor students, studying hard and playing hard," says Rob. "I think that was our motto at WPI! I've enjoyed being a sales executive at Saint-Gobain (Norton Company of Worcester) for 26+ years, where I was a six-time Winner's Circle Award recipient for top sales. I enjoy hunting, fishing, scuba diving—everything the Great Northwest is famous for!" Alison started out at Clairol, then launched her first business as an accident reconstructionist. She later worked in sales in the electronics market, then moved on to a variety of consulting opportunities. She says she "kept incredibly busy with the kids and their activities—coaching lacrosse, soccer, basketball and leading other activities (scouts, theatre) they were involved in. It's been a busy road and I am now looking forward to the next business consulting opportunity."

Jack Holzman '84 writes, "Married to Michelle, with two stepkids. Working in the Navy's nuclear propulsion program as deputy director, audiological controls at Portsmouth Naval Shipyard in New Hampshire."

Jason Marcari '84 is president and chief executive officer of Summer Infant Inc.

Joan Marler Morra '84 writes, "After finishing my BS, I stayed on at WPI to complete my MS in materials engineering, then stayed on for an additional two years as a visiting instructor in mechanical engineering. I met my husband, **Martin Morra '82 (MS BE)**, at WPI, and we were married in Higgins House. (Pro-

fessors Ron Biederman and Rick Sisson were among the distinguished guests.) I went to work as a research engineer at Wyman-Gordon Co., maintaining a professional connection to WPI through company-sponsored research. We purchased a house within walking distance of WPI, and became official Worcesterites. With the birth of our first child, I took an extended leave from engineering. Shortly after our second child was born, we reluctantly left Worcester and relocated to upstate New York for new employment. I now live 30 minutes away from ANOTHER Polytechnic (located in Troy), but it's NOT the same! After a brief foray back into teaching, I have recently been consulting in an unrelated engineering field. I stop by WPI whenever we pass through Worcester, and I hope to become the parent of an incoming freshman one day soon!"

Scott Rudge '84 is spending his time in Kobe, Japan, helping a young biotech company (RMC Pharmaceutical Solutions) meet global standards for manufacturing.

Stephen Schoonmaker '84 is principal engineer at Manitowoc Crane Group in Shady Grove, Pa.

Marie Sparks '84 joined Highland Financial Group in 2010 as a financial professional. She advises individuals and businesses on managing their risk, protecting and building their assets and planning for future life events.

Doug Valentine '84 is the new senior pastor at First Baptist Church in Wallingford, Conn.

John Voccio '84 writes, "After 22 years at American Superconductor, I am now a research scientist for MIT's magnet laboratory, working on MRI and MNR projects. I am married and have three boys."

Jim Ball '85 reports "Retired from the Army after 24 years of active duty in 2009 and am currently working as a program manager for the Department of Defense, finishing the BRAC 133 Marks Center construction project. This spring, I assumed the position of division chief, Alterations Work Group at the Pentagon."

Steve and Mari-Agnes (Flynn) Jackson '85 have a son, Matt, in the Class of 2015 at WPI. Steve also started a new job, as business development manager of Thermal Products for Sapa, the largest aluminum extruder in North America.

Cheryl (Buitenhuys) and David McCarthy '85 have a son, Daniel, in the Class of 2012. Their younger son, Sean, has applied to the class of 2016.

Angela Padavano '85 has spent the last 26 years as a civil engineer for the MassDOT. "In addition to my engineering po-



sition, I have recently embarked on a new endeavor. Along with my partner, Rose-Ellen Padavano, I have opened a restaurant called Rosalina's Kitchen, located at 83 Hamilton Street, in the Grafton Hill section of Worcester. We are a neighborhood restaurant that serves homemade Italian fare. We are also a BYOB establishment. The link is rosalinaskitchen.com."

Cathy (Dochak) and **Tom Pelnik '85** have lived in Richmond, Va., for the past 19 years. Cathy has been teaching middle school math for 14 years at the Orchard House School. Tom recently joined ACS Infrastructure Development, where he is in charge of business development for North America. They have two children; Carolyn is studying engineering at the University of Virginia, and Eric is a freshman at Washington & Lee University, where he is majoring in psychology and playing on the lacrosse team.

Michael Raspuzzi '85 writes, "After almost 15 years at SeaChange working on video delivery software, I decided to move on. I recently accepted a position as technical lead, software engineering at Cisco Systems in Boxborough, Mass. I have run into a few WPI alums here at Cisco. My group works on secure connection (VPN) and secure virtualization software. My wife and I continue to live in Leominster and have a home-away-from-home in the White Mountains. Our twins graduated from Leominster High School this past June and headed off to college last fall. Michael, who was the class of 2011 valedictorian, is at Cornell studying architecture. Nicole is at Suffolk University studying graphic design."

Susan Woods '85 writes, "I have moved from The Netherlands, where I lived for six years, to New York City in late 2010 and have recently started work at Hearst Magazines. I have the world's easiest commute—a 15-block walk to work each day! We are involved with the international editions of many of the Hearst titles (*Cosmo*, *Esquire*, *Harper's Bazaar*, *Good Housekeeping*, etc.). We are starting a new edition this spring, and many new international editions later in 2012. It's very interesting and a complete career change after years in health care administration."

Chris Adams '86 writes, "I am still working for a local utility company. I support computer systems used for transmission and distribution. During tropical storm Irene, and winter storm Alfred, I worked many long shifts monitoring these systems. I was even sleeping on the computer room floor for several nights. Fortunately, my systems were OK, but during the first three days of Alfred, my office did not have power, and my site was using one of its backup generators. So even the power company was not immune to losing service!"

Ron Barth '86 writes, "Who says you can't switch careers? I graduated 25 years ago as an electrical engineer, and now I'm following my original passion: music. My band, Clockwork (clockworkboston.com), has really taken off—so much that it's taking over as my main occupation. And I'm loving it! We



play wedding receptions and corporate events across New England. Know someone getting married? Give me a call!"

James Bundock '86 says, "I'm a senior IC designer at ADI, where I recently designed the AD8229, a low-noise, low-distortion, high-temperature-capable (>200C), precision instrumentation amplifier. Previous work includes designing the *EE Times China Ace Award*-winning AD825X family of programmable gain instrumentation amplifiers (Best Amplifier category)."

Cheryl Costa '86 writes, "After 10 years at MITRE Corp., I left engineering and became a certified financial planner. It was a fantastic career change—I've been working in the investment management world for almost 15 years now. My business partner and I run Forteris, a wealth management firm with offices in Purchase, N.Y., and Framingham, Mass. Between work and raising three kids, my days are pretty full."

▶11 **Samir Ghosh '86** writes, "Hey! Loving life in Northern California still after 15 years. I'm at Qontext, where we provide social collaboration for businesses. And I'm coaching triathlon teams for the Leukemia & Lymphoma Society's Team In Training."

John Joseph '86 is starting a new information technology company in the Central Massachusetts area. He recently left Dell, three years after being acquired as vice president of marketing and product management at EqualLogic (an iSCSI data storage company). There, he worked with the management team to grow the company to 3,700 customers and \$200M in sales annually when Dell acquired the business. John lives in Bolton, Mass., with Kelley, his wife of 23 years, and three college-bound children: John (19), Jesslyn (18), and Brittany (16).

Mike Kelly '86 reports that after 17+ years in the manufacturing organization of Haemonetics Corp., he has accepted a new position at Instrumentation Laboratory in Bedford, Mass., as director of consumables manufacturing. "I'm looking forward to a new career challenge," he says, "along with a location that is much closer to my golf course!"

Jennifer Mellone '86 writes, "In 2006, as a Navy Reserve officer, I was mobilized to Kabul for a year. I could not believe that Afghan officials were asking ME for advice on how to run their country! I did not see any mines explode on the golf course with the sand putting 'greens.' After surviving 'Operation Enduring Freedom,' in 2007 I survived 'Operation Enduring Ovarian Cancer' on the home front. In 2008 I got married at the Naval Postgraduate School in Monterey, Calif. My husband and I lived in Campbell, and in 2010 we bought a second home condo in Napa (wine country). In 2011 I left Boeing to join AppSec Consulting in San Jose as senior information security consultant. I'm also commanding officer of a Navy Reserve unit. Now in 2012—I have been journaling and would love to write a book about my experiences."

Anne Marie (Daly) Riechmann '86 says, "I moved to southwest Oregon two years ago for my husband's job. It's very rural out here in the mountains, but quite beautiful. We live near a large nesting site for bald eagles—we see them flying around or sitting in trees. I'm teaching CAD in the Mechanical Engineering and Technology Department at Oregon Institute of Technology."

Donna Barone Viens '86 is still teaching and coaching at Wilbraham and Monson Academy in Wilbraham, Mass. "Sent my first child off to college this year—Saint Andrew's in Scotland."

Tony Erwin '87 is active in the WPI Alumni community, playing with the WPI Alumni Jazz Band. He recently started a new job at Teradyne as an applications engineer. "My wife, Lisa, and I recently celebrated 20 years of marriage. We live in Tewksbury, Mass., with our two children and two dogs."

Marie Hutchinson '87 lives in Connecticut with her husband and 5-year-old and (newly adopted) 2-year-old daughters. "I work at Hamilton Sundstrand as manager of program office effectiveness, optimizing budgeting processes. My kids' godparents are sorority sisters from WPI."

Paul Lubas '87 is senior marketing manager for 3M Purification Inc., responsible for the life sciences business segment, which includes pharmaceutical, biotech, and biologic filtration and separations applications. He lives in Glastonbury, Conn., with his wife, Paula.

Elliot Scot '87 writes, "It's hard to believe we're coming up on 25 years since graduation. I haven't strayed far from the Worcester area. Shrewsbury has been a great place to raise

the kids, and now my son is talking about going to WPI for aeronautics. He says his next home will be in outer space. I've been working with server virtualization in high availability clustered environments, trying to provide a highly reliable, high-performance solution to small- to mid-size banks at an affordable cost. Recent legislation is making it tougher for smaller banks to compete, creating some interesting challenges for us. There have been some very late nights—I thought I was done with all-nighters after I left WPI. To my old friends: I hope all is well. Look me up if you're ever in the area. I've gotten pretty good at Brazilian barbeque out in the backyard, so call ahead."

Barbara (Grimm) Actis '88 is president of Management Quality Consulting, a web development firm. She and her husband, Robert, recently celebrated their fifth anniversary.

Greg Duplessie '88 started ExecEvent as a way to bring technology executives together to learn and network with each other. Events have taken place in Boston, San Francisco, and London, and continue to expand worldwide. Greg lives in southern Washington state with his wife, VaNessa, and their kids, Alex (8) and Analeigh (5).

Ted Hein '88 works at Cree in Durham, N.C., as senior IT manager.

Carleen Maitland '88 reports, "I am on leave from my faculty position at Penn State University, working in the international office of the US National Science Foundation in Arlington, Va. I recently participated in a National Science Policy workshop at the US embassy in Baghdad. The workshop aimed to develop an NSF for Iraq and to further US-Iraqi scientific cooperation. My invitation was issued jointly by the Departments of State and Commerce, based on my expertise—but also because they saw WPI on my resume! Apparently the Commercial Law Development program has had a positive experience working with WPI and was hoping to develop another WPI connection."

Eric Pauer '88 received the 2011 George W. Bush Outstanding Employers Supporting Traditional Air National Guard Members Award. He is an engineer at Impact Science & Technology in Nashua, N.H., and a member of the Massachusetts Air National Guard.

Nicholas Soter '88 is a sales executive with Anaqua Inc., focused on selling IP Asset Management (IAM) software and services. "Anaqua Enterprise software is in use by some of the leading IP owners in the world, including HP, Ford, Kimberly-Clark, and SAP," he notes.

Fran Hoey '89, senior vice president and renewable energy market champion for Tighe & Bond, was recently invited to join the leadership team for the Environmental Business Council of New England's Renewable Energy Committee. Fran is also board chairman of the commonwealth's third

largest C.164 utility company and chair of a solar energy cooperative currently developing three projects with aggregate nameplate capacity of 5.25 MW (of which 4.5 MW are currently online).

Rob Laventure '89 accompanied his daughter, Nicolette, to the San Mateo Gymnastics Invitational, where she competed with 11-year-olds from as far away as Japan. "She took first place in every event and finished in second place out of 68 girls. My wife and I couldn't prouder of these results, but we're especially proud of her sportsmanship, leadership, and the encouragement that she provides to her teammates. Way to go, Nicolette!"

Rosemary (Vassallo) Nelson '89 is currently in transition, searching for her next molecular automation position in the biotech industry.

Ajoy Patel '89 writes, "Am now well settled in Dubai, U.A.E. and have been here for the past 12 years now! I am the general manager of a company that manufactures oil-filled electrical transformers, and while very little of my technical background at WPI is being used in what is primarily a management function, it greatly facilitates my understanding. I am in touch with a few of my batch mates and college mates from WPI and have always tried to keep in touch! I have two daughters, Antara, 6, and Taraana, 8. Since 1995 I have been married to a wonderful woman, Radhi, a lawyer working a local bank here."

Arthur Resca '89, '97 (MS CE) married Colleen Dwyer in Worcester on August 6, 2011. After enjoying a trip to Italy, the couple resides in Holden.

Doug Roberts '89 says, "I recently developed Synergistic Controls STC-4966 Remote Ceiling Fan Thermostat, a product that offers thermostat control for ceiling fans. The energy-saving device is available at smarthome.com. I'm exploring this small start-up venture on the side to see if it can develop into something."

Andy Siegel '89 joined Broadcom Corporation as director of business development, in the microwave communications line of business in April 2011, when Broadcom acquired ProVigent, where Andy was vice president for sales in the Americas.

Jim Tremblay '89 is currently working for the US Air Force as program manager for F-16 Mission Planning Systems at Hanscom AFB.

Lyle Hazel '90 reports, "I just started working for Qualcomm supporting graphics on smartphones."

Frank Christiano '91 was named project manager for the Design Assurance effort at Chevron. "This effort will affect all major projects built by Chevron," he writes.

Karen (Chmielewski) Collins '91 writes, "I am teaching high school chemistry in Connecticut and loving it. I did an accelerated certification program seven years ago for teachers in shortage areas, of which science is one. I even have a former student at WPI now! Mick, my husband of 15 years, and I have two middle-schoolers who keep us busy. We are looking forward to summer vacation and taking some camping trips."

Fredric Gold '91, '94 (MS MFE), '98 (PhD MFE) lives in Natick, Mass., with his wife, Amy, son, Zachary (9), daughter Orli (5), and rescued lab-greyhound, Ellie. He is a supplier quality lead engineer for GE Healthcare, based out of Westborough, supporting the Life Sciences division.

Shawn (Harrington) Markham '91 was named a senior engineering associate, by Corning Inc., receiving the company's top distinction for engineers. She is currently project manager of forming technology at Corning Display Technologies' liquid crystal display plant in Sakai City, Japan. She and her husband, Brian, have three children.

Michael Messer '91 was promoted to colonel in the US Air Force. He is currently working for the Joint Staff/J7 as a senior joint fires and maneuvers analyst, leading the analysis of the DoD's Transitional Cyberspace Operations Command and Control concept.

David Andrade '92 says, "Still teaching high school physics and paramedic classes, though I haven't been able to work as a paramedic due to a back injury. I completed my second master's degree (in educational leadership—the first was in educational technology). I also write for *Tech&Learning* magazine and have my own successful educational blog (educationaltechnologyguy.blogspot.com). I still love teaching after 10 years and encourage my students to go into engineering careers. I use many facets of the WPI Plan in the way I teach physics."

Lieu and **Chuck Gaboriau '92** welcomed their second daughter, Gabrielle, on Sept. 15, 2011. "Big sister Mia is extremely proud," they report.

Maureen Hoke '92 was promoted to vice president at O'Brien & Gere in January 2012. Based in the Savannah office, she currently leads the firm's environmental practice in the Southeast, which includes offices in Virginia, North Carolina, South Carolina, and Georgia.

Jennifer (Wiley) Marrs '92 writes, "I recently had my first book published, *Machine Designers Reference* by Industrial Press." (See p. 71.)

Scott Morley '92 is currently working for BT Professional Services as a senior consultant. He will finish his MBA at Bentley University in May. Scott recently joined Mensa.

Robert Nocera '92 moved the offices for his growing IT consulting company, NEOS LLC (neosllc.com), to 20 Church



Street in Hartford, Conn. His software company, Vgo Software, LLC (vgosoftware.com) was opened in 2004 and also continues to grow.

George Regnery '92 continues at Bedford Funding, a private equity fund that invests in software companies and specializes in software companies for human capital management. He and his wife, Katy, and children, Henry (7) and Caroline "Callie" (4), live in Ridgefield, Conn.

Peter Cavallo '93 has been teaching mechanical engineering part time at Temple University in Philadelphia since 2008. Now an adjunct associate professor, he has primarily taught fluid mechanics and has also developed new courses in compressible flows and aerodynamics for the ME Department. "It's still strange being on the other side of the fence," he says. "My day job as a scientist in the field of CFD is still going strong and I am currently heading a research program sponsored by NASA Langley."

Matt Friend '93 writes, "Still working at MathWorks (where we are hiring— check out our openings and let me know if you are interested). We are bracing for our oldest to enter middle school (not sure how that happened so quickly), juggling schedules consumed by Girl Scouts, soccer, DI, and school activities, and—in my free time—training for my first triathlon. Time continues to march on at a lightning pace."

▶12 **Mark Russell '93** says, "It has been a busy year. We left the active duty Navy lifestyle (after 15 years) to settle down on the eastern shore of Maryland. I'm now a NASA research pilot and the aviation safety officer for the Goddard Space Flight Center based out of Wallops Flight Facility in Virginia. My supervisor is a graduate of RPI, so of course there are constant

verbal WPI-versus-RPI battles. After seven moves in 15 years, our family is excited to be settled. Kate (my wife, whom I met in Worcester during my WPI days) is looking to start a gourmet food business. She volunteers with Court Associated Special Advocates (CASA) for abused and neglected children. Our kids are in middle school and third grade. The photo shows me with members of the NASA Suborbital and Special Orbital Projects Airborne Science Research Team at Wallops Flight Facility (I'm the short guy in the green flight suit in front)."

Tom Single '93 writes, "In January 2011 I went on a climbing expedition to Cerro Aconcagua in Argentina, the highest peak in the world outside of the Himalayas. We made it to 20,000 feet at the high camp before a storm moved in and literally blew us off the mountain. This past summer I prepared for a year in Afghanistan. As a lieutenant colonel in the Air Force, I'm deployed as commander of the 966th Air Expeditionary Squadron, in charge of over 2,300 Airmen supporting the ground fight. It's a small world: I ran into Lt. Col. **Spencer Cocanour '95**—he's commander of the 21st Expeditionary Special Tactics Squadron. It's been an honor and a privilege to serve with such outstanding Americans sacrificing so much on the front lines of the ground fight."

Laurence Dallaire '94, '96 (MS FPE) says, "I'm the chief fire marshal at the United States Capitol in Washington. I live in Manassas, Va., with my wife, Amy, and three daughters: Isabelle (10) Camille (8), and Gabrielle (5)."

Jason Johnson '94 is manager of the Video and Evaluation departments at Karl Storz in Charlton, Mass., which is focused on releasing new video imaging medical endoscopes. "We are very enthusiastic about a new program at WPI in which Storz will help develop future leaders," he says.



Kristi (Henricksen) Perry '94 writes, "Since graduation, I have lived in Seattle, Ariz., Worcester (my daughter was born there!), and now California. I started my career as an electrical engineer, and then moved into project and program management after completing my MBA at the University of Arizona. Currently, I manage my husband's private medical practice. Charles and I have two children, Jackson (10) and Elin (8). I enjoy the outdoor lifestyle the Sacramento region offers, and have developed gardening and beekeeping hobbies."

Vin Recchia '94 continues to work as a financial advisor at Merrill Lynch in Boston. After spending several years as a civil engineer, he enjoys helping families and small business owners manage their investments and plan for retirement. Many of his clients are in technical careers, including several WPI graduates. He lives in Winthrop with his wife and son.

Charlie Gillis '95 contributed to a new book by **Jennifer Marrs '92**, *Machine Designers Reference*, proving material on precision locating techniques and tolerance stack-ups. **Gregory Aviza '93** also authored a section of the book. (See p. 71.)

Gregg Hart '95 recently became general counsel of Fogg System Company in Denver. The company specializes in medical interface adapters and test equipment. He and his wife, Robin, have two sons, Ryan and Tristan.

▶13 Born to **Brooke (Kuffel) '95** and **Jim O'Connor '92**: a son, Sean Michael O'Connor, March 19, 2011.

Seth Tobey '95 received an MBA from Texas A&M University in May 2010. He works for Chesmar Homes in Houston, where he lives with his wife, Paula, and two daughters.

Jacques '95 and **Kristen (Stagg) Brouillette '96** are enjoying a busy life in the Worcester area. "With one daughter in the second grade and another in kindergarten, we are kept on our toes with various school activities and dance lessons," Jacques writes. "I recently traveled to Memphis for a training program that helped sharpen my skills in advising the Lambda Chi Alpha chapter at WPI. Keeping photographic record of family happenings is a relatively new hobby of mine. While not nearly

a professional, I do manage the occasional great shot. When not distracted by these or by our antique home, I work at Fluor Corporation in the Property Management division. To all our friends, please feel free to drop us a line through WPI's Alumni-Connect site."

▶14 **Mark Paulson '95** says, "Our five kids are thriving in sports, piano, school, and other activities. Beth is very active in every aspect of their lives as am I, but work is a bit of a limitation. We've all been enjoying time spent on our friends' farm, where Beth and the kids ride horses, and we all help out with farmwork. We're in the process of adopting a child from Ethiopia and hope to travel there within the year to bring our child home. In January I started a new job in Boulder, Colo., at Spectra Logic as senior southwest engineer in the Emerging Markets group. The learning curve is a bit all-consuming right now, but it's an exciting team with many great opportunities for career growth."

Mike Caprio '96 lives in Brooklyn, N.Y., where he is still running his own software consulting firm. He was chosen to be the conductor for entrepreneurs on the New York City StartupBus to South By Southwest 2012 in Austin, Texas (startupbus.com/buses/nyc).

Justin Cutroni '96 writes, "The year 2012 started with a big change for me—I decided to take a job with Google. I'm now part of their analytics team. In my new role of analytics advocate, I bring a user's perspective to the team. I'm also working on an update to one of my books, *Google Analytics*."

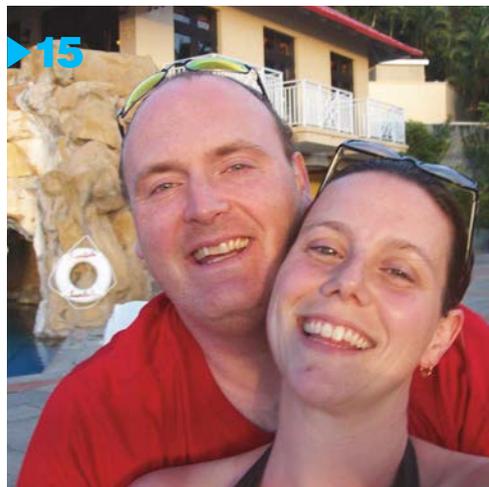
Eric Heigel '96 was promoted to lieutenant colonel in the US Air Force last year. He is stationed at the Defense Intelligence Agency in Washington.

Wendell Jones '96 has been at MedImmune for seven years and recently transferred to a new position within the company as manager of quality compliance.

Bill Stankosky '96 reports, "My wife, Sherry, and I are adopting a baby boy, named Alexander Ryan, born Oct. 17, 2011. He is our first child and is our little miracle!"

▶15 **Cara (Valliere)** and **Tim Tully '96** celebrated their 15th wedding anniversary last year and traveled to St. Lucia for a romantic getaway. "We hiked the Piton Mountains and zip-lined through the forest, but for the most part, we just enjoyed quiet time along the Caribbean." They offer thanks to Tim's mom for watching the boys—Connor (14), Seamus (8), and Aidan (5). "To ensure that no one felt left out, we followed up our private vacation with a family trip to Disney."

Noah Weisleder '96 was awarded the Kauffman Foundation Postdoctoral Entrepreneur Award for 2011. He is assistant professor of physiology and biophysics at Robert Wood Johnson Medical School in Piscataway, N.J., and chief scientific



officer at TRIM-edicine, a biotechnology company in North Brunswick. He and his wife, **Melissa La Greca '97** currently live in Dunellen with their children, Annie, Denis, and Lucas.

▶16 "Who says engineers don't know how to have fun?" writes **Adam Zampino '96**. "I've been a member of the West African World Fusion band MAMADOU for over 12 years now, and I still love making people dance." Adam, one of the original members, brings his keyboard synths to the mix, along with harmonic backing vocals. The group was founded by Mamadou Diop, a recent Boston Music Award winner (International Artist of the Year). "In addition to my night life, I have a solid career as a civil engineer, currently designing roadways and inspecting bridges with Diversified Technology Consultants. I'm also a founding member, director, and officer

of the nonprofit organization A3D (African Development through Drum and Dance, www.a3dinc.org). When I'm not traveling with MAMADOU, I can be found in the studio recording my own instrumental and piano compositions. Look for them on CD Baby (cdbaby.com) and on Amazon.com. For more info about our fun party band, visit mamadou.com."

Jocelyn (Russo) Bourgault '97 joined Xerox Corp. after graduation and earned an MBA from the University of Oregon in 2008. She recently returned to her job as new product development program manager after a one-year paid Social Service Leave at a small nonprofit in Portland, working with low-income Latinos. As director of operations, she helped streamline internal administration processes and connect with the Latino professional population in Portland to bring awareness of Hacienda programs and help with fundraising efforts. Jocelyn has two children, Remy (7), an avid skier, soccer player, and violinist; and Josephine (3), "a fierce, no-fear skier who loves to eat snow!"

Natalie '97 and **Chris Grace '95** returned to Massachusetts in November 2011. Natalie is a patent agent at Choate, Hall & Stewart LLP in Boston. Chris is a lead mechanical engineer in the Home Robots Division of iRobot.

Marni (Hall) '97 and **Ed Hallissey '98** announce the birth of their daughter, Shoshana Rae. They live in Silver Spring, Md.

Jimmy Pai '97 depicts 2011 as a time of change: He moved back to San Francisco from Maui to take a new job as IT director for Mandarin Oriental; got married; and had a son, Dexter Nathaniel, born in August.

► **17 Capitola Pontrelli '97** recently celebrated five years of service at Invensys Controls in Carol Stream, Ill., which manufactures controls for appliance and HVAC equipment. She also won recognition for an Intellectual Property (IP) idea on sustainability. Her daughter, Isabella Rose, celebrated her first birthday on Dec. 31, 2011.

Charles G. Prescott '97 is a senior project manager at Babcock Power in Worcester. He holds certification as a PMP (Project Management Professional).

Craig and Leanne (Stackpole) Hansen '98 welcomed their second child (and future WPI Engineer?), Zachary Carlyle, on Oct. 20, 2011. They say, "Big brother Avery loves to help out with the baby, but wishes his brother was old enough to play."

Jeannine (Block) and James Lovering '98 report, "We spent three weeks last summer driving to Florida and becoming 'residents' of Disney World. The girls are already talking about going back. Jeannine will graduate from nursing school in December as an RN; James is busy as ever teaching high school physics and turning his daughters, Amelia (6) and Bethany (4), into budding scientists."

Greg Murphy '98 and his wife, Emily, are living in Northampton, Mass. Their daughter, Rachel, turned 1 in December.

Elana (Kingsbury) '98 and **Rich Person '96** welcomed their daughter, Melanie, on March 1, 2011. "Big brothers, Tim (11), Sam (9), and Max (6) absolutely love their little sister!"

Christopher Pacitto '98 was recognized as one of *Gulf Coast Business Review's* "40 Under 40" for 2011. He lives in Florida.

► **18 Eric Pauly '98** was recently promoted to vice president of quality assurance engineering at Fidelity Investments. He currently lives in Ayer, Mass., with Cathy, his wife of six years, and two children, Mackenzie (3) and Thomas (2).

Gregory Zelfond '98 is now a PMO project manager at First Niagara Bank. He received his MBA in 2003 from Bentley College and achieved PMP certification in 2009. Greg has lived in Buffalo since 2007.

Doug Crawford '99 and wife, Amanda, welcomed their first child, Abigail Jayne, on Sept. 24, 2011. Doug is a project manager for Whiting-Turner Contracting Co. out of Baltimore. They currently reside in Hagerstown, Md.

Brendan FitzPatrick '99 and his wife, Valerie, celebrated the birth of their twin boys, Sean Ryan and Daniel Christian, on Jan. 4, 2011. They live in Mooresville, N.C.

Brad Denison '99 was recently promoted to a controlled title holder of senior engineer, Engine Assembly and Test, at GE Aviation's facility in Lynn, Mass. "I am recognized as a

technical expert in this area," he writes, "and will ensure product competitiveness both today and into the future."

Patrick O'Sullivan '99 will be completing his master's in systems engineering at WPI this April and graduating in May.

Major **Matt "RATT" Poisson '99** writes, "I'm currently serving as an instructor at the U.S. Air Force Test Pilot School. I instruct in F-16 and T-38 aircraft while teaching students the

procedures and techniques of flight testing advanced aircraft. In summer I will move with my family to Tennessee, where I will be an Air Force Fellow at Oak Ridge National Laboratories."

► **19 Carla (Corrado) Beck '00** received a master's in finance from Bentley University in December 2010. Twelve days later, she and her husband, James Beck, and 3-year-old Joseph, welcomed Sophia Elizabeth to the family. "A challenge only WPI could have prepared me for!" she says.



Uri Braun '00, a PhD candidate dedicated to the study of computer science at the Harvard School of Engineering and Applied Sciences, was honored as a 2012 Siebel Scholar and received a \$35,000 award for his final year of graduate studies.

► **20 Matthew** and **Erica Tworog-Dube '00** were thrilled to welcome their daughter, Ariana Brooke, in June 2011. "Ariana enjoyed her first trip to campus this fall," they say, "and, hopefully, will join the class of 2033!"

Jim Konz '00 and **Dina Carreiro '01** have three children, Colby (5), Lillian (2), and Logan (1). They live in Webster, Mass. Jim is a director in software development at NASDAQ OMX.

Irving Llimatta '00 writes, "I'm not sure if this is much of a class note, but I did just make my last student loan payment. If I could do it all over again, I would do it all over again. Money well spent!"

Jacob Telepciak '00 and his wife, Toni (Assumption '00), welcomed their first child, a beautiful, healthy baby girl named Madison Kay, on Aug. 7, 2011.

Maria Vassilieva '00 is currently working on her master's in ME. Her husband, **Konstantin Kovalev '00 (MS ME)**, earned his PhD at the University of Brussels in Belgium in 2006. "We were married in January 2007 in Denmark, and our son, Alexander, turned 1 this year on Valentine's Day."

► **21** Since earning a master's degree in mechanical engineering with aerospace concentration in 2004, **Ian De Barros '01** has been working for GE Aviation. After many years doing inlet and exhaust system aerodynamic design and integration, he was recently promoted to engineering section operations leader for the Thermal Systems Design Group. Ian married Brittany Harley in May 2011; they live in Cincinnati. "We have no plans in sight for kids," he says, "but we have three dogs—Max (Australian Shepherd), Sergei (Siberian Husky), and Kaiser (German Shepherd)."

Sui Nin (Raymond) Lam '01 lives in Toronto with his wife, Loretta. They are expecting a baby in June. He is a senior

manager in IT governance at Canadian Imperial Bank of Commerce.

William Osmer '01 will receive a master's in criminal justice administration and an MBA from Husson University in May. In addition to his graduate studies, Bill was an adjunct faculty member in the math department at Eastern Maine Community College this past academic year.

Tracy (Patturelli) and **Antonio Troncoso '01** welcomed their second child, Logan Mark, on Nov. 11, 2011. Logan joins his big sister, Mia Lynn, 3½. The family currently resides Chelmsford, Mass.

Gene Ananiev '02 received his PhD in cellular and molecular biology from the University of Wisconsin Madison.

Todd BenDor '02 checked in from Paris, on a sabbatical at the Sorbonne, to report that he planned to be married in April, in Mexico. He has been an assistant professor of city and regional planning at the University of North Carolina since 2007.

Mark Bronski '02 says, "After spending three years in Stuttgart, Germany, at the headquarters of TRUMPF, I've returned to the US to run the company's 80,000-sq.-ft. industrial laser factory in Farmington, Conn., as manager of laser production."

► **22 Luke Connerly '02, '08 (MS FPE)** and Courtney Igoe were married in Newport, R.I., last May. They currently reside in San Jose, Calif., with plans to return soon to New England. "We are expecting our first child in July!"



Lori (Luiz) Dumont '02 and husband, Aaron, welcomed a beautiful baby boy, Landon, into the world, Aug. 26, 2010.

Bassam Esa '02 writes, "My daughter, Katia, turned 1 in January. I started new job with Optical Fiber Solutions as a software controls engineer."

Kimberly (Morin) Ferguson '02 and her husband celebrated the birth of their son, Connor John, on Nov. 23, 2011.

Tim Fisher '02, '04 (MS EE) finished law school and started work as a patent attorney at Finnegan, Henderson, Farabow, Garrett & Dunner in Cambridge, Mass. "Expecting my first child (a daughter) in February," he writes.

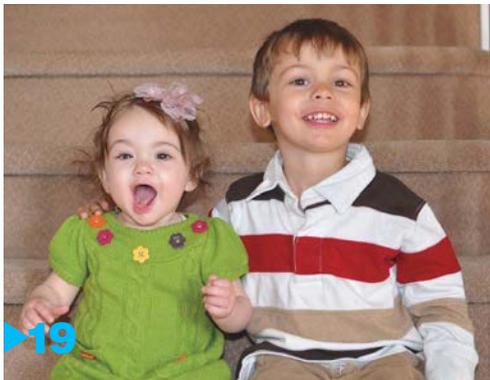
Derek Gelinis '02 is a product development engineer for Comcast. His wife is a law student. They have two very busy children, ages 5 and 3.

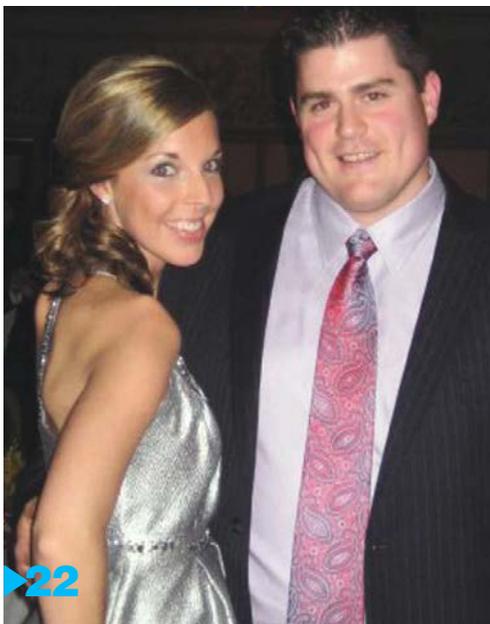
Eric Laskey '02 and Kim-Son Nguyen welcomed their second child, Khai David, on Nov. 29, 2011. Khai joins his 2-year-old brother, Quan Alexander.

► **23 Jody Kenniston '02** and Daniel Staruk were married Oct. 8, 2011. The wedding brought together many WPI alumni, including maid of honor **Janice Narowski '01**, **Michael Jasinski '01**, and classmates **Jeremy Tonzi**, **Elizabeth Levandowsky**, and **Jake Rocznik**. The couple lives in nearby Holden.

Michael Kuczewski '02 writes, "My wife, Emily, and I quit our real-world jobs to spend the first half of 2011 in the rainforests of Central and South America. For four-and-a-half months, we volunteered with two conservation programs as field research assistants on avian biodiversity projects in the Peruvian Amazon, and at an indigenous reserve in Costa Rica. We then traveled for another six weeks. The work was hard but totally rewarding, and we definitely miss waking up to the sounds of parrots now that we're back in the real world."

Alexandra Vargas Mendez '02 reports, "After WPI I moved to Atlanta where I have been working with the US Nuclear Regulatory Commission as a nuclear reactor inspector engi-





neer. I have two children, Kailyn Amirah Rogers (5) and De'Juan Alexander Rogers (3)."

Katie Wheeler '02 enjoyed a West Coast road trip last summer, including a visit with **Katie (Gagnon) Chenu '01** and **Laura (Domey) Kern '01**. The autumn wedding of **Elisa Baker '02** brought her to stunning New Mexico, along with friends, including **Andrew Oleson '03**. The previous summer, the trio explored Berlin together for the wedding of **Jamie Stern-Gottfried '02**. "As much as I enjoy getting away from it all," she writes, "I'm happy to call Brooklyn, N.Y., home." Katie continues to work in environmental health epidemiology and plays with the Brooklyn Conservatory Community Orchestra (bcc.o.info).

Katherine (Mirtle) '03 and **Michael Bender '02** welcomed their first child, Ellie, to the world on Feb. 2, 2012.

Scott Bentley '03 says, "After working for Fidelity Investments from May 2002 to August 2011 as a senior systems engineer, I've returned home to Worcester and am now an infrastructure architect for The Hanover Insurance Group."

▶**24** **Chris Cammack '03** is living in Northern Virginia with his wife, Jaime, and their 2-year-old son, George. Following three tours of duty in Iraq with the Army, he is now working as an engineer for the Marine Corps on a contract to improve the survivability of MRAP vehicles in down-range blast scenarios. His work includes projects on enhanced gunner protection and advanced tie-down designs.

Abiche Dewilde '03 and **Berk Akinci '02** are thrilled to announce the birth of their twins, Kaan and Laura, on Dec. 12, 2011. They join big sister Kiara, 3½.



Andrew Keefe '03 has just taken a position with Vecna Robotics as an electrical engineer working on QC Bot, a hospital courier, tele-presence, and patient self-service robot.

Ashley Mossa '03 and **Jeremy Lindeman '05** were married on Nov. 2, 2011, and honeymooned in St. Lucia.

Jennifer (Persico) Rohleder '03 joined the law firm Patton Boggs LLP in Washington, D.C., in January. Her practice is focused on energy issues such as electric generation and transmission, renewable energy development, and regulatory compliance. She has been a practicing attorney for four years and is a member of the D.C. and Virginia bars. She and husband **Kevin Rohleder '04** welcomed their first child, Marcus, in July 2011.

John Baird '04 was invited to speak at SXSW Edu in Austin, the national conference on education paired with South by Southwest. He also has been chosen as a mentor for SXSW Interactive, one of five individuals selected from an international pool of candidates to participate. The new mentorship program is specifically aimed at bringing in well-established industry leaders, and John was chosen for his background in education.

Pamela Comey and **Alex DiDonato '04** are getting married Aug. 25, 2012, in Boston. She is a test engineering at Jacobs Technology in Bedford; he is an audio power hardware design engineer for Sonos in Cambridge. Pam and Alex recently purchased a house in Belmont.



Kristopher Gaewsky '04 writes, "I've been in Northern California for eight years, working in Intel's Flash Memory Division. I bought a home in 2009 and enjoy driving my '02 Subaru WRX! I am recently engaged and will be married in June 2012."

Frank Gerratana '04, '05 (MS CS) is practicing intellectual property law at Fish & Richardson, PC, in Boston.

Andrea Johnston '04 writes, "My son, Dylan Thomas Brissette, was born in 2010. I currently live with my fiancée, Thomas Brissette, in Norwood, Mass., and I work at the Wellman Center for Photomedicine at Massachusetts General Hospital."

Since joining Booz & Company two years ago, **Gregor Kronenberger '04** has advised clients in consumer and retail space on moving to a new IT platform. "I'm excited to be getting married—the date is set for June 2012."

Nicole (McMahon) and Mike Orrell '04 recently welcomed their second son, Braydon. Big brother Jack can't wait to teach his baby brother everything he knows.

Erik Ross '04 says, "I earned a master's in aeronautical engineering from the Air Force Institute of Technology in 2010, and one in mechanical engineering from WPI in 2011. I started a new job at Baldwin Filters in Kearney, Neb. And I rescued a yellow lab, named Conrad, from an animal shelter."

LT JG **Michael Schwartz '04** writes, "I just 'winged' as a naval aviator helicopter pilot. I am stationed in Norfolk, Va., flying the MH-53E."

Daniel Wallace '04 recently graduated from MIT, where he was a System Design and Management Fellow. He earned a master's degree in engineering and management from the Sloan School of Management and MIT's School of Engineering. While there he studied entrepreneurship and technology strategy at Harvard Business School. He is an associate at Booz Allen Hamilton in the firm's New York office.

Lt. **Ryan Casey '05** graduated from flight school this past summer and married in the fall. He is serving with the Marine Light Attack Training Squadron 303 at Marine Corps Air Station in Pendleton, Calif.

Drew Freinberg '05 just completed a yearlong deployment to Afghanistan as company commander of the Forward Support Company, 368th Engineer Battalion. All soldiers returned home safely, he reports. Drew received a Bronze Star for the deployment.

Chuck Haines '05 is married with two children (ages 5 and 1), and living in Virginia. He is a co-owner of a start-up that specializes in delivering mobile web apps to small and independently owned businesses.

Gregory Krane '05 became engaged to Farleigh Layfield last spring. They met in vet school and are planning a summer 2012 wedding in Newport, R.I.

Over the past five years, **Brian Kuhn '05** and **Kevin La-Malva '06** have been growing the fire safety engineering practice at the national structural engineering firm Simpson Gumpertz & Heger, based in the company's Waltham, Mass., headquarters office. The fire safety group works with architects, structural engineers, and building enclosure specialists on a variety of unique structural fire protection and building safety issues. The team welcomed the addition of WPI alum **David Jacoby '95** to the New York office in February.

Meredith Leclair '05 and her husband, Jason, welcomed their second son, Jack, on Sept. 23, 2011. Jack was also welcomed by his brother, Collin, born Sept. 11, 2009.

Nick Martunas '05 has been named Top Sales Performer at Bose Corp. for the last three years running.

Jessica Reidel Sarcione '05 relocated to Oxford, Mass., with her year-old son, Cameron, to reunite with her family and friends after 6-1/2 long years of being away from home. She says, "I maintain my position as a patent examiner for the US Patent Office, but now work from home, thanks to the wonderful thing that is the Internet."

Michael Bertini '06 is in his second year of PhD work in economics at Brandeis University. He writes that he is living on a student salary and is crossing his fingers for that WPI Polar Fleece Class Notes contest prize!

Brenden Brown '06 spent most of the past year traveling around the country, driving 25,000 miles, visiting 30 national parks, and staying in 50 campgrounds.

►25 **Kristin Collette '06** and **Bryan Bigda '09** were married on Oct. 8, 2011, in Dennis, Mass. Bridesmaids included **Nicole Keenan '06** and **Ashley Mossa '07**; groomsmen were **Ryan Eley '09**, **Dean Rheaume '08**,

Dan Cesarone '09, **Jono Zwirko '09**, and **Ryan Sotolano '09**. They celebrated their wedding with 35 WPI alumni in attendance. They reside in Norfolk, Mass., with their English bulldog, Jack.

Sara Fowler '06 moved to Virginia a few years ago and is a water resources engineer at AECOM. She writes, "I got married in October, and we moved into our newly built house at the end of the year. This year I will take my PE exam, which brings back memories of my years at WPI. Many people have not heard of WPI down here in the South, but I'm working to spread the word!"

Michael Hebner '06 changed jobs in December. He now works for Deloitte Consulting LLP based at the Boston office.



Eric Hunt '06 married Nichole Roberge in September 2010. They are living in Worcester.

Luke '06 and **Katie (Hall) Marron '07** are officers in the US Air Force. They recently completed deployments to Iraq and Afghanistan, respectively, where they advised local military on building sustainable forces. They are finishing up a tour of duty in Turkey before returning stateside this summer to new jobs. Luke will begin navigator training, and Katie will be joining the civilian sector, "or turning into a beach bum for a while" she says. "We love the email updates! So proud to be part of such a great institution."

►26 **Caitlin McMonagle '06** spent five years as a quality engineer at Defibtech LLC, in the portable Automated External Defibrillator (AED) market. In 2012 she joined by Farm Design, a fast-paced medical device R&D contracting firm in Hollis, N.H., as a program coordinator. "I volunteer with New England Border Collie Rescue," she writes, "and I currently share my life with two of my own rescued BCs, Didgeridoo and Lizzie, and I foster another, named Harp. Last July I vacationed to Alaska with four WPI alums—**Andrew Bangs '06**, **Aubrey Klafit '06**, **Shaun Haerinck '06**, **Mike Rainieri '07**, and former classmate Mark Smith. We flew to Anchorage, then traveled by car to Deadhorse and back, including the entire length of the Dalton Highway. Total distance driven was well over 2,000 miles. We backpacked Sukakpak Mountain (4400 ft.), crossed the Atigun Pass four times, put our feet in the Arctic Ocean, and met Santa Claus in North Pole, Alaska."

Ernst Minschke '06 and his wife, Lenora, were married in 2008, with classmates **Tim Burke**, **Justin Gonsalves**, and **Jason Overson** in attendance. On Jan. 11, 2012, Ernst and Lenora became the proud parents of Silas Philip.

Vinnie Nogarotto '06 and his wife, Brandi, welcomed their first child, Mitchell Anderson, on Jan. 14, 2012. Vinnie works for ExxonMobil Refining & Supply as a mechanical engineer; Brandi is a nurse at Woman's Hospital in Baton Rouge.

▶27 **Julian Race '06** is currently serving as a systems administrator for the United States Antarctic Program in the Marine division. He works on board the research vessels *Nathaniel B. Palmer* and *Laurence M. Gould*, supporting science missions in Antarctic waters. Recently, the USAP vessels have conducted research in the Drake Passage, the Antarctic Peninsula, and the Ross Sea. When not exploring the southern oceans, Julian lives in Denver, enjoying the skiing and hiking adventures to be found there.

Mark Sitkowski '06 reports that he's been working as an electrical engineer at the National Grid.

Deepti Sukhwani '06 (MS EE), '12 (MBA) and **Bharat Sukhwani** of Natick, Mass., welcomed their daughter, Neev Suri, on Oct. 23, 2011.

James McMillan '80 says, "Still employed at General Dynamics, but I have relocated from Massachusetts to the Orlando area, where I work from a remote site location outside the University of Central Florida."

Mike Miller '07 and **Eric Gebrian '06** recently founded a revolutionary start-up called Socialete, with a technology to disrupt the nightclub promotion industry. "Nightclub promoters are typically an under-the-table marketing tool that club owners use because there is no other option," they say. "Socialete throws members-only parties and socials for urban, young professionals in the Boston area and offers the inside scoop on the best events in town. Check it out at socialete.com."

Kris Nigro '07 recently moved back to the east coast and is working for a contractor in Connecticut and finishing a master's degree through WPI.

In October 2010, **Derek Williams '07, '11 (MS MFE)** married Amanda Seekell, whom he met while studying at WPI. They live in Middletown, Conn. Derek works as an instrumentation engineer at Pratt & Whitney.

Gabriel Baldwin '08 writes, "I've traveled all the way to Timbuktu and back!"

Jessica Coelho '08 recently moved into a new home and became treasurer of Local 3713 at the MDC in Hartford, Conn.



▶28 **Jeremy Lebowitz '08, '09 (MS FPE)** and **Caitlin Lally '08** tied the knot on Sept. 17, 2011, at Zorvino Vineyards in Sandown, N.H. Jeremy earned his PE license in December and is working as a consultant at Rolf Jensen and Assoc. in Framingham, Mass. Caitlin received her doctor of pharmacy degree from MCPHS in Worcester; she is the pharmacy manager of the Holden Walgreens. They recently bought a house in nearby Grafton.

Mina Salib '08 continues as a senior engineer at Pfizer.

Ryan Trunko '08 is engaged to Katie Lupian; they will be married on July 6, 2012. They reside in Albany in their own house. Ryan has been working as a civil design engineer for Laberge Group since he left WPI.

Virginia Ward '08 writes, "After my Fulbright fellowship teaching in Taiwan during the 2008-09 school year, I returned to the US, worked in DC for a year, and New Orleans for a summer. I'm now back in Asia, living and teaching in Ulsan, South Korea, and will be here until August (maybe longer!). I'm looking forward to attending graduate school for international education policy or management in 2013."

Kevin Wayns '08 '09 (MS ODL) is an industrial engineer completing the three-year Manufacturing and Operations Leadership Program with Campbell Soup. He writes, "My successes include project leadership with autonomous maintenance, collaboration with plant leadership, technicians and all operations associates, as well as strategic planning and lean manufacturing problem solving. I attained a Six Sigma Black Belt after delivering three initiatives to improve overall



packaging efficiency by 25 percent. I'm interested in plant management and developmental roles in maintenance, logistics, planning, and area management."

Vineet Barot '09 reports, "I got my master's in mechanical engineering from UW-Madison. For my research, I collaborated with Hydro-Thermal Corp.—and, behold, they hired me afterward! I've been working as a flow analysis engineer for the past six months and I recently moved to downtown Milwaukee. Fun times! I also have a girlfriend. (Take that, Jon!)"

►29 **Jeremy Chapman '09** writes, "I returned to the US from a year-and-a-half stint teaching in Turkey, and recently started a job in southern Indiana. I test and install new engines for Cummins. Looking back, I noticed that of all my WPI experiences, my IQP in Copenhagen had the greatest impact on my life. It was an ideal opportunity to develop the core skills of teamwork to tackle unexpected challenges, which I've come to find out, is worth more to my job than other engineering skills. The IQP also made the rest of the world seem much more friendly and accessible, has which shaped the last two years of my life. WPI people are everywhere! In Istanbul, I was visited by roughly 10 WPI faculty, staff, and alumni. I'm hoping to find some WPI alums in Indiana. If we've lost touch, or you're in the area and want to get together, please email me: jeremyrchapman@gmail.com."

Since graduation, **Chris Drouin '09** has been living in Waltham, Mass., where he works as a marketing and website research analyst for Vistaprint. In his spare time, he sings in the Harvard-Radcliffe Community Chorus, hikes, bikes, and works on his game design ideas.

Jo-Ellen (Sullivan) '09 and **Derek Duval '08 (MS FPE)** were married on Aug. 27, 2011, on Cape Cod—"right in the midst of Hurricane Irene!" they report. Jo-Ellen left her position as a senior bioprocess associate with Bristol-Myers Squibb and is now a software engineer for Zenith Technologies. Derek is at NFPA in Quincy.

►30 **Jennifer (Himottu)** and **Keith Flanders '09** married in October 2011. "After dating for almost five years (since we

met in our freshman orientation group)," she writes, "Keith proposed right after we both graduated from grad school. We ended up in DC, where I'm a structural engineer for Thornton Tomasetti and Keith is a fire protection engineer for Aon. That made it a little tough to plan a wedding back in Massachusetts, but everything went very smoothly, and everyone had a wonderful time. More than 25 alumni were guests—they may have been the only ones who understood that our programs were designed to look like engineering blueprints!"

Nick Gilligan '09 is at Midé Technology Corp., a high-tech R&D firm focused in the aerospace and defense industries. His projects have ranged from machining to computational fluid analysis simulations. His team developed actuating control surfaces for a long-range sniper round, performing analysis and offering design modification recommendations for solar power inverters. Recently promoted to production manager, he oversees the production of piezoelectric actuators, sensors, and vibrational energy harvesters. Nick enjoys cycling and sailing, and plans to relocate to the San Francisco Bay Area.

Jason Hu '09 writes, "WPI, you can't get rid of me! I'm still collaborating with my professors in the BME Department on many of my company's research projects."

Jen Keating '09 is an R&D engineer at Grove Instruments, working on a noninvasive blood glucose meter. "We're embarking on an exciting year with many projects in store," he says. "I just began taking a graduate course at WPI in digital signal processing to expand my skill set here at Grove. I'm

planning a trip to Africa next fall, which will include a visit to my IQP Site in Windhoek, Namibia. I am excited about the potential for professional and personal development that all of these have to offer."

Katy Levinson '09 reports, "I quit my job at the venture capital firm and started two ventures: amacron.com (which mails nonperishable college necessities to students who can't walk to a bulk food store, much less carry everything back), and sendmeawesome.com (which mails people awesome stuff). Both ideas gained surprising traction, but I have been sidetracked by efforts to keep a hackerspace, the Hacker Dojo in Mountain View, Calif., open. To comply with local building codes, our community is working to raise a quarter million dollars to renovate the space or get a new one. (Feels like something right out of an IQP!) You can check out our efforts at hackerdojo.com/Assemble."

Cara Marcy '09 recently competed a two-year stint in the Peace Corps, serving as a sustainable agriculture volunteer working with an association of cacao farmers in the coastal region of Ecuador. "My main projects have been with farmers practicing organic farming techniques," she writes. This includes raising worms and making their own organic insecticides and liquid fertilizers. In addition, they started a micro-enterprise, a co-op that cuts out the middle man and provides fair pricing for their products. I am looking forward to returning to the States, but will miss my new family, the sights, the sounds, and the smell of chocolate roasting in the mornings. I plan to return to grad school this fall to study sustainable international development."

Kyle Miller '09 and his bride, Orianna Duinker, were married in Halifax, Nova Scotia, with several other members of the WPI community present on the happy day. They lived in Oxford, England, for two years before their Aug. 19, 2011, wedding, and have moved to Toronto. Kyle says, "I'm now working for the aerospace firm Solar Ship (solarship.com). We are developing a new type of aircraft that derives part of its lift from a buoyant gas, and the remainder from its aerodynamic shape. Our prototype is on the runway regularly."

Anthony Petrocchi '09 writes, "In November I began working at the Rhode Island School of Design as an assistant construction project manager within the institution's Facilities Department. I am enjoying the position greatly, and it gives me the opportunity to live in my home state, where I get to be with my girlfriend and see friends and family (and WPI for occasional visits). I'll receive my master's in civil engineering/construction management from WPI in May. In the near future I plan on just keeping a steady career and enjoying life!"

Army First Lt. **Mitchell Riley '09** began a one-year deployment to Hermand Province, Afghanistan, in August 2011. "Looking forward to getting home and attending lots of classmates' weddings," he writes. "Yike, we're getting to that age!"





Francis Song '09 says, "I am a first lieutenant in the US Air Force, currently assigned as an air weapons officer on the NATO AWACS, stationed at Geilenkirchen Air Base, Germany. I recently completed a three-month rotation in Afghanistan in support of NATO-ISAF, after becoming Combat Mission Ready. Last year I also deployed to Sicily in support of Operation Unified Protector. I am in the middle of online graduate courses for a master's degree."

Mark Wunderli '09 (MS PSM) says, "As a DSCADA engineer, I have developed communication infrastructure with various vendors equipment to monitor and control 15 remotely located devices with a new distribution management system. The new DMS will pinpoint the faulted section of line using real time data and provide fault analysis. These new technologies will isolate that faulted section and restore power lowering the duration and number of impacted customers and will be deployed to all major distribution circuits."

Lesley Drohan '10 writes, "For nearly two years, I've worked for Lonza Biologics, a pharmaceutical CMO (custom manufacturing organization) in Hopkinton, Mass., and have been quite happy there. Recently I was asked to transfer for six months to another site. I am now a resident of Slough, Berkshire, U.K. The city is about the same size and diversity of Worcester, though a bit more industrial, and only a 20-minute train ride from London. I'm planning on going back to school for a PhD within the next year."

Eric Lees '10 completed his master's program in systems engineering in WPI's Corporate and Professional Education Division. He writes, "In October 2010, I was let go from my job

as a lead systems test and evaluation engineer at Textron Defense Systems due to ongoing restructuring. This came as a blessing in disguise, as my wife and I were expecting identical twin boys at the time. Being home allowed me to complete household projects and to get the house ready for the boys' arrival. We welcomed Jaxson and Dylan to the world Jan. 17, 2011. I am hoping to find a new job in the not too distant future, but in the meantime I'm enjoying my time at home watching the boys grow."

Tobin McGee '10 says, "Upon graduation I made the national rowing team and competed in Belarus at the World Rowing Championships. When I returned to the US, I started at Fuel Cell Energy in Danbury, Conn., as a process engineer, when I was contacted by **Kevin Boyd '99**, asking if I was interested in working at IBM. So, now I'm a semiconductor process engineer for IBM, living in White Plains, N.Y., with my fiancée, whom I proposed to in December. I am still rowing, at the New York Athletic Club, and have won two national championships since graduation."

Kevin O'Brien '10 is living in Brookline and working as a system specialist at Fidessa in Boston. "I've been writing more lately, am still single, and have plans to live and work in Europe for a while," he says. "We'll see how that turns out."

After a year in the work world, **Adam Panzicia '10** has returned to WPI to pursue a master's degree in robotics.

Arie Vilders '10, '11 (MS ME) writes, "I moved to Erie, Pa., to work for GE Transportation, where we make locomotive engines and mining motors. I'm in a two-year rotational program for operations management, after which I plan to get my master's in supply chain management. My ability to watch and attend Celtics, Bruins, Sox, and Patriots games has greatly decreased, but at least I still have a big body of water to enjoy."

Ryan Doherty '11 says, "I'm working part time at BAE Systems as a software engineer in Burlington, Mass., while completing my master's degree in robotics engineering at WPI. As graduation approaches, I'm hoping to relocate closer to work."

Jared Drake '11 writes, "I'm a mechanical design engineer at Micron Products, a plastics molding company in Fitchburg, Mass. My projects include military, medical, and automotive applications. I wouldn't have had this opportunity were it not for WPI—I found it through the CDC's WPI JobFinder site."

Jason Gabriel '11 reports, "I'm currently serving on active duty in the U.S. Air Force at Kirtland Air Force Base in Albuquerque, N.M. I work at the Air Force Research Laboratory developing technology for the next generation of U.S. ballistic missiles."

Ben Goldberg '11 has switched jobs and is now at Casenet, in Bedford, Mass.

Mark Kuhlwein '11 writes, "I hope everyone has been doing great with their lives since graduation. I know I have—I'm an MCAS biology teach at Fitchburg (Mass.) High School. Basically, the kids who are having trouble passing the state's standardized test have to take a class with me before they take the test again. It's a challenge, but as all of you know, good things come from hard work and dedication."

Victoria Mason '11 is a claims coordinator at Enservio, and a part-time personal care attendant for a girl who has cerebral palsy. She says, "These jobs occupy my time as I wait to hear about medical school admission for the fall of 2012."

Nathan Nesbitt '11 reports, "Last fall I moved to Medford with two friends from WPI who graduated with us. It surprised me once I settled in how many other WPI alumni live in the area; we've had several dinners since with a bunch of us that sort of knew each other while at WPI, and have all enjoyed building new relationships. I am a physics graduate student at Boston College, where I will be doing research on either bio-sensing or meta-material solar cells this summer. I bike 14 miles to get to school, which has been a wonderful experience after living in Worcester—they have bike lanes in Boston!"

Kushal Palkhiwala '11 is a graduate student at WPI, and just got an internship with CR Bard working on a tissue regeneration project.

Sean Patrick '11 married his high school sweetheart of 10 years, Jessica Gay, on Sept. 10, 2011. They live in East Free-town, Mass.

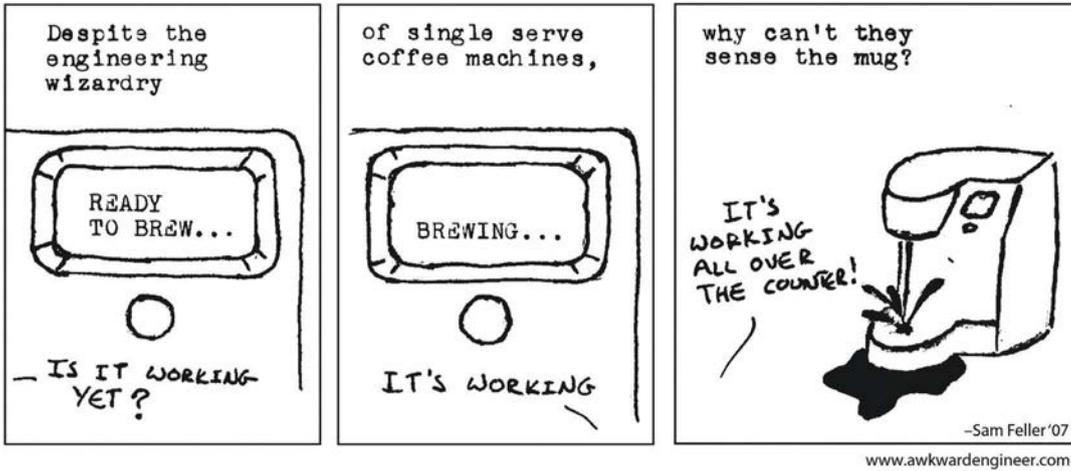
Caitlyn Shaddock '11 is about three-quarters through the master of arts in teaching program for secondary school education at Northeastern. She is completing her student teaching at Burlington High School, with hopes of securing a teaching position somewhere for the fall.

"Hey! This is **Rashmi Venkatesh '11**. I've been pursuing a PhD at Georgetown University in Pharmacology and have been doing great!"

Ian Williams '11 says, "I've been working at Microsoft since July, and the time has come to finally ship my product. Exciting times! In other news, I've taken up snowboarding as a hobby and become a metalhead—our old WWPI president **Devon Ward** would be proud."

Adelina Zaimi '11 (MME) writes, "As a math teacher, I have been analyzing Worcester School District MCAS data. I look for trends, areas of weakness by type of question, by strand, as well as by different subgroups such as performance of students with disabilities, and students for whom English is a second language."

Awkward
ENGINEER



Sujiken Solution

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 Albert J. Kullas '38 (Phi Kappa Theta)
 Roger W. Bryson '39
 Roger L. Iffland '39
 Walter E. Crandall '40 (Phi Gamma Delta)
 Edward P. Disbrow '41
 John T. Haran '41
 Stannard M. Potter '41
 Sidney Soloway '41 (Alpha Epsilon Pi)
 Robert F. Wilson '41 (Phi Sigma Kappa)
 Gerald J. Bibeault '42
 Philip L. Camp '42 (Sigma Phi Epsilon)
 Randal B. Hathaway '42
 Robert H. Hodges '42 (Theta Chi)
 Robert L. Holden '42 (Lambda Chi Alpha)
 Earle B. Quist '42 (Lambda Chi Alpha)
 John E. Wood '42
 Walter J. Farrell '43 (Lambda Chi Alpha)
 Philip J. Gow '43 (Alpha Tau Omega)
 Averill S. Keith '43 (Lambda Chi Alpha)
 John McLay '43 (Phi Sigma Kappa)
 Vladimir T. Dimitroff '44
 Roger G. Edwards '44 (Alpha Tau Omega)
 Lloyd G. Mann '44
 James T. Pearce '44 (Alpha Tau Omega)
 Philip B. Jones '45 (Sigma Phi Alpha)
 Robert M. Neumeister '45 (Sigma Phi Epsilon)
 Harry W. Sandberg '45 (Phi Gamma Delta)
 Harry B. Wesley '45
 Willard J. Adams '46 (Phi Sigma Kappa)
 Robert D. Bartlett '46 (Lambda Chi Alpha)
 Frank L. Baumgardner '46 (Sigma Phi Epsilon)
 Richard C. Lawton '46 (Phi Sigma Kappa)
 Daniel W. Knoll '47 (Phi Sigma Kappa)
 William Longmuir '47 (Phi Sigma Kappa)
 James G. McKernan '48
 Richard W. Morse '48
 Clark L. Poland '48 (Alpha Tau Omega)
 Alan K. Riedel '48 (Sigma Phi Epsilon)
 Harold A. Melden '49 (Sigma Phi Epsilon)
 Harry H. Mochon '49 (Sigma Phi Epsilon)
 Carl W. Ringquist '49

R. Reed Grimwade '50
 Ralph E. Partridge '50
 John C. George '51 (Sigma Alpha Epsilon)
 Carl E. Johnson '51 (Alpha Tau Omega)
 Antonio J. Renazco '51 (Theta Chi)
 Donald F. Stockwell '51
 Horace G. Trainer '51 (Sigma Alpha Epsilon)
 Rocco R. Diverdi '52
 Burton Rendall '52
 Stuart B. Rowe '52 (Phi Sigma Kappa)
 Henry Shapiro '52 (Alpha Epsilon Pi)
 Raymond G. Giguere '53 (Theta Chi)
 Lt. Col. H. G. Stanton '53 (Phi Gamma Delta)
 Howard I. Nelson '54 (Phi Sigma Kappa)
 Gordon E. Walters '54 (Phi Sigma Kappa)
 Howard J. Dworkin '55
 James S. Mathews '55 (Phi Kappa Theta)
 David C. Provost '55 (Sigma Alpha Epsilon)
 Robert E. Mulno '56 (Alpha Tau Omega)
 Edward A. Blakeslee '56 (Alpha Tau Omega)
 Robert H. MacGillivray '58
 Ralph A. Huey '59 (SIM)
 F. Bernard Lally '59
 Paul R. Gould '60
 Edward B. Allen '62 (Theta Chi)
 Robert M. Smith '62 (SIM)
 Verne R. Viele '62
 Michael Gerson '63 (Alpha Epsilon Pi)
 Howard G. Sachs '65 (Alpha Epsilon Pi)
 Alan W. Moku '66 (Alpha Tau Omega)
 Arthur A. Wentzell '66 (SIM)
 Timothy J. Hester '67
 John J. Korzick '68 (Phi Kappa Theta)
 Henry E. McGuire '69 (Phi Kappa Theta)
 Frederick J. Aspinwall '70 (SIM)
 Robert J. Harvey '70
 Timothy J. Coakley '71 (SIM)
 Lawrence J. Snow '71 (Sigma Pi)
 Earle R. Vancelette '71
 Michael J. Winn '71 (Lambda Chi Alpha)
 Richard I. Hatch '72 (SIM)
 Steven C. Tremblay '72
 Ronald J. Lak '73 (Sigma Alpha Epsilon)
 John P. Sullivan '73 (MS)

Margaret K. St. John '75
 William P. Conner '76 (SIM)
 Raymond P. Wilson '76 (SIM)
 Jon P. Hammarstrom '77 (Phi Kappa Theta)
 Richard D. Lindberg '77 (SIM)
 Steven A. Massey '81
 Douglas J. Powers '83
 Kevin M. King '92
 James J. Jurczyk '92 (SIM)
 David M. Finnegan '94 (MS)
 Sean K. Duffy '00
 Megan A. Lally '02
 Robert W. Miner '04 (Zeta Psi)
 Christian F. Shetler '05

FACULTY, STAFF, AND FRIENDS

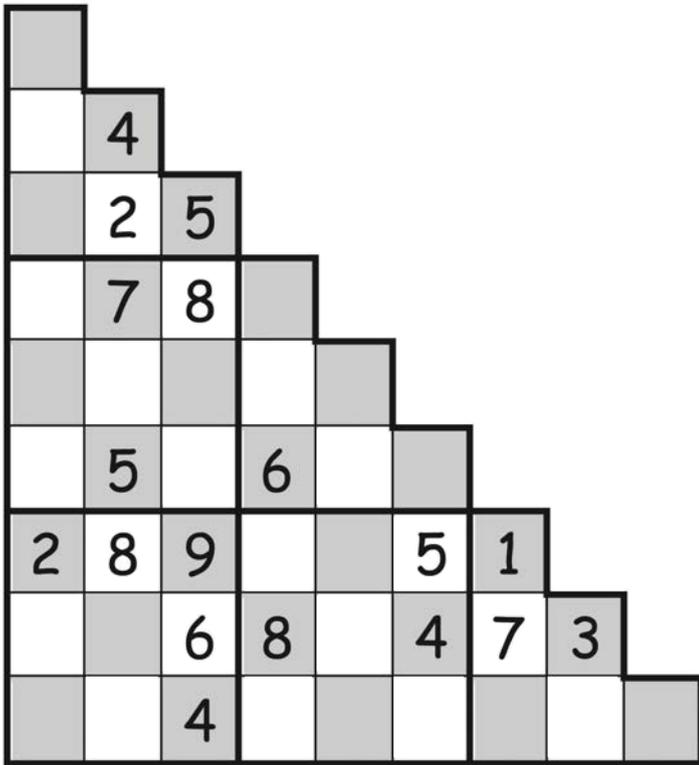
Donald N. Zwiep, emeritus professor and former head of WPI's Department of Mechanical Engineering, died on April 14, 2012, in Naples, Fla. He was 88. The longest-serving academic department head in WPI's history, he joined the faculty in 1957 and led the department through the formation of new graduate programs. He retired in 1990 and remained active as a project advisor. Survivors include his wife, Marcia; four daughters, nine grandchildren, and two great-grandchildren. Memorial donations may be made to the Donald Zwiep M.E. Memorial Fund at WPI.

Trustee Emeritus Myles J. McDonough, who joined the Board in 1989, died March 30, 2012, at age 82. He served on the board's Physical Facilities Committee during a decade that saw great changes to WPI's campus, including the construction of the Campus Center and the conversion of West Street into a pedestrian mall. McDonough was chairman of FLEXcon Co. He is survived by his wife, two sons, and seven grandchildren.

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 alumni-editor@wpi.edu or call 508-831-5998.

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 86

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WPIIndex Sources

#1, 2, 3, 4 Centers for Disease Control; #5 EPA Statistics on End-of-Life Elections; #6, 7 Earth911.com; #8, 9 Satellite Industry Association; #10, 11 Wikipedia; #12, 13 Union of Concern Scientists Satellite Database; #14, 15, 16, 17 NEASC Accreditation Report 2012; #18, 19 Manual of English Meters, J. Malof; #20, 21 Alexa.com; #22, 23 Chronicle of Higher Ed; #24 WPI 2005 President's Commission Report; #25 NEASC Accreditation Report 2012; #26, 27 Goats4H.com; #28 DairyGoatJournal.com; #29, 31 WPI Annual Fund Office; #30 WPI Admissions Office.

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