

EXCELLENCE AND INNOVATION

WORCESTER POLYTECHNIC INSTITUTE
PRESIDENT'S REPORT 2008



Worcester Polytechnic Institute

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EXCELLENCE AND INNOVATION



As I write this note, the world is grappling with a complicated and often bewildering array of challenges—from economic upheaval and violent conflicts to climate change, dispiriting corruption, and unrelenting poverty in some of the most vulnerable places across the globe. These are turbulent times for individuals, families, institutions, and nations, but as I bear daily witness to the work of this university, I find myself profoundly optimistic

about the future of WPI and deeply heartened by the leadership we can offer. Ours is a community filled with the imaginative, determined, and principled leaders the world is calling out for—those who can rise to the challenge, create effective solutions, and inspire others to work together for the common good. This is truly a moment for WPI.

For this 2008 President's Report, we have chosen for our theme Excellence and Innovation. In the pages that follow, you will find vivid illustrations of WPI students, faculty, staff, and alumni who exemplify these qualities, which one sees in abundance across the university. You will also read about the deliberate steps WPI has taken to preserve its vitality during the difficult economic times ahead, safeguard its enduring tradition of *Lehr und Kunst*, and ensure its continued success and bright future.

All those who know and love WPI recognize that excellence and innovation have been woven into the fabric of this university since its founding when a small group of individuals set out to establish a new kind of institution, one that Stephen Salisbury II described in 1871 as “the first attempt in our country to combine theoretic knowledge and practical training.” Today, excellence remains the standard by which we judge everything we do at WPI. It is the rigor we demand of ourselves and the support we offer one another as we strive to achieve our goals. Innovation provides the spark that energizes our work and draws us together. It is creative, inquisitive minds imagining something that has never been before—from the first liquid-fueled rocket, to a sustainable laundry system in Cape Town, South Africa, to new stem-like cells that may be used to replace tissue lost to injury, grow new organs, and cure degenerative diseases like diabetes and Parkinson's.

About the cover: The WPI motto, Lehr und Kunst (Theory and Practice), has informed the curriculum since the Institute's founding in 1865. Today, theory and practice can be seen in the excellence and innovation that permeates the WPI spirit, as evidenced throughout this report.

If the WPI community has long been characterized by the pursuit of excellence, we recently recommitted ourselves to celebrating its accomplishment, as well. After a 34-year absence, the university has reinstated the Dean's List to recognize the success of our students. Of course, the world recognizes the achievements of our students, too. Just a few months ago, Chuck Gammal '08 was chosen as the nation's top electrical and computer engineering student. I had the pleasure of knowing Chuck and serving with him on a few committees, and I am delighted that he received this prestigious award, which recognizes both scholastic excellence and high moral character.

The faculty continue to do all they can to provide WPI students with a truly distinctive education that stimulates their best thinking and prepares them to make great contributions to the world. While they remain committed to WPI's signature offerings like the Global Perspective Program and the Interactive Qualifying Project, WPI faculty are continually reexamining the curriculum to ensure its relevance and robust good health. This past year, for example, they created two new Great Problems Seminars, adding Heal the World and Making Our World to Feed the World and Power the World. At the same time, WPI faculty pursue their own research with a gusto that reverberates across the university. As of this writing, two of our colleagues are currently at work in Asia as Fulbright Senior Scholars. Thomas B. Robertson, assistant professor of history, is exploring the consequences of American rural development in Nepal, and Seth P. Tuler, research assistant professor of interdisciplinary and global studies, is looking at the need for improved environmental health communications in Thailand.

While it is right and proper that we celebrate our successes, I would like to add a word about mistakes. Excellence is not the absence of mistakes. It is the response we make to those mistakes, what we learn, and how we find our way. This is something that our own Robert H. Goddard, Class of 1908, would surely have understood. As an undergraduate, Goddard pursued several ideas that eventually proved fruitless, even setting off a terrific explosion on campus one day. If he had been discouraged by these mishaps, or cowed by his professors, he might never have come to be known as the father of modern rocketry. And his example would not have lived on to inspire new generations of WPI students, such as Gasthi Sivayoganathan '11, who also dreams of going to the moon (see page 11).

If a foundation of excellence and innovation has sustained WPI, then it has also been central to the WPI character to put these qualities to work for a larger purpose. We seek more than the discovery of esoteric knowledge that benefits, or is even understood, by the very few. Rather, we seek knowledge that

will improve the lives of our fellow man. “If the cause be not good,” as Shakespeare wrote in *Henry V*, then you will find little enthusiasm for it at WPI.

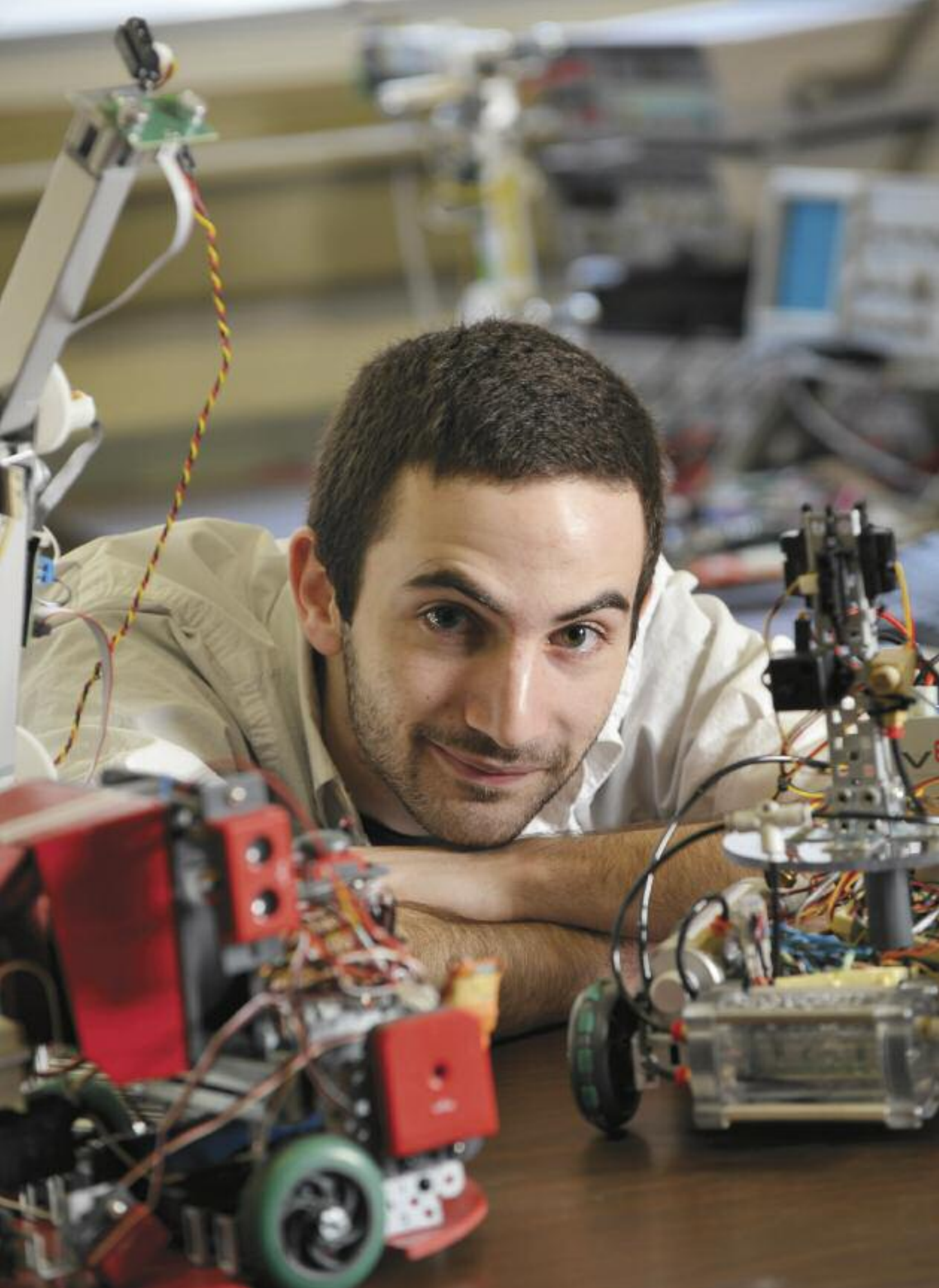
Of course, I believe WPI itself is the most worthy of causes and I find myself joined in that belief by thousands of alumni and friends who have invested in our mission of preparing the next generation of innovators and leaders. The generosity and support of our alumni and friends is most heartening, especially during this time of great fiscal challenge. One alumnus has sponsored a new, multimillion dollar scholarship program; several others have created new endowed professorships; still others have chosen to support the Global Perspective Program or the Great Problems Seminars. We are truly grateful, although not surprised, that the WPI family is rallying around the university.

For a deeply moving portrait of our community, I turn to Ryan Patrick Jones and Jason Cox, two young men from the Class of 2005 who will be forever linked by their ties to the university and by their service to the nation. Two years ago, the WPI community mourned Ryan's death from wounds he suffered in Iraq when his vehicle struck a roadside bomb. During Jason's seven-month tour in Fallujah, he served as a fire team leader and was required to be in the turret of Humvees, which were often exposed to improvised explosive devices (IEDs). The experience gave Jason a new mission—to design a device that would detect IEDs. Now a graduate student at WPI, Jason recently received the United States Navy and Marine Corps Achievement Medal for his research, which has already been put to use by the Marine Corps. Responding to such a fine recognition, Jason merely said, “It saves lives, and that's what counts.”

In 1945, in the early days following World War II, Admiral Wat Tyler Cluverius, then-president of WPI, talked with students about the challenges before them. “Perhaps,” he said, “this is the last time you will have to rebuild a world.” Today, our students, faculty, and alumni are again at work, if not rebuilding the whole world, then creating the solutions, making the advances, and providing the leadership that will see us through the difficult days ahead. I cannot think of a more exciting, rewarding, or noble endeavor.

Yours sincerely,

Dennis Berkey
President and CEO



power in numbers

ANDREW MARCHESE '10: BUILDING ROBOTS FOR A BETTER FUTURE

It's not hard to rally behind Andy Marchese and his Swarm Bots for Solar Energy Collection, the winning entry in WPI's 2008 Strage Innovation Award.

His intent is so purposeful, so altruistic, you can't help but want to see his ideas reach fruition. He entered the competition last year with the "hope of proposing a brand new idea that could improve the quality of life," he says. "It's not that much fun to reinvent the wheel."

His fervor has little to do with the actual prize. The reward, he says, is that he was able to take an idea that was "dormant in his head" for some time and give it legitimacy. Marchese fused his interests in robotics, electrical engineering, and biology, mimicking the social behavior of insects to explore an alternative way of harnessing energy. The project examines how nature accomplishes certain social tasks as ways of gathering resources. The swarm aspect, the centerpiece of his project, reinforces the belief that group synergy yields tremendous power.

The same can be said for innovation at WPI. "An idea isn't achievable alone," he says. "It takes input and support from everyone around you."

Marchese calls WPI the "fertile crescent," where anything can take shape and grow. "Anytime you come up with an idea," he says, "there's a point when you're going to second guess yourself. But if you talk to a professor who's been doing this for 30 years, and if that professor is encouraging, it gives you confidence and reassurance and helps you cultivate the idea even more."

Now a double major in robotics engineering and biomedical engineering, Marchese once considered studying history because he believed engineering would limit his creativity. But the WPI culture has shown him that engineering is not just about formulas. Engineering, he says, is what enables him to be most innovative.

"An idea isn't achievable alone. It takes input and support from everyone around you."

FACULTY RESEARCH: ADVANCING HEALTH CARE IN A DIGITAL ERA

The push is on to bring the U.S. health care system into the digital age by replacing paper-based systems with electronic medical records and other information technology tools. To assess the impact of those systems, and to guide future implementations, WPI has launched an innovative three-year study of IT practices at four medical organizations—two in the United States and one each in Canada and Israel.

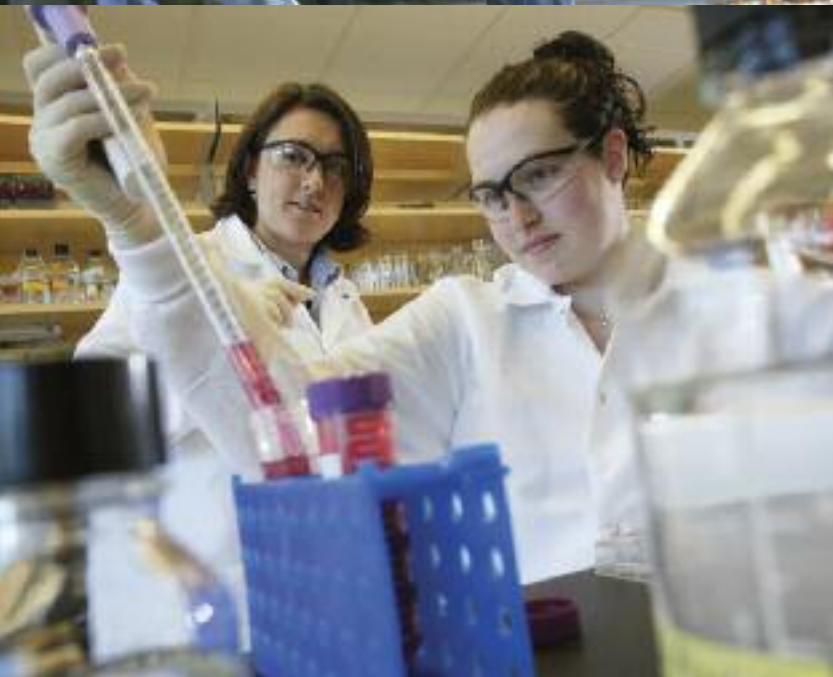
Funded by a \$750,000 grant from the National Science Foundation, the study will analyze how the new technology affects medical providers, patients, and health care operations. “From what we observe, we will develop new ideas and new concepts for health care delivery, such as better ways of organizing workflow and decision making to take advantage of the opportunities enabled by these IT systems,” says Diane Strong, professor of management.

Strong joins Sharon Johnson, associate professor of industrial engineering, and Isa Bar-On, professor of mechanical engineering, in leading the study. They have extensive experience analyzing the impact of IT in large organizations, such as global manufacturing companies. “As we’ve seen in many other complex organizations, just installing an IT system alone typically doesn’t achieve efficiencies,” Johnson says. “What has to happen is that an organization and its processes need to adapt to realize the efficiencies and quality improvements that are enabled by IT.”

Domestically, the study will focus on two organizations in Massachusetts: the Fallon Clinic, a large group medical practice, and UMass Memorial Health Care, an integrated medical system comprising several hospitals and clinics. In Canada, the study includes primary care offices of the Vancouver Coastal Health District; in Israel, the study will examine primary care practices in two of the four quasi-private health funds that cover the entire population. The sites were chosen because of their diversity of cultures, experience with IT, operating models, and management structures. In Israel, for example, more than 90 percent of physicians are already using the technology. “Looking at Israel will give us a reality check,” Bar-On says. “We’ll see what works, and what doesn’t, and learn from people who have been using these systems for more than 10 years.”



*innovative
study*



UNIVERSITY HIGHLIGHTS



JULY 2007

- The university's Metal Processing Institute is featured in a July 25 History Channel documentary on aluminum.

- WPI announces the establishment of a new endowed professorship in chemistry made possible by the generosity of the late John C. Metzger Jr. '46, and his wife, Jean. Kristin Wobbe, associate professor and head of the Department of Chemistry and Biochemistry, is later named to the professorship.

- President Dennis Berkey is elected vice chairman of the Association of Independent Colleges and Universities in Massachusetts, a one-year term.



AUGUST 2007

- Topping-off ceremony celebrates the final roof beam's installation in new green residence hall; East Hall opens to students in August 2008.

- WPI researchers win a million dollars to develop a system to locate and monitor emergency workers in buildings; the university hosts national forum on this critical issue.

- WPI launches the Great Problems Seminars, empowering first year students to work on projects of global importance.



SEPTEMBER 2007

- WPI celebrates the official opening of the Life Sciences and Bioengineering Center at Gateway Park with a week of activities, including a lecture by 2006 Nobel Laureate Craig C. Mello, professor of molecular medicine at the University of Massachusetts Medical School.

- WPI announces the establishment of the Beswick Professorship in Innovation and Entrepreneurship, through the generosity of Paul R. Beswick and his wife, Siang Kiang.



SEPTEMBER 2007

- Homecoming weekend activities include the dedication of a renovated Alumni Field, naming the track after legendary WPI coach Merl Norcross.

- National Math and Science Initiative awards Massachusetts and Mass Insight Education and Research Institute a \$13.2 million grant to bolster the number of students enrolling in Advanced Placement courses. WPI will play a key role in the program.



develop talent

STEPHEN FLAVIN: A NEW MODEL FOR A NEW ECONOMY

Stephen Flavin finds success in helping others find success. As associate provost and dean of WPI's Corporate and Professional Education (CPE), he works with individuals and organizations to come up with innovative ways to unlock their potential. "There's something very fulfilling in helping organizations develop talent," he says.

The CPE division offers a complete portfolio of educational solutions for working professionals seeking to advance both their company and career. Whether it's a non-credit technical workshop or a graduate degree, individuals can sharpen and expand their skill set, and employers are able to bring the academic rigor of a world-class university to their company. "We're filling a much needed role," Flavin says. "Each of our programs has brought tremendous value to our corporate partners."

Last year, for example, a CPE program (Fundamentals of Biotech Manufacturing) retrained longtime chemical manufacturing workers from Polaroid Corp. for new careers in the rapidly expanding bioscience and biomanufacturing industry. The workers gained relevant biotech skills and were matched with new employers as they completed the program. The return on investment, Flavin says, was considerable. "These are workers who essentially never saw unemployment. They spent less time looking for a job, and less time feeling disconnected from the workforce."

Today, CPE's work remains ever more critical, with the nation's workers preoccupied by the uncertainties of a new economy in which their jobs might be eliminated or their skills rendered obsolete. "We work to understand the current and future needs of our customers and build programs that deliver sustainable results," Flavin says. "This is a new model of workforce development that's increasingly embraced by industry and government."

Among his accomplishments, Flavin is proudest to have mobilized a strong team of WPI professionals who are valued by clients as trusted experts. "When we've done our job well," he says, "the WPI name becomes more well known among a larger circle of people. These are the potential employers of our graduates and the parents of potential future students."

"There are so many positives," Flavin adds, "It's all very gratifying."

"We're filling a much needed role. Each of our programs has brought tremendous value to our corporate partners."

STUDENT PROJECT: SUSTAINABLE SOLUTIONS BRIDGE CULTURAL DIVIDE

The concept of innovation can take on any number of different meanings. To four seniors who traveled to a remote part of southern Africa last spring, being innovative meant stripping away all they knew to be true to be able to understand another point of view.

Last year, Nick Careau, Martha Gray, Charlie Mezek, and Phyllis Wall spent seven weeks in Namibia to assess the potential implementation of a basin management program in the Fish River Basin. After interviews with local authorities, community representatives, and water and sanitation experts, the team concluded that the country didn't need innovative ideas; it needed a better way to communicate and cut through a cultural divide.

"We found that a tremendous amount of innovation already existed," says Mezek. "It was a matter of confronting the limits of innovation."

Communities weren't sharing information and there was a great deal of reluctance to implement new ideas, such as waterless toilets. "Everybody wanted flush toilets because they thought they were better," Mezak says, "even though water resources are scarce."

The group presented their findings and recommendations to the Desert Research Foundation of Namibia, many of which have since been implemented, such as conducting educational workshops, producing instructional manuals, and using technology (email and text messaging) to deliver information.

Will it make a difference in the long term? The group is convinced it will. "Our job was to contribute an accurate picture of what we saw going on," Mezek says. "It was humbling to think we were going to go there as technology people to tell all these experts something they didn't already know."

"Our role was to create a connection," he says. "And we did."



UNIVERSITY HIGHLIGHTS



OCTOBER 2007

- WPI launches new robotics engineering program, the first of its kind in the United States, with a symposium on the robotics revolution.
- Mechanical engineering professor Rick Sisson is elected president of ASM Heat Treating Society.
- The Alfred P. Sloan Foundation awards a \$500,000 grant to a group of universities led by WPI to inaugurate the National Professional Science Master's Association.
- RXi Pharmaceuticals signs a 20-month lease to locate in the WPI Life Sciences and Bioengineering Center, with the option to become the lead tenant of a future building. The biopharmaceutical R&D company was founded by 2006 Nobel Laureate Craig C. Mello.



NOVEMBER 2007

- *BusinessWeek* ranks WPI's part-time MBA program No. 1 in the Northeast and No. 9 in the nation; celebration is held in April 2008.
- American Society of Engineering Education ranks WPI No. 2 in the nation for percentage of biomedical engineering degrees awarded to women.



NOVEMBER 2007

- Professor Yi Hua "Ed" Ma receives the Institute Award for Excellence from the American Institute of Chemical Engineers.
- Robert Norton, Milton Prince Higgins II Distinguished Professor of Mechanical Engineering, is named Massachusetts Professor of the Year by the Council for the Advancement and Support of Education.
- WPI and the Worcester Business Development Corp. receive the 2007 Phoenix Award and a U.S. Department of Commerce national award for Gateway Park.



DECEMBER 2007

- WPI University Lecture features Ronald Prinn, professor of atmospheric research at MIT, who speaks on climate change, economics, and policy.
- Hundreds of students ages 9-14 participate in 7th annual RoboNautica state robotics tournament, hosted by WPI.

finding perspective





discovery mission

BHALAYOGASTHINI SIVAYOGANATHAN '11: AN ASPIRING ASTRONAUT

Gasthi Sivayoganathan has a bold dream: to go where no Sri Lankan woman has gone before. Her childhood hero was Valentina Tereshkova, the first woman in space, and she was later inspired by the first Indian-American woman astronaut, Kalpana Chawla, who died in the 2003 Space Shuttle Columbia disaster.

"Very few people in this whole world will have the chance to go beyond the earth," she says. "Anyone can travel, but few experience the excitement of visiting other planets and discovering new things."

Sivayoganathan chose WPI over other engineering programs, knowing that lecture halls packed with hundreds of students were not for her. "I like to sit in the first row," she says. "That way, if I don't understand something, my professor knows from my facial expression that I didn't get it."

A mechanical engineering major and physics minor, she thrives on the personal attention she gets from her professors and loves the rapid pace of the WPI curriculum. "Instead of sitting in class for two months and writing a final exam at the end, we're working on projects throughout the term. With only seven weeks, there's no chance to slack off. I really like that."

Outside of class, she is a Student Government Association senator, vice president of the Indian Student Organization, and a member of the International Student Council. She has traveled to Washington as a Youth Opportunities Coordinator for One World Youth Project, an international organization that brings together high schools from different countries to work on UN goals. She also tutors eight hours a week and works nine hours a week for the admissions office. "I'm always trying to manage my time better than I managed it yesterday," she says, "and looking for ways to be more effective." The reward is the opportunity to meet diverse people and work on interesting projects, she says.

The aspiring astronaut did get her hands on some moon dust, assisting WPI's "Dig-IT" team in a national NASA-sponsored competition to design a robotic system to excavate lunar soil samples.

"I never have a dull moment," she says. "There is so much going on here, if you are ready to take it, you can definitely go and grab it."

"Anyone can travel, but few experience the excitement of visiting other planets and discovering new things."

WILLIAM R. GROGAN '46: SHAPING THE FUTURE OF EDUCATION

Looking back over the nearly 40 years of the WPI Plan, WPI's innovative approach to undergraduate education, Bill Grogan has one particular nit to pick. "I've often wished we'd chosen a different name," he says. "It's a system, not a plan. 'Plan' seemed to lock it up, so when we made changes, some people felt it was the end of the Plan."

The Plan has undergone a number of changes. For Grogan—who served on the faculty committee that created the Plan and then, as WPI's first dean of undergraduate studies, led its implementation—most have been necessary refinements, including the elimination of the Competency Exam, the all-or-nothing final test that was among its original requirements.

"The Plan is a living system," says Grogan, who believes the program is more innovative today than it has ever been. He points to the Interactive Qualifying Project (the required science, technology, and society project) as an element whose importance has only grown through the years as hundreds of projects have been completed at WPI project centers around the world.

Grogan notes with pride that nothing quite like the Plan exists at any other university, "and I don't think it could." The reason, he says, is WPI's calendar, with its four seven-week terms. Being away for a semester can be too costly for students and faculty, but seven weeks is doable. "The term system was an important enabling feature."

However, the Plan's continued vitality does face threats, Grogan says. He is concerned, particularly, about the continual infusion of new faculty who must buy into WPI's distinctive way of doing things. Many do, he says, often by seeing the excitement of students and alumni.

"When you hear alumni talk about the effect this education had on them, their enthusiasm is amazing," he says. "That's when you know it really does work."



UNIVERSITY HIGHLIGHTS



*enabling
innovation*



JANUARY 2008

- WPI receives \$1.5 million NSF award to develop intelligent tutoring system for improved science education.
- Gateway Park team receives \$250,000 from Economic Development Administration.
- WPI appoints Stephen J. Lemire as the first executive director for new National Professional Science Master's Association.
- WPI receives \$6 million from George I. Alden Trust for a new center in undergraduate life sciences, to be located in Goddard Hall.
- Red Sox ace Curt Schilling visits WPI's GameJam, a 38-hour design marathon for aspiring video game developers.

FEBRUARY 2008

- Wenjing Lou, assistant professor of electrical and computer engineering, wins coveted CAREER Award, the NSF's most prestigious recognition for young faculty members. Lou's research focuses on wireless networks and their security.
- WPI is a satellite site for Hillary Clinton's National Town Hall Meeting.
- WPI receives gift from IPG Photonics to enhance photonics teaching and research.

MARCH 2008

- WPI men's basketball is a five-time NEWMAC regular season champion, reaching the NCAA Division III tournament for the fourth year in a row.
- Helen Vassallo '82 (MBA), professor of management, receives Women of Consequence Award from the City of Worcester.
- Diran Apelian, Howmet Professor of Mechanical Engineering and founder and director of WPI's Metal Processing Institute, assumes presidency of The Minerals, Metals, & Materials Society (TMS).

MARCH 2008

- Graduate Research Achievement Day showcases the breadth and talent of graduate students' work; research topics include new ways of removing harmful chemicals from water supplies, advances in 3D ultrasound imaging, and improving the performance of lithium ion batteries, among others.
- WPI study finds exposures to low levels of radon appear to reduce risk of lung cancer.





creating value

SOPHIE VANDEBROEK: INNOVATION EVANGELIST

Sophie Vandebroek is on a mission to make one thing perfectly clear: if you don't innovate, you become obsolete. An undisputed truth in any venture, innovation is about creating value for the customer. Otherwise, you have an idea with nowhere to go.

Vandebroek uses her years of experience to promote novel thinking not only at Xerox Corp.—where she is chief technology officer and president of the Xerox Innovation Group—but also on campus, as a member of the WPI Board of Trustees.

The key to innovation in academia, she says, is no different from what it is at Xerox, where she is responsible for fueling the flames of innovation at the \$17.6 billion company. (Last year, Xerox received the U.S. National Medal of Technology, recognizing over 50 years of innovation.) Just as a multinational corporation must create value for the customer with a practical economic return, so too must a university. “You aren't innovating if you come up with a product or service that no one thinks is important or valuable,” she says.

And while infusing creativity into the curriculum is vital, having a solid understanding of the basics in science and technology is also crucial. “You can be a good innovator only if you have respect and credibility that can be relied on,” she says. “The notion of having your ticket punched—getting a PhD in physics or engineering, for example—remains extremely critical. You must know things in great depth and have a very strong core competency, while at the same time being creative and entrepreneurial.”

Vandebroek, whose son is a first year student at WPI, points to the university's project-enriched curriculum, interdisciplinary majors, and outreach to non-academic experts that put it ahead of the competition. In her role at Xerox, she has had the opportunity to collaborate with universities around the world, and says, earnestly, “WPI has one of the most innovative curriculums of any of the schools that I have seen.”

“You can be a good innovator only if you have respect and credibility that can be relied on.”

MARYANN BAGDIS GOEBEL '73: EXPRESS ROUTE TO SUCCESS

Maryann Bagdis Goebel had to find her own way to WPI. Her high school initially was reluctant to arrange a campus visit for her, believing that WPI was still all male. Inspired by newspaper photographs of WPI's first two women students, Goebel had to prove to the guidance counselors that she was indeed eligible to apply. Her persistence paid off. She was accepted early decision and was one of 17 women to graduate in WPI's second coed class.

Most recently, Goebel was chief information officer at DHL Express worldwide. Based in Cologne, Germany, she spent much of her time traveling between DHL's global regions, while keeping a foothold at her home in Fort Lauderdale, Fla. And with the company's 4,700 facilities in 220 countries offering overnight door-to-door international delivery, with real-time tracking, to all corners of the world, Goebel's IT strategy and ability to execute was key.

Although the signposts may not have been clear in 1968, WPI was clearly the right route, offering Goebel an environment that was challenging yet providing the opportunity to flourish. (She has since steered others to that WPI path—two sisters, Judy Bagdis Largesse '77 and Carol Bagdis Averka '84, and a nephew, Nate Largesse '09.)

Following the advice of a favorite boss and mentor who once said the key to success was to "bloom where you are planted," Goebel has uprooted herself again and again, relocating from Philadelphia to Texas, Virginia, New Jersey, Detroit, and now Europe (for the second time), advancing to the top rank of major corporations as a leader in information technology management. She previously held senior IT roles at Frito Lay/PepsiCo., Bell Atlantic NYNEX, and, more recently, General Motors North America, where she was named one of 100 Leading Women in the North American Auto Industry by *Automotive News*.

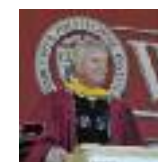
Despite the technical demands of her work, it's the human element of her WPI education that serves her the best. Balancing challenging course work with extracurricular activities instilled self-confidence and discipline while emphasizing the importance of teamwork and prioritization, all essential elements to her corporate success. "Technical expertise is the ticket to entry," she says. "Real results come from working successfully with people."



the human element



UNIVERSITY HIGHLIGHTS



APRIL 2008

- Longtime electrical and computer engineering professor John Orr is named WPI Provost and Senior Vice President.
- WPI's New Voices Theatre Festival celebrates 26 years.
- WPI and President Dennis Berkey receive Bowditch Award from Worcester Business Development Corp. for the university's economic development efforts.

APRIL 2008

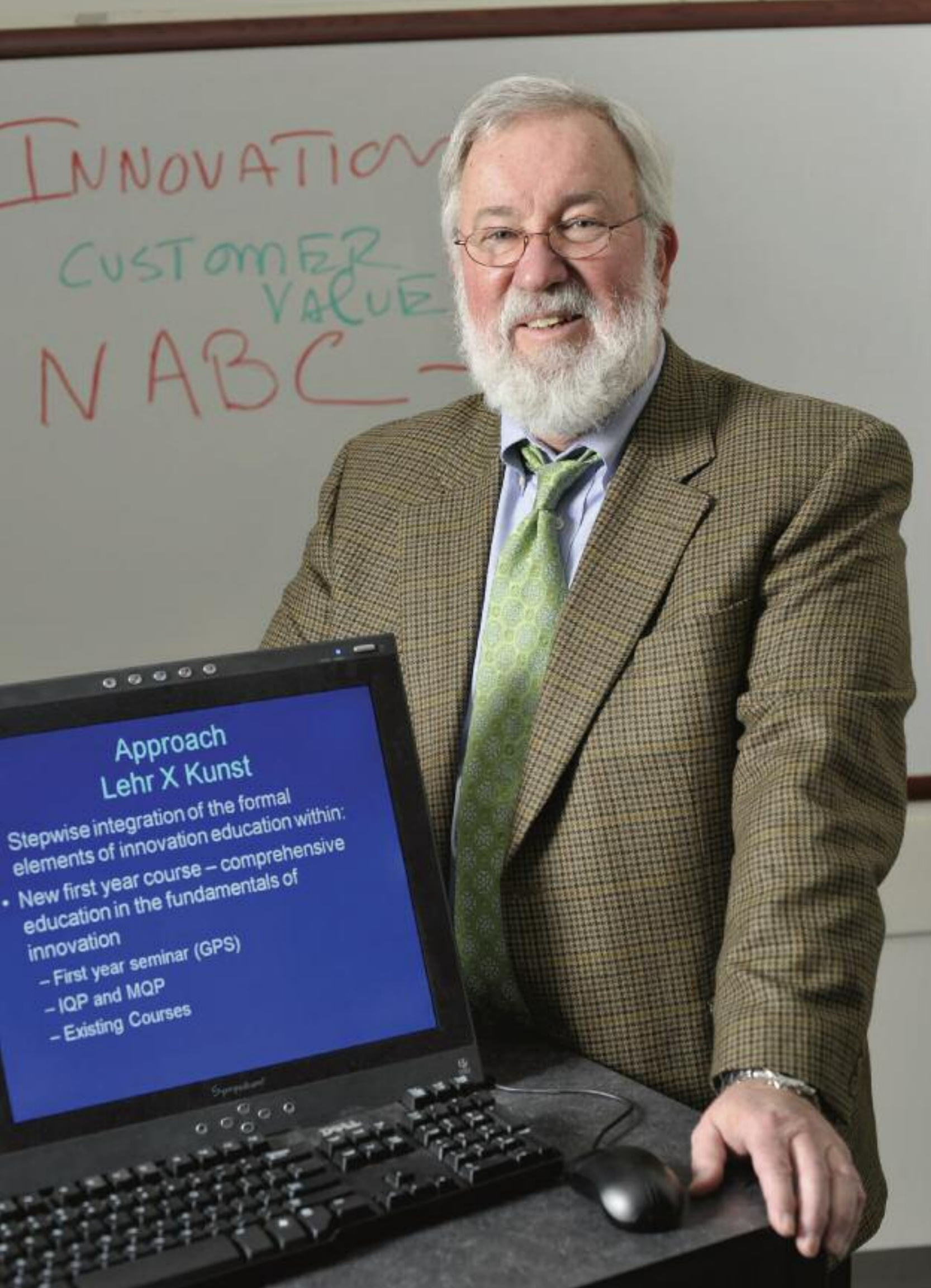
- Student Government Association sponsors celebration commemorating 100th anniversary of Robert H. Goddard's graduation from WPI. The celebration marks the first in a series of events honoring the father of modern rocketry.
- WPI launches interdisciplinary environmental studies BA program.
- EPA names WPI student teams as finalists for prestigious 'People, Prosperity, and the Planet' award.

MAY 2008

- GE's CEO, Jeffrey Immelt, speaks at WPI's 140th Commencement; 1,089 degrees are conferred.
- Professor David Dollenmayer wins Goethe-Institut's prestigious Wolff Prize for German-into-English translation.
- Women's crew varsity 4 earns silver medals at both the New England and ECAC championships.

JUNE 2008

- Professor Dalin Tang wins 2008 Kalenian Award to help develop his invention—a medical software diagnostic tool for analysis and indexing of cardiovascular disease. Established in 2006 by Alba Kalenian in memory of her late husband, inventor Aram Kalenian '33, the award encourages innovation and entrepreneurship among WPI students, faculty, and alumni by providing \$25,000 in seed funds to advance their ideas.
- President Dennis Berkey is elected chair of AICUM (Association of Independent Colleges and Universities in Massachusetts) panel.
- In FY08, WPI raises \$25.3 million in gifts and pledges from alumni, parents, and friends, compared to \$14.7 million in FY07.



Lehr x Kunst

RICK SISSON: CHAMPIONING INNOVATION

Last May, WPI Trustee Curt Carlson '67 approached longtime faculty member Rick Sisson with a simple question: “What are you doing to get innovation into the classroom at WPI?”

Sisson’s answer was the beginning of a cultural shift in the way students’ ideas are encouraged, developed, and ultimately, becoming a reality. “This approach isn’t about what your idea is so much as how you’re going to get that idea into the marketplace,” says Sisson, the George F. Fuller professor of mechanical engineering and a member of a new faculty innovation team looking at ways to infuse innovation into the curriculum.

Whereas the WPI motto, *Lehr und Kunst* (Theory and Practice) has informed the curriculum since 1865, today, Sisson offers a new approach—*Lehr x Kunst*. With Carlson’s blessing, Sisson is advocating for innovation by garnering the support of 19 faculty members who also are integrating innovation into their courses and projects. Following Carlson’s NABC (Need, Approach, Benefit, Competition) methodology, students from first year to graduate levels are learning to articulate customer value propositions and develop business strategy. (The same methodology is used in the university’s Great Problems Seminars—another example of innovation at work, in which first year students devise solutions to global problems.)

“The plan is not to form a new degree, but to permeate the curriculum with the innovation culture,” says Sisson, who’s referred to on campus as the champion of innovation. “We focus not on how to get people to come up with ideas—at WPI, students and faculty have plenty of creative ideas—but rather how to help them take it to market, sell it, bring the idea to fruition.”

Still in its early stages, the innovation team hopes to expand to more participating faculty members, and even have innovation and entrepreneurial classes (in addition to those taught in the management department). Ideally, Sisson says, each student will have at least one class taught by an innovation team member whose role is to guide students to determine and articulate the value of their ideas to the customers.

How so? “We just keep asking them questions,” he says, “What is the need? What is your approach to meet the need? How will your ideas benefit the customers? Who is the competition?”

Most important, Sisson adds, “We give them the vehicle to look at the big picture.”

“This approach isn’t about what your idea is so much as how you’re going to get that idea into the marketplace.”



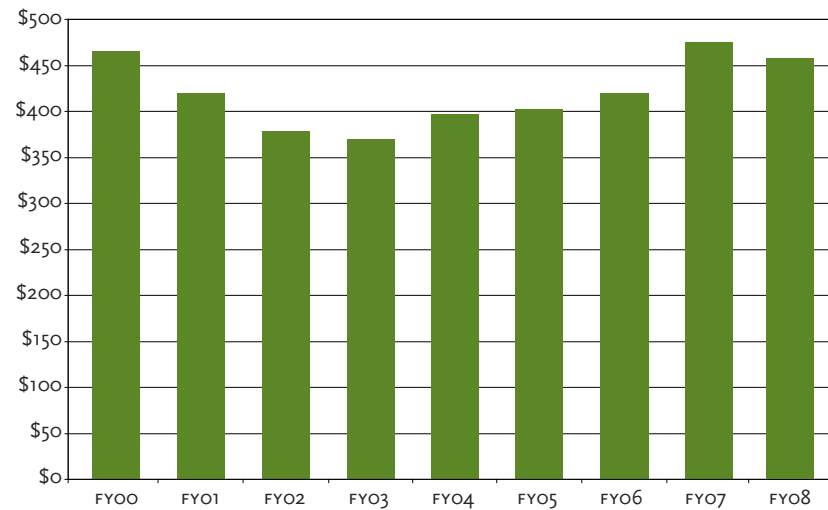
Jeffrey Solomon

This year my report consists of a brief review of our performance for the fiscal year ended June 30, 2008, followed by commentary on the threats facing the U.S. higher education industry as a result of the deepening economic crisis, and how WPI is positioned to meet these challenges and emerge stronger at the end of the recession.

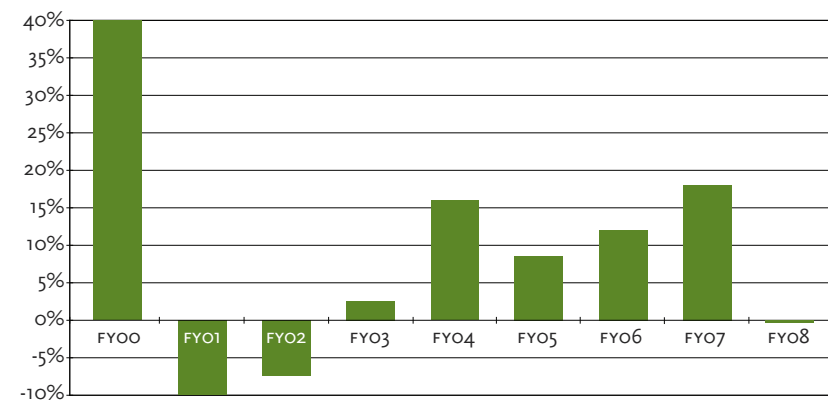
The university ended fiscal year 2008 in a solid financial position, despite the decline in the financial markets and turmoil in the tax exempt bond markets that took place through June 30, 2008. As a result of the continued strong demand for a WPI education, and through conservative budgeting practices, the university recorded a positive operating result for the third consecutive year. The declines in the financial markets, coupled with the endowment's annual operating contribution, were primarily responsible for the decrease of \$15.4 million in the university's net assets to \$460.6 million. The endowment produced a slightly negative total return of less than 1 percent for fiscal year 2008, compared with a loss of nearly 4 percent for the median university endowment over that same period. The broad diversification of our investment portfolio mitigated a greater decline. At June 30, 2008, the value of the university's endowment stood at \$384.7 million.

While WPI was not immune to the turmoil in the tax exempt debt markets that began in the fall of 2007, the university fared relatively well. Our debt

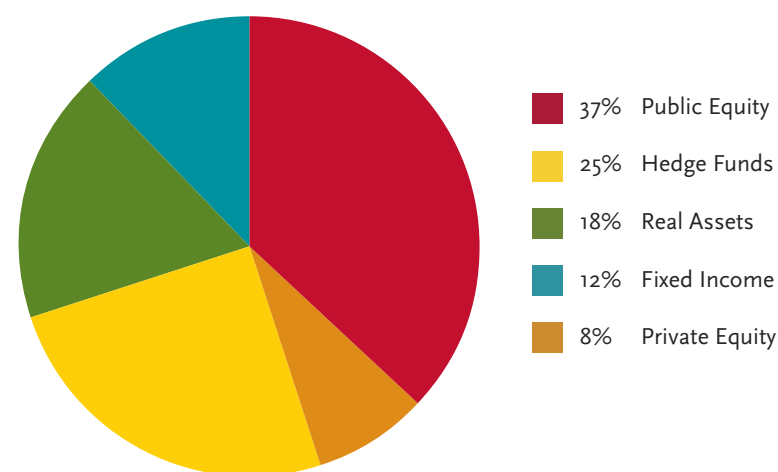
Total Net Assets (in millions)



Endowment: Performance History



Endowment: Approved Asset Allocation Targets



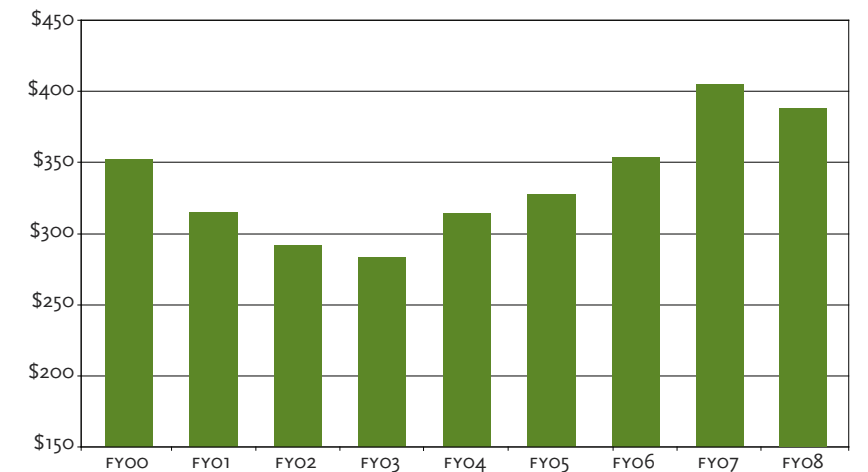
structure includes only a modest exposure to variable rate debt. These securities experienced significant volatility in interest rates during the fiscal year as credit markets tightened, yet we were able to manage successfully through these market dislocations with minimal financial impact.

We maintain a strong commitment to developing facilities that support academic and campus life: last fall marked the completion of a new residence hall for upperclassmen. East Hall is a 232-bed suite-style apartment building with an adjacent 190-car parking facility. The building is next to Founders Hall and features an Arts Walk between the two buildings, creating a vibrant lower campus. We anticipate that East Hall will achieve a LEED Gold rating (Leadership in Energy and Environmental Design) from the U.S. Green Building Council.

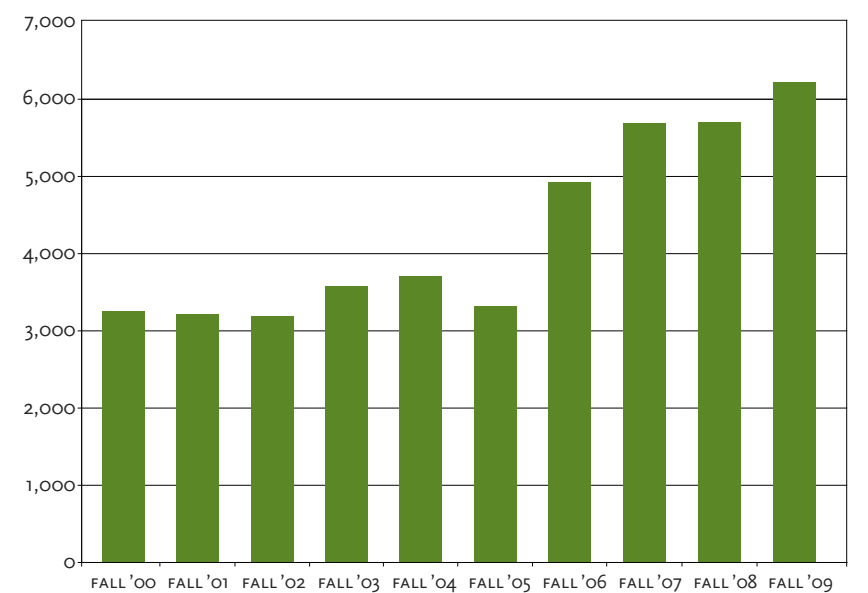
U.S. higher education has been historically resilient during economic downturns. However, several signs are emerging that suggest otherwise, as noted in a recent Moody's Investors Service report. Moody's cited several factors, including the decline in household financial wealth—possibly causing families to seek lower-cost alternatives to a private higher education—and significant declines in endowments, which pressure operating budgets and institutional credit metrics.

Halfway through fiscal 2009, WPI remains in a relatively strong financial position, but we have taken these concerns into consideration in developing our fiscal 2010 budget. The overarching goal is to build a sustainable academic and financial model that adapts to the new economic realities, whatever they prove to be. I am pleased to report that demand for a WPI education

Endowment: Market Value History (in millions)



Undergraduate Applications

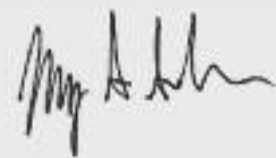


“We maintain a strong commitment to developing facilities that support academic and campus life.”

remains sound, with applications for the fall 2009 entering freshman class at record levels. Understanding that the cost of private higher education may become more difficult for many families, WPI will limit increases in tuition, room, and board rates for fall 2009 to 2.9 percent, the lowest percentage increase in almost two decades, and we will be making more financial aid available to our students. We will continue to invest in our academic program, continuing to recruit strong faculty in such areas as robotics, chemistry and biochemistry, management, and humanities and arts. Employee morale remains high on the campus, and we will continue to pay competitive compensation and core benefits. We will offer only modest wage and salary increases for fiscal 2010, but will defer final determination until fall 2009 enrollment and net tuition are determined. The administration is constraining costs by filling only the most mission critical open staff positions. In addition, a new presidential commission has been formed to review operational efficiency and effectiveness. We expect significant expense reductions and revenue enhancements to result from the work of this commission. Finally, we will enter next year with a significantly increased operating contingency to add flexibility in the face of continuing uncertainty.

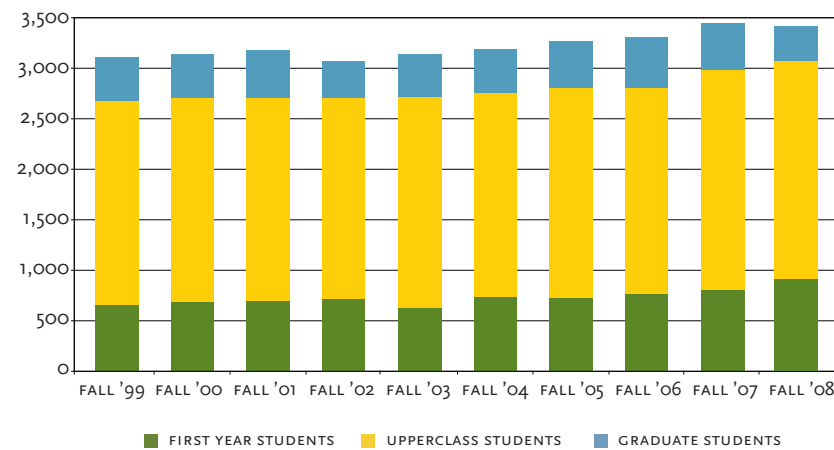
Thank you for your continued support of this fine university. I look forward to reporting to you next year on how WPI emerged stronger from these unprecedented economic challenges.

Jeffrey Solomon

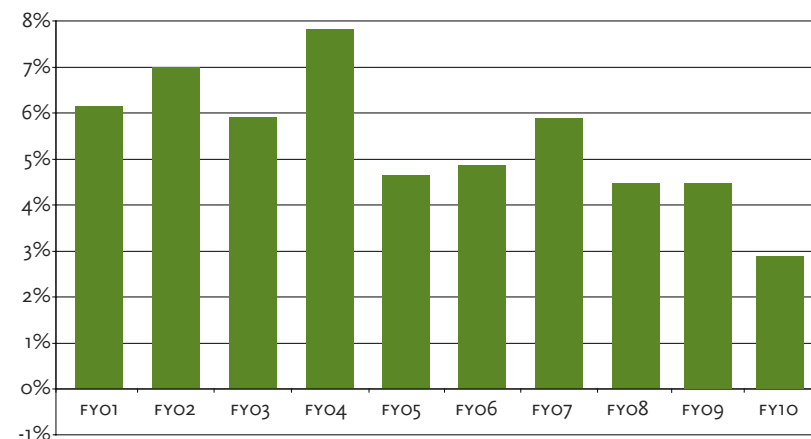


Executive Vice President and Chief Financial Officer

Full-time Student Enrollment

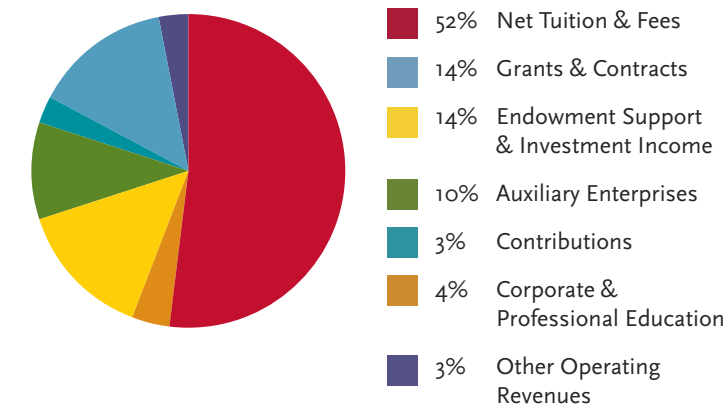


Tuition Rate Increase

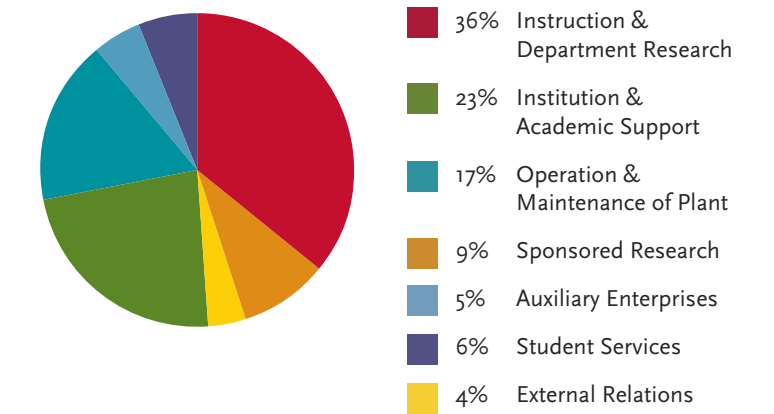


“Demand for a WPI education remains sound, with applications for the fall 2009 entering freshman class at record levels.”

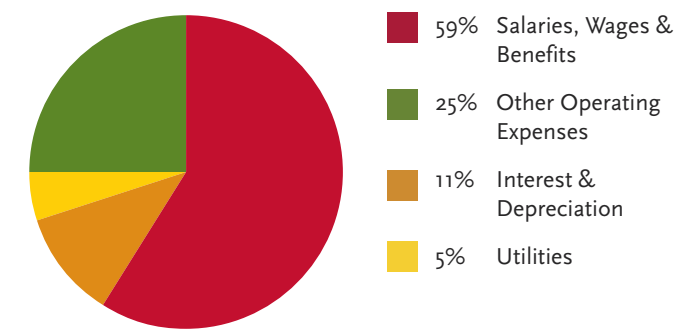
FY2008 Sources of Operating Revenues



FY2008 Operating Expenses by Function



FY2008 Operating Expenses by Type



Consolidated Statements of Activities

Years Ended June 30, 2008 and June 30, 2007 (in thousands)

	2008	2007
Operating revenues		
Tuition and fees	\$ 114,576	\$ 103,716
Less: Unrestricted student aid	32,739	30,405
Endowed scholarships	5,005	4,465
Externally funded student aid	4,098	4,051
Total student aid	41,842	38,921
Net tuition and fees	72,734	64,795
Other educational activities	7,926	7,290
Contributions	4,229	5,820
Contract and exchange transactions	20,324	18,837
Investment income on endowment	4,830	1,859
Net realized gains on endowment used for operations	11,494	13,553
Other investment income	3,976	3,889
Sales and services of auxiliary enterprises	14,113	12,952
Other	1,006	1,365
Total revenues and other support	140,632	130,360
Operating expenses		
Instruction and department research	49,668	48,571
Sponsored research and other sponsored programs	12,634	12,346
External relations	6,314	5,906
Institution and academic support	30,424	26,190
Student services	8,236	8,122
Operation and maintenance of plant	23,451	20,461
Auxiliary enterprises	7,549	7,583
Increase in asset retirement cost	1,433	-
Total operating expenses	139,709	129,179
Change in net assets from operating activities	923	1,181
Nonoperating		
Net realized and unrealized gains (losses) on investments	(13,805)	60,107
Net realized gains on endowment used for operations	(11,494)	(13,553)
Change in value of split interest agreements	(183)	(453)
Contributions	14,529	10,712
Net realized and unrealized losses on interest rate agreements	(4,180)	(476)
Loss on extinguishment of debt	(1,209)	(1,877)
Change in net assets from nonoperating activities	(16,342)	54,460
Total change in net assets	(15,419)	55,641
Net assets, beginning of year	476,001	420,360
Net assets, end of year	\$ 460,582	\$ 476,001

Consolidated Statements of Financial Position

June 30, 2008 and 2007 (in thousands)

	2008	2007
Assets		
Cash and cash equivalents	\$ 11,065	\$ 7,441
Accounts receivable, net	6,297	3,827
Contributions receivable, net	11,315	3,943
Funds held under bond agreements	8,668	43,045
Prepaid expenses and other assets	4,551	5,717
Interest rate agreements	-	596
Student loans receivable, net	21,168	20,565
Beneficial interest in trusts	17,154	16,743
Investments	404,387	427,303
Land, buildings, and equipment, net	176,797	145,426
Total assets	\$ 661,402	\$ 674,606
Liabilities		
Accounts payable and accrued liabilities	\$ 18,808	\$ 19,204
Deposits and deferred revenue	7,318	7,214
Split interest agreements	11,193	12,558
Funds held for others	4,040	3,418
Asset retirement obligations	4,661	3,019
Refundable government loan funds	6,792	6,792
Bonds and notes payable	143,987	145,403
Interest rate agreements	4,021	997
Total liabilities	200,820	198,605
Net assets		
Unrestricted	234,037	252,731
Temporarily restricted	117,869	122,148
Permanently restricted	108,676	101,122
Total net assets	460,582	476,001
Total liabilities and net assets	\$ 661,402	\$ 674,606

A Message from Higgins House



Dexter Bailey

During the past year, WPI's alumni, parents, and friends have demonstrated remarkable generosity and devotion to the university: from new endowed professorships in engineering, environmental engineering, and life sciences and bioengineering, to new scholarships that help ensure the best and brightest students have access to a WPI education, to the many gifts to the Annual Fund that help advance the WPI Plan. Your contributions provide vital support to the talented people and innovative programs that distinguish this university and make it such a vibrant place.

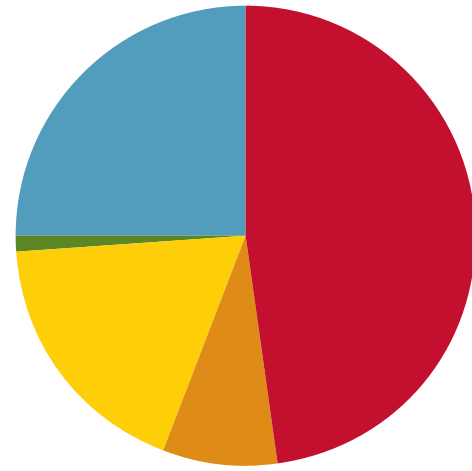
When you consider how your gifts to WPI help educate women and men with the wisdom and knowledge to make a difference in the world, you can see the immeasurable return on your philanthropic investment. Over the past 144 years, pioneering inventions have revolutionized communications and electronics, metallurgy, automotive engineering, aeronautics, information technology, medicine, and modern rocketry.

WPI students, faculty, and alumni continue to seek solutions to the most pressing problems facing our world—hunger, disease, expanding demands for energy. The challenges are many, and your investment is critical.

Dexter A. Bailey Jr.

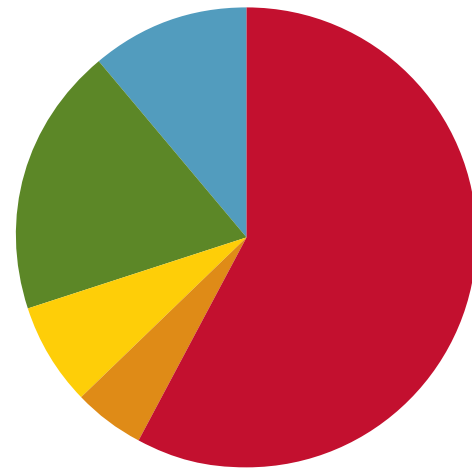
Vice President for Development and Alumni Relations

Who Gives to WPI?



- 48% Alumni
- 25% Parents and Friends
- 18% Foundations
- 8% Corporations
- > 1% Other Organizations

Where Do Your WPI Dollars Go?



- 58% Endowment
- 19% Restricted, Current Use (e.g., new First Year Seminars, Alumni Field renovation, and scholarships)
- 11% Unrestricted, Current Use (areas of greatest need, including scholarships, faculty research, and student programs)
- 7% Property, Plant, and Equipment
- 5% Gifts Pending Designation

Charts are current as of March 20, 2009.



The President's Report is produced by the Marketing and Communications Division for the Office of the President.

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