ILLINOIS INSTITUTE OF TECHNOLOGY

iitmagazine

Fall 2009

MANY VOICES, **ONE VISION**

MVOV

IIT Launches New Strategic Plan

NATACHA DEPAOLA New Engineering Dean **RAY BALLARD** Student President Ignites IIT Spirit

HANK KOHLBRAND Taking a World View **RESEARCH** Sustainable Tall Buildings, Antimicrobial Peptides

letter from the President

It's All About Our Vision

"What do I want to be when I grow up?"

This question has been asked of us many times, and is often answered without much thought with a simple "I don't know." While this answer may be acceptable for individuals, it can be ruinous for organizations.

Strategic plans position organizations to answer this question clearly. The heart of a strategic plan is its vision statement. Too often such statements are generic. A vision statement should do two things: identify the institution and define its priorities. We have written a new vision statement for IIT that meets these two criteria [see p. 15].

From February 2008 until May 2009, we engaged the entire IIT community in developing the university's vision, priorities, and goals, and the outcome is a new strategic plan for IIT, *Many Voices, One Vision*. We worked hard to answer the questions "what do we want to be?" and "how do we get there?"

Now we embark on the next important stage: implementation. Task forces are being set up to define and execute the initiatives required by the vision, for example, an Innovation Sandbox, an International Academy, and elements of a distinctive IIT education. This stage is not easy, but I believe that setting a high target, as described by our vision statement, was even more difficult. Now we know what we are aiming to do.

Our strategic plan is a living document and will be adjusted annually to reflect changes in circumstances—internal and external to the university. Strategies will be modified to cope with changing conditions and to exploit new opportunities, but the vision remains constant. It is our target and will not move until it is achieved.

An important facet of strategic planning is its level of expectations. There is great value in setting high expectations. My four decades of faculty service have convinced me that when you expect more, you get more. Expectations of oneself and others represent a critical component to improvement. We are aiming high, and we intend to get there.

It's all about our vision. It is aggressive and optimistic. To reach our goals, we need the help of the entire IIT community—alumni and friends, faculty, staff, students, the Board of Trustees, and our local community. I invite you to participate and look forward to hearing from you as we implement our plan. You are welcome to submit your ideas to *Many Voices, One Vision* via email at manyvoices@iit.edu.

John L. Anderson
President

iitmagazine

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Founded in 1890, Illinois Institute of Technology is a private Ph.D.-granting university that awards degrees in engineering, the sciences, architecture, law, design, psychology, humanities, and business.

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IIT MAGAZINE ONLINE-ONLY CONTENT!

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DEPARTMENTS

ILLINOIS INSTITUTE OF TECHNOLOGY

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Letters

Story Sparks Personal *Playboy* Memory

In connection to the spring 2009 *IIT Magazine* article on *Playboy* alumnus Art Paul, you might be interested in the following story, which I recounted in my December 2001 Commencement speech at IIT's winter graduation.

My father, Haim Reingold, was on the IIT faculty since before my birth, so I had spent many, many days with him on campus and could not, as an undergraduate, suddenly become anonymous. One day, as a new freshman in 1963, I was sitting in the barbershop in The Commons waiting to get a haircut. The barber, a man who had been cutting my hair since I was a little boy, announced to all assembled that I was the reason there was no *Playboy* magazine to be read there (a staple in barbershops for decades).

He went on to explain that when I was 9, around 1955, I was in the barbershop waiting for my turn, when I discovered and read a copy of that magazine. That evening I told my mother about it. She was not pleased, so she called the wife of John Rettaliata, president of IIT, whom she knew through the faculty wives' club. *Playboy* disappeared from the barbershop and was gone for at least a dozen years.

—Professor Edward M. Reingold (MATH '67)
IIT Department of Computer Science

Is It Less or More?

The smart grid ["New Grid in Town," spring 2009] keeps sounding like more stuff for me to manage (keeping track of my house's power). If it's so smart, it should require less attention from me. Not more, right? More isn't always better.

Interesting, thanks.

—Thom Westergren
Denver

Write back!

IIT Magazine welcomes all signed letters to the editor and edits letters for content and clarity. Please send correspondence to:

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campusnews

YPO Event Draws Leaders to Main Campus

On May 19, the Young President's Organization (YPO) held its reception and dinner on Main Campus to discuss the topic Going Green at 150 mph.

Guests were invited to test drive Tesla roadsters—high-performance, all-electric sports cars—around campus. IIT faculty members also showcased some of their work in energy and sustainability, biomedical science and engineering, and company startups.

The featured dinner speaker was Bob Galvin, IIT regent and former YPO chapter president. He discussed both the early years of YPO—which he helped found, along with fellow university regents Bob Pritzker (IE '46) and Al Self—and his Perfect Power initiative.

IIT Regent Bob Galvin test drives a Tesla.

Among the YPO event attendees were several IIT trustees, including [front row, left to right] Craig Duchossois, Bob Pritzker (IE '46), and Antonio Gracias; [back row, left to right] Tim Haggerty (current president, YPO Chicago Chapter), IIT President John Anderson, Al Self, Bob Galvin, and IIT Trustee Tim Stojka.

Photos: Richard Shay

MANY VOICES, ONE VISION DISTINCTIVELY DEFINE THE IIT GRADUATE

IIT to Develop International Academy

How do you build future global leaders? **Give them a global education.**

For most universities, that may include teaching foreign languages or offering academic and volunteer opportunities abroad. While these efforts expose students to new cultures and ways of thinking, there are no programs in the United States that provide students a "holistic experience," says Darsh Wasan, IIT vice president of international affairs.

A component of the *Many Voices, One Vision* strategic plan, the IIT International Academy will become the country's signature international-education program for undergraduate and graduate students. The goal is to educate future global leaders who are not only proficient in their fields but also prepared for the demands of the global economy.

The concept of the IIT International Academy expands on the traditional residential college model, in which students with similar interests or academic majors live together. The academy will provide an environment in which international and American students from all majors can learn from each other informally in their daily lives. It will also provide an integrated program of leadership workshops, service projects, speakers, symposia, language resources, and cultural events to help students expand their knowledge of multiple cultures and to give them a framework for reflection and discussion so they can begin to develop a global mindset.

"We expect that the academy will help us attract the top students from the U.S. and abroad," says Wasan.

As Wasan envisions it, the academy will be open to undergraduate and graduate students, and will provide competitive scholarships, co-op experience, and interdisciplinary research projects focused on major global issues. The academy will also facilitate exchanges in which students and faculty could conduct research and study or teach at partner universities abroad.

Darsh Wasan

"The International Academy has the potential to continue the visionary work of Bob Galvin [IIT trustee and regent], who in the 1994 strategic plan, the National Commission for IIT, encouraged the university to focus its efforts internationally," says Wasan. "This program would allow IIT to take its global efforts to the next level."

The International Academy will build on IIT's strengths. Among U.S. universities, IIT currently enrolls the greatest percentage of international students; has offices in Paris, Beijing, Seoul, and Bangalore, India; and offers master's degree programs online in India. In 2001, the university established an International Board of Overseers, composed of global business leaders. The International Academy would also tap as a resource IIT's Leadership Academy, which provides developmental training for undergraduates with exceptional leadership potential.

President John Anderson has appointed a task force to help Wasan develop the International Academy. Wasan is also contacting executives of global companies to research the attributes they look for in future leaders, as well as working with students, alumni, and faculty to learn their views on the structure and facilities required of this new initiative.

Illustration courtesy Skidmore, Owings & Merrill

Green Light for Metra Stop Near IIT

The groundbreaking event in June made it official: after several years of planning, a new Metra station will be built next to IIT Main Campus. Speaking at the event, held at Federal and 35th streets, near the station's location, Congressman Bobby Rush formally launched the construction of the new station, which will be dedicated to former State Representative Lovana S. "Lou" Jones, who served the Bronzeville area for 20 years until her death in 2006.

One of the first "shovel ready" projects in Chicago to be awarded stimulus dollars, the train stop is proceeding thanks to $4.9 million in federal funds secured by Rush and $6.9 million in stimulus funding. IIT is providing a permanent easement of its property along Federal Street to Metra for the new Rock Island Line station, which is expected to open next fall.

What I Did Last Summer

Ryan McClure (CHEM, 3rd year) put the carefree days of summer aside in order to pursue a modest goal: discovering a cure for cancer.

McClure, a chemistry major in the College of Science and Letters, spent the summer working with Joy Chong, assistant professor of chemistry. With grants from the National Institutes of Health, Chong is working to develop drugs that can be employed for cancer therapeutic and diagnostic applications such as radio immunotherapy, magnetic resonance imaging, and positron emission tomography (PET). The goal is to produce highly tumor-specific, safe, and effective cancer drugs.

A second-generation chemist (his father received bachelor's and master's degrees in chemistry and analytical chemistry, respectively), McClure approached Chong about research opportunities in her lab after taking her Organic Chemistry course. He worked with her during the spring 2009 semester and then applied for and was accepted into CSL's Undergraduate Summer Research Program. The program provides students with a $5,000 stipend to spend 10 weeks concentrating on his or her research under faculty guidance.

McClure's project, "Synthesis of a macrocyclic bifunctional ligand for positron emission tomography (PET) imaging of Gastin-releasing peptide receptor (GRPR) expressing tumors," is part of Chong's overall research. "PET is a sensitive cancer-imaging tool that requires three components," she says, "a positron-emitting radioisotope such as Cu-64 and Ga-68, cancer-targeting biomolecule, and a bifunctional organic molecule.

"Ryan has worked on preparing a bifunctional ligand that can hold Cu-64 or Ga-68 tightly while being attached to bombesin, a peptide that binds to GRPR over-expressed in tumors," she says. "We proposed that bombesin-bifunctional ligand conjugate radio-labeled with Cu-64 or Ga-68 can provide highly sensitive, noninvasive PET imaging of GRPR-expressing tumors."

McClure also conducted side projects, which included preparing small organic molecules for development of a novel synthetic method for chiral diamines and amino alcohols. The projects allowed him to gain various practical experimental skills and knowledge in synthetic organic chemistry, which were helpful in carrying out synthesis of the relatively complex macrocyclic bifunctional ligand. "I got really excited each time I realized that I had successfully synthesized the right compound," he smiles. "Even though I ran a couple of reactions a week, every single one felt like a small victory."

Because of the opportunities the program affords, McClure was able to use complex equipment such as a 300 MHz nuclear magnetic resonance spectrometer, "which not many 19-year-olds are lucky enough to do," he says. He also was able to fine-tune his lab technique and work on a project that furthers his desire to help the world through medicinal applications of organic chemistry. Although no one in his family has been affected by cancer, he feels a "moral obligation to help people."

"Imagine," he says, "if Jonas Salk hadn't researched the polio vaccine just because he didn't know anyone who had it."

—Linda Packer

Photo: Bonnie Robinson

utpwatch

Traction Developing on UTP's International "Soft Landing" Strategy

Across the world, technology parks such as IIT's University Technology Park are realizing a critical role they can play in promoting economic development and company growth. The unique combination of ready space, business development focus, contacts, and linkages to universities has led to the development of "soft landing" programs in these parks, including IIT's own, that encourage and support international technology companies to set up their foreign offices within a park instead of in a commercial real-estate site. Companies receive special support, sometimes including administrative assistance and short-term leases, to accommodate their initial forays into a foreign market.

UTP's newest "soft landing" clients are Saarland Technology Corporation (Germany), in a partnership with Science Park Saar and UTP to help promote nanotechnologies for building materials, and NextGen Venturi, a U.K.-based company that provides Bluetooth solutions for the world's prestige auto manufacturers. Both chose UTP in order to be in the center of their prospective markets and to take advantage of UTP's university location. Comarch, a Polish enterprise-software company, chose UTP several years ago for the same reasons.

- *www.universitytechnologypark.com*

Rowe Elected to the American Academy

IIT Board of Trustees Chair John W. Rowe, chairman and chief executive officer of Exelon Corporation, was elected among the 2009 class of fellows of the American Academy of Arts and Sciences. Rowe will be inducted into the organization at a ceremony this October in Cambridge, Mass.

Founded during the American Revolution, the academy's original incorporators included John Adams and John Hancock. More than 4,000 "scholar-patriots" representing academe, science, business, and the arts are current members of the academy, an independent policy research center conducting multidisciplinary studies of complex and emerging problems.

- *www.amacad.org*

New ID Archival Collection Adds to Knowledge Base

This fall, a new collection of academic, historical, and creative materials produced by IIT Institute of Design (ID) students and faculty—Institute of Design Records, 1948–2001—will be made available to researchers. It features work done during the period of ID's residence in S. R. Crown Hall, its brief move to what is now known as IIT Tower, and on to its present location in Chicago's River North area. The collection augments another assemblage of materials—Institute of Design Records, 1937–1955—already available for review, which covers the establishment of the New Bauhaus, founded by László Moholy-Nagy, later reorganized as The School of Design in Chicago, and currently known as IIT Institute of Design.

The newest collection is composed of a variety of materials including individual and class projects in photography, product and visual design, art education, printmaking, and film making; essays and articles by and about faculty members; retrospectives from the school's 50th anniversary celebration in 1987; and audiovisual and visual materials, including photographs, slides, and drawings.

"The most requested materials in the IIT Archives are the Institute of Design materials," says Catherine Bruck, university archivist, noting that the core of the new collection—student theses and other materials from ID's former photography courses—are likely to draw even more attention as they are examples of the work coming out of ID when faculty were crafting the school's seminal photography program.

"What we have is the evidence of students' studies under the masters of photography—Aaron Siskind, Arthur Siegel, Nathan Lerner, and Harry Callahan—who, essentially, were creating the discipline of how to teach photography," she says. "There were no degreed programs in photography as an academic discipline prior to the Institute of Design."

In her notes summarizing the collection, processing archivist Meg Romero refers to a poster entitled "General Principles/Educational Principles" that she discovered among the volume of materials she cataloged. It seems to provide archival evidence of a philosophy that holds true for ID, yet today:

"The effective control of the physical environment, which is the designer's task, depends upon his understanding of contemporary man's needs and his ability to use to the fullest the tools at his disposal to achieve greater health and happiness for mankind."

For information about viewing the ID archival collections, send an email to archives@iit.edu.

MORE ONLINE

Designing the Future: The Institute of Design Collection at Illinois Institute of Technology (1937–1955):
http://archives.iit.edu/exhibits/id/index.html

Talent and Trust Form Foundation of Women's Cross-Country

The Wayne E. Dannehl National Cross-Country Course at the University of Wisconsin–Parkside is not for the faint of heart. Or the faint of knees, for that matter.

It is a deceptively beautiful trail, with the Pike River to the north and a forest of mixed trees in every other direction. Steps from the start line, however, the uphill trek begins and before the initial mile ends, traverses a 71.4-foot increase in elevation. A second rise, beginning one mile later, zigzags between the trees and tops out at about a 40-foot elevation before the course winds downhill a half-mile to the finish line.

For competitive collegiate cross-country runners, the course is rarely done solo. Instead, individuals leap over rocks, slosh through mud, or will their quadriceps up the hills as part of a mob of team runners—possibly 300 in number—each hoping to take one of five places at the head of the pack.

"It's one big melee," admits Phil Kopinski, coach of IIT's women's and men's cross-country teams, with a laugh.

"You're getting me all excited!" says Emily Ryan (ARCH, 5th year), listening to her coach—a former four-year cross-country letter winner at the University of Illinois at Chicago—describe the sport she became addicted to years earlier when she enrolled at IIT as a 21-year-old freshman. "I can't wake up any other way than getting out there every morning and moving with a group of friends," she says, about her practice runs along Chicago's lakefront.

During the academic year, Ryan and her teammates gather at 6:30 a.m. each weekday for an hour-and-a-half of training and on Sundays for a run averaging between nine and 14 miles. Saturdays are reserved for the season's eight meets (nine if the team advances to the nationals), which are held from mid-August to mid-November. The 2008 season ended on solid footing for the IIT women's team, with members finishing second at the Chicagoland Collegiate Athletic Conference (CCAC). For the first time, an IIT woman—Stephanie Lucas (BMED, 2nd year)—was named CCAC Runner of the Year for her time of 19:42.35 at the conference championships.

Ryan placed seventh on the team at the conference race, not a coveted spot in the top five, which gives a runner a shot at the national championships, but a critical one when it comes to the team score. She created a buffer zone between other runners and her IIT teammates, helping to secure their positions. She was pleased with her performance, one that she earned through patience, dedication, and trust.

Emily Ryan

Photo: Bonnie Robinson

MORE ONLINE

Chicagoland Collegiate Athletic Conference: **www.ccacsports.com**
IIT Women's Cross-Country: **www.illinoistechathletics.com/sport/6/8.php**

During summer 2008, Ryan over-trained and developed posterior tibialis tendonitis, a persistent inflammation of the ankle region. Kopinski, who also serves as IIT's certified athletic trainer, substituted most of her running regimen with months of conditioning exercises in the pool and on the stationary bicycle. As her pain begin to eventually subside and Ryan returned to the road, she ended the season gaining even more than the satisfaction of providing a much-needed assist to her conference teammates.

"It really hit me that Coach does know what he's talking about," she explains. "While I've always trusted the system, in that moment when I was injured and miserable...," Ryan shakes her head as she recalls that rough period. "In the end, though," she says, "I had results that I could be proud of." Things are looking up even more for Ryan, whom Kopinski named team captain for the 2009–10 cross-country season, her last on campus.

Kopinski says that while it takes him about two years to gain an athlete's trust, whether in making tough decisions about racing strategies or treatment of injuries, IIT runners have an advantage in the sport because most understand one important concept: delayed gratification.

"Architecture or engineering students, for example, work so hard for 16 weeks to get one grade," says Kopinski. "I believe that's why running succeeds here, that's why it's always been part of the fabric of IIT. That mentality is already within the students. They work very hard and don't always soon see the fruits of their labor, but then hopefully in the end it will all come together. That's distance running in a nutshell." ■

Exelon and Motorola Gifts Give Students a Leg Up

For most college students, coursework and research are only part of the challenge of university life. Knowing whether to enroll in a particular course, how better to manage their time, or how to obtain the advice of professors or mentors may not come naturally.

To help ensure that more students learn early on how better to prepare themselves for college life and the academic rigors of IIT, Exelon Corporation awarded the university a generous grant to permanently endow the Exelon Summer Institute. In its second year, the month-long program coaches incoming first-year students on how to excel in math, chemistry, and physics, and teaches time management and communication skills. Students also participate in workshops and activities that allow them to explore their intended academic majors.

"Even the brightest students can have trouble acclimating to the rhythm of college life," says Mike Gosz, vice provost for undergraduate affairs. "Our goal is to discover and embrace the potential of each incoming student and build on that potential to ensure college success."

Steve Solomon, director of corporate relations for Exelon, notes that more than 300 IIT alumni currently work at or are retired from Exelon. "IIT has provided us with many quality employees, and now with the institute, hopefully some future employees," he says.

Tenesha Pointer (ARCH, 2nd year), who participated in the program during its inaugural year, says, "It was a great way to meet people and also get firsthand advice from students on what one should expect from being a freshman in college."

During summer 2009, the Motorola Foundation helped to underwrite the program, which hosted 35 students. Of the 30 students who participated during 2008, 29 completed their first year of college and three made the Dean's List last spring. To further nurture participants and encourage retention in future years, students who have completed the program will mentor new enrollees.

Illinois Tech Baseball

Recap

With a playing season that runs from February to early May, the Illinois Tech baseball team can't rightfully be called the Boys of Summer. But even with snow on the ground, the IIT players came out swinging in the style of those major league hitters just the other side of the Dan Ryan Expressway. Here are Illinois Tech baseball highlights from 2009:

- The team ended the season with the fourth-highest win total in the history of the baseball program.
- At the Chicagoland Collegiate Athletic Conference (CCAC), the Illinois Tech baseball team achieved an 18–12 record, earning fifth place.
- Andy Kungis (ARCH, 4th year) won the IIT Gold Glove Left Fielder of the Year award.
- Branden Schombert (BME, 4th year) was named a CCAC All-Conference pitcher.
- Illinois Tech will go into the 2010 season with a consistent roster of experienced baseball talent, as only two players graduated in May 2009.

MANY VOICES, ONE VISION

DISTINCTIVELY DEFINE THE IIT GRADUATE: ENTREPRENEURSHIP

Photo: Bonnie Robinson

Taking Care of Business

When Jon Liao came to IIT to teach entrepreneurship in 2006, he saw an opportunity to build a program that wouldn't just compete well with its peers, but that would truly stand out. He factored in the Stuart School of Business focus on innovation, but the real key to his vision was to recruit IIT's non-business students—the engineers and designers who Liao figured would come up with smart ideas and products. Liao wanted to get those students to think like businesspeople, and to pair them with business students at Stuart.

It wasn't a stretch, considering that Liao himself had co-founded a biotech company, HumanZyme, and successfully steered that company through several rounds of funding. He had seen firsthand what can happen when an entrepreneur and a new idea come together. Liao is convinced that by joining IIT students from different fields to work together on entrepreneurial projects, great ideas will result.

"We have an ideal platform at IIT to promote cross-disciplinary education because we can combine entrepreneurship with great programs in engineering, design, and the sciences," says Liao. "We add a new dimension to an already high-quality education, and we equip these technically competent students to choose a career where they can build a business, not just be someone's employee."

To that end, IIT formed an Entrepreneurship and Leadership Committee, composed of Liao and the university's deans, to make curricular recommendations and focus on advancing cross-disciplinary entrepreneurship training; the committee is chaired by Stuart Dean Harvey Kahalas.

Any IIT undergraduate can minor in entrepreneurship, learning principles ranging from market research to business plan creation to how to seek and secure funding. In fact, 70 percent of IIT entrepreneurship students aren't business majors. This fall, the school will launch the Kern Innovation and Entrepreneurship Academy (KIEA), which will enroll 25 top engineering students per year in a special entrepreneurship program that provides them access to successful area entrepreneurs. Selected students may earn up to $4,500 each in scholarships through the program. (KIEA is funded by a $1.3 million grant from the Kern Family Foundation of Waukesha, Wis.)

Beyond the coursework, there's a student entrepreneurship organization, which brings in successful entrepreneurs as guest speakers. In competitions such as the IIT-hosted Chicago Innovation Chase, students compete against peers from other universities in a unique one-day entrepreneurship scavenger hunt in which they search for clues and then develop a business from scratch.

But it's the off-campus competitions where IIT is really making its mark. IIT teams have excelled in national and regional competitions: in 2008, an IIT team took first prize in a regional Idea to Product competition in St. Louis. Also in 2008, a team of IIT graduate students won a Microsoft Emerging Technology Award for a business based on a fiber-optic blood sensor at the University of San Francisco's International Business Plan Competition. The winning plan was developed during one of Liao's courses. This year, an IIT entrepreneur finished second at the San Francisco competition.

Successes like that reinforce the vision of Liao and Kahalas.

"Creativity and strategically competitive thinking are hallmarks of IIT's student body, and they're exactly what the marketplace will demand," says Kahalas. "We're bringing these students together and teaching them to develop their ideas into viable business strategies, and it's very exciting to watch them learn and grow."

For Liao, the program itself is an entrepreneurial venture. He was drawn to IIT by the chance to build an entrepreneurship program from scratch. "With a clean slate, you can make such a difference," says Liao, who works with David Pistrui to run the Entrepreneurship Program at IIT. The clincher was IIT's undergraduate programs in business-friendly disciplines. "I could see the opportunities to leverage our strengths, and it really was a no-brainer," Liao says.

—Steve Hendershot

www.stuart.iit.edu

Hamid Arastoopour

Hamid Arastoopour (M.S. GE '75, Ph.D. '78), director of the Wanger Institute for Sustainable Energy Research, was invested as the Henry R. Linden Endowed Chair in Engineering at a ceremony held on April 30.

Alan Cramb

Alan Cramb, provost and senior vice president for academic affairs, has been named an honorary member of the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME). An AIME past-president, Cramb was recognized for being a member who is outstanding in his respective field and/or who has performed unusual service to the institute. Cramb was also named a 2009 fellow of the American Society for Metals International for his efforts in advancing the science and technology of modern steelmaking.

Martin Felsen

Martin Felsen, studio associate professor at IIT College of Architecture, was awarded the 2009 Latrobe Prize from the American Institute of Architects' College of Fellows.

Judith Gregory

Judith Gregory, assistant professor at IIT Institute of Design, was appointed to a multi-year visiting scholar position at the University of Denmark.

faculty honors & awards

Taking **Sustainability** on the Road

IIT and Chicago are natural partners who share a strong commitment to serving the city's people and communities. Now the university hopes to build upon those shared goals by focusing its unique resources—including architecture, engineering, and design—on projects that will benefit IIT's neighbors, further strengthening the university's ties with the city.

As a collaboration between IIT College of Architecture and the Chicago Park District shows, the results can be stunning.

Project Nomad, a mobile learning center, is serving as a testament to the possibilities of eco-friendly living and modern architecture. Specifically, it's an interactive exhibit that takes cues from Mies van der Rohe's iconic Farnsworth House and showcases green technologies ranging from photovoltaic solar panels (a set of them is mounted on Project Nomad's roof, providing the exhibit's electricity) to recycling. Nomad will rotate among city parks, educating Chicagoans on the benefits of sustainability.

"The primary goal is to reach low-income urban families who aren't really thinking about living green or experiencing nature," says Alan Bell, the Chicago attorney whose company, The Elements Group, is spearheading the project. "Some of the areas where these people live aren't the most beautiful, architecturally. We want to bring them something modern, innovative, and exciting that will brighten up their communities and get them thinking about experiencing nature and the environment in a whole new way."

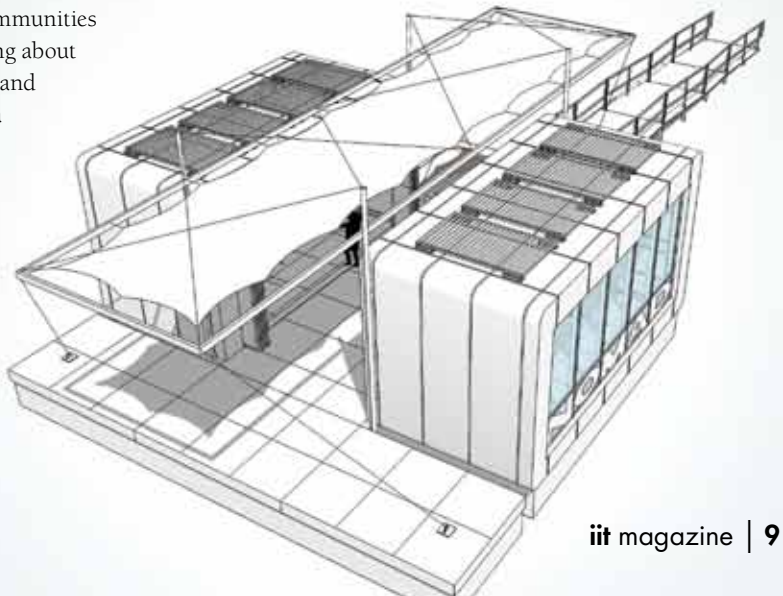
Bell explained his vision to Eva Kultermann, assistant professor of architecture, who loved the idea and suggested making it a student project. Bell agreed, and during the 2008–09 school year teams of students worked on developing and refining a design that would be striking, functional, and portable. In addition to the solar panels, the design incorporates recycled, Earth-friendly materials.

The students' design was a hit with Bell, the Chicago Park District, and the audience at Modern Earth, the Earth Day 2009 event where the project was unveiled. Project Nomad then moved to Krueck + Sexton Architects, which will oversee the exhibit's final design and construction. The firm hired one of the IIT student leaders for a summer internship to work on the project.

"The project provided our students with experience in the complete process of building design and construction in a more comprehensive and real-world setting than is possible in traditional academic studios," says Kultermann. "Additionally, it provided an educational platform for the ethical practice of architecture by serving the needs of the local community."

Construction should be complete in late 2009, and Project Nomad is on track to begin its tour of Chicago's parks in spring 2010.

—Steve Hendershot

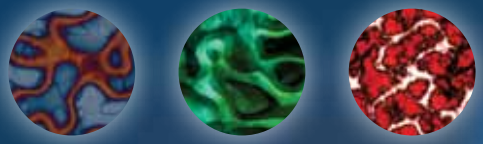


MVOV MANY VOICES, ONE VISION RESEARCH AND CHICAGO

- *http://airwaterearthsun.com/html/community/project_nomad.php*

MANY VOICES, ONE VISION RESEARCH TO IMPROVE THE QUALITY OF LIFE

FIGHTING ANTIBIOTIC RESISTANCE



Today, antibiotics are under siege. Bacteria and other organisms, many displaying multi-drug resistance, are rapidly gaining ground. This poses one of the most serious challenges for medical science. As IIT Coleman Faculty Scholar and Assistant Professor of Physics David Gidalevitz points out, "Bacteria only need to undergo a slight mutation to make traditional antibiotics ineffective."

David Gidalevitz

Photo: Bonnie Robinson

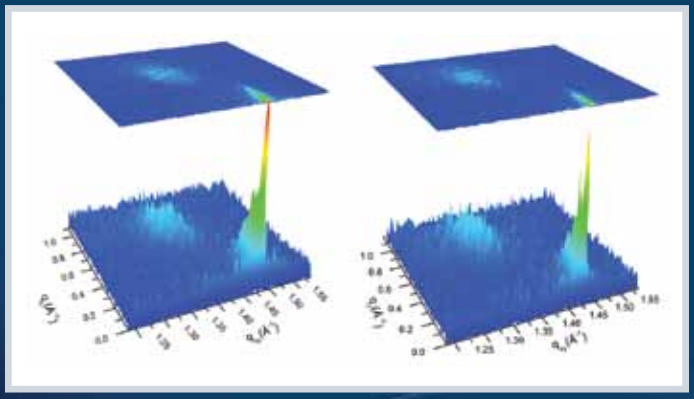
Many antibiotic drugs act by attaching to specific cell-surface receptors. When a bacterium mutates, it changes these binding sites so that the antibiotic either cannot attach, or binds to the membrane but loses its bactericidal effect. Gidalevitz believes a unique class of compounds known as antimicrobial peptides (also known as host defense peptides) may help humanity out of its antibacterial rut.

Antimicrobial peptides, or AMPs, occur naturally in organisms ranging from microbes to mammals. In humans, AMPs are part of our innate immune response—the first line of defense against infection. As Gidalevitz explains, these peptide defenders have some remarkable qualities. They can target an extremely wide range of pathogens, including two broad categories of bacteria (known as either Gram positive or Gram negative, based on their staining properties), as well as some viruses, protozoa, tumors, and even fungi. More importantly, AMPs are able to hunt and kill prokaryotic cells like bacteria while leaving eukaryotic cells–the healthy cells in our bodies–undisturbed.

Gidalevitz's work involves the construction of membrane mimics, manmade nanostructures imitative of natural cell walls. He uses these mimics to better understand the precise mechanisms that allow AMPs to recognize and disrupt bacterial cell membranes, despite their structural variation.

Although some experimental drugs composed of naturally occurring AMPs have been attempted, such compounds are quickly recognized by proteases in the body and destroyed before they are able to act. On the other hand, ampetoids—mimics of natural AMPs—are different. "Antimicrobial peptide mimics won't interfere with general biological systems," Gidalevitz says. "They're not recognized as such."

How do AMPs target bacterial cells for destruction? Part of the trick occurs through recognition of the lipid matrix of the bacterial cell wall, which carries an electrically negative charge (unlike eukaryotic cell membranes, which are electrically neutral). Generally, the kinds of mutations bacteria undergo in order to outwit traditional antibiotics can't save them from a frontal assault on their membrane chemistry by an antimicrobial peptide. Because of this, AMPs offer an attractive weapon in the pitched battle against resistant pathogens.



Grazing incidence X-ray diffraction pattern of phospholipid monolayer mimicking the surface of the red blood cell; [left] before injection of human antimicrobial peptide LL-37; [right] after peptide injection

To study the structure of membrane mimics and their interactions with AMPs, Gidalevitz takes a new approach, using sensitive technologies, including synchrotron-grazing incidence X-ray diffraction and X-ray reflexivity, in collaboration with Argonne National Laboratory. "To investigate the action of the peptides and membrane mimics with these techniques is fairly novel," Gidalevitz notes. "These are definitely not tools used by a majority of biologists."

Unlike natural cell walls, which are composed of a lipid bilayer, Gidalevitz's membrane mimics are monolayer structures applied to an aqueous surface in which natural AMPs are dissolved. The AMPs themselves are supplied by Gidalevitz's collaborators, including Annelise Barron of Stanford University.

A $1.3 million National Institutes of Health grant will help Gidalevitz pursue this research for the next three years, though there is so much to learn about the subtleties of these powerful compounds, and their potential benefits so great, that he expects his work will likely continue long thereafter.

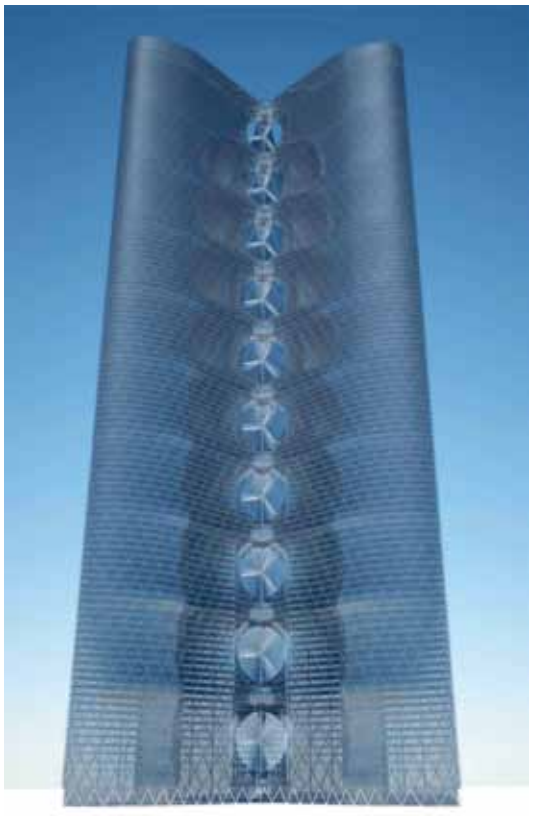
Research into membrane dynamics and AMP mechanisms of action bring promise for the development of an entirely new class of peptide antibiotics, which will target pathogenic invaders and circumvent antibacterial resistance.

–Richard Harth

MORE ONLINE

Roles of antimicrobial peptides in immune defense: http://download.cell.com/trends/immunology/pdf/PIIS1471490609000052.pdf?intermediate=true
Antimicrobial peptides and lethal infections in mice: www.sciencedaily.com/releases/2009/06/090619124928.html
Antimicrobial peptides and applied biotechnology: www.ejbiotechnology.info/content/vol6/issue3/full/1/index.html

MANY VOICES, ONE VISION RESEARCH IN ENERGY AND SUSTAINABILITY



SKY-HIGH SUSTAINABILITY

Rising energy costs, dwindling fossil fuel reserves, and threats of climate change are central challenges for this century. As IIT Professor of Architecture Peter Land points out, we need only look around us to see the biggest consumer of this energy: the built environment.

At IIT, a research initiative takes aim at tall buildings, focusing on refining their design and equipping them to extract the maximum benefit from two primary forms of energy: sunlight and wind. Although his interdisciplinary team came together under the umbrella of the Wanger Institute for Sustainable Energy Research (WISER) just a year ago, Land has wrestled with architectural challenges of sustainable tall buildings for two decades.

Now WISER is harnessing university-wide resources, uniting the College of Architecture with Armour College of Engineering faculty and researchers from other domains, to provide a comprehensive platform to address issues of tall structure sustainability.

New building designs, some appearing to materialize from the realm of science fiction, are being developed by Land and his colleagues, and tested at IIT under rigorous conditions. One day, such ultra-efficient tall buildings may gather all the energy powering them from renewable sources—a synthesis of design and construction Land refers to as the stand-alone concept. Emancipated from the grid, these carbon-free structures could provide living and working space for a burgeoning population, generating their own energy onsite through sustainable technology. "We really are the first school to come together to try to make this a reality," Land says.

Within WISER, Land has formed a consortium consisting of himself and 15 engineers, to investigate the sustainable built environment. "The design concepts are worked out under my direction with advanced-level students," he says. Currently, some 12–15 building forms are in testing phases. These unorthodox structures are variously shaped to optimize their ability to extract energy from clean sources.

A key focus of this research is wind turbines. Tall buildings can take advantage of greater wind velocities at higher altitudes, providing significantly more energy than other types of buildings. To be used effectively, incoming wind flow must be accelerated, and then focused onto the turbine's rotors, which may be located on the structure's roof or on the building façade. Single-, bi-, and omni-directional turbines may be used, depending on the particulars of building design and the prevailing wind conditions.

In order to further optimize a tall building for wind energy, Land called on the fluid mechanics expertise of Henry R. Linden Professor of Energy and WISER Director Hamid Arastoopour, and Associate Professor of Mechanical and Aerospace Engineering Dietmar Rempfer.

Rempfer stresses the importance of maximizing wind velocity, as the energy content of the wind varies with the cube (or third power) of the average wind speed. "If the average wind velocity doubles," he says, "I can extract eight times the power from the wind compared to lower wind velocity."

Once Land has completed the building's conceptual design, an accurate physical model of the structure is produced and subjected to wind tunnel testing. Rempfer gathers the resulting data and uses computational fluid mechanics to accurately model the wind flow. To optimize the building's shape, he digitally tinkers with the geometry of his computational model, performing simulations to see how the power output changes through repeated iterations.

As Rempfer explains, one such tall building design *[see inset]* features paired towers, between which a series of wind turbines are suspended. The two towers are shaped in such a way that they form a flow duct or nozzle to increase the wind flow velocity, focusing the accelerated stream onto the turbines.

Other sustainable designs use photovoltaic (PV) elements as integral design features, inseparable from building structure. These may take the form of transparent PV cells embedded in a building's window glass, or solar concentrators capable of focusing solar radiation on parabolic reflectors. Incident sunlight is used to heat surfaces of the solar-thermal collectors to more than 1,000 degrees, in order to drive conventional steam turbines or for solar thermal heating of the building's air or water.

Eventually, the use of wind and solar, as well as other renewable resources including geothermal, will guide not only tall building design, but also city planning in general. Land says that changing the political will of developers and governments of the world will be as important as design evolution in the promotion of pollution-free environments for future generations.

—Richard Harth

MORE ONLINE

Council on Tall Buildings and Urban Habitat: **www.ctbuh.org**
Wind turbines in the Bahrain World Trade Center: **www.inhabitat.com/2007/03/28/bahrain-world-trade-center-has-wind-turbines**

"We will achieve our goals and reach our vision."

The closing sentence of the executive summary of IIT's new strategic plan, *Many Voices, One Vision* (MVOV), is short on words but long on determination. While planning documents serve to outline the goals, aspirations, and projections for an institution's success, the most powerful words are those that say, unequivocally, that the success will be achieved. The "will" gives rise to a way.

IN THIS ISSUE:

MVOV HIGHLIGHTS

This issue of *IIT Magazine* features stories that cover many of the priorities and core principles of the *Many Voices, One Vision* strategic plan. Stories noted with the icon at left relate to the specific priority or principle described in the accompanying text.

MANY VOICES, ONE VISION
MVOV

"MVOV is a detailed plan with ambitious objectives, but its success is well within our reach if we remain positive," says IIT President John Anderson. "The tone of the plan—as much as the tenets of the plan—sends a strong message to the IIT community that we are committed to achieving excellence."

The planning process began in February 2008 with the convening of a working session of the Executive Committee of the Board of Trustees. This led to the assembly of the MVOV steering committee—consisting of students, faculty, staff, and alumni—headed by Vice President for Business and Administration John Collins, and Associate Professor of Physics and Chair of the Faculty Council Christopher White. The steering committee held informational sessions about MVOV, which outlined the plan's goals and objectives, and in summer 2008 invited members of the IIT community to contribute ideas about what they believe the university's strengths and future priorities should be. During summer 2008, the committee reviewed more than 300 suggestions from 660 people who registered online to be a part of the process.

The steering committee consolidated these ideas into a concise report. Meanwhile, the university's academic deans and a group of student leaders each also authored reports on the critical issues facing IIT. The three reports were shared with IIT senior administrators and trustees, and have helped to shape the plan, which was approved May 28, 2009, by the Board of Trustees.

"We were convinced that the strategic plan would only succeed if we engaged and embraced all of the constituencies within the broader university community and opened ourselves up to unconventional thinking," says White. "The process used by the steering committee was difficult, yet the struggles proved fruitful in the end. We were eventually able to avoid a traditional planning process and draft a truly innovative report."

"I am impressed by how so many members of the IIT community were engaged in helping to identify these priorities. Their level of input was unprecedented," says David Baker, vice president for external affairs and director of the Office of Institutional Strategy, which was established in January 2008 to lead the MVOV effort.

The university priorities developed through the plan emphasize distinctive, value-added educational programs, interdisciplinary research based on university-wide themes, initiatives that inspire innovation and excellence among faculty and staff, and investment in engineering and science. Underlying the other priorities is a commitment and plan to assure long-term financial strength. All the priorities are intended to position IIT to attain its ultimate goal: to be an internationally recognized university.

Woven throughout the MVOV report, and reflected in the priorities, are several values and core principles intended to guide the IIT community as it works to implement the plan. Driving toward a culture that embraces change, these values and principles include focusing on students, strengthening the faculty and staff, engaging alumni, and making a commitment to a diverse and inclusive community of scholars and innovators.

The plan offers some time-proven objectives and action steps aimed at improving upon ongoing efforts. There is a continued focus on Chicago as a partner in education and research, interdisciplinary coursework and research, and steps toward greater financial solvency and flexibility.

But MVOV also offers a unique set of constructs that are intended to help distinguish IIT from other institutions of higher education.

To begin, IIT is aiming internationally. While this encompasses both the vision and the core principle of heightening visibility, it also addresses more specifically proposed new initiatives such as the International Academy [see story, p. 3]. In addition, efforts to further enhance interdisciplinary research, particularly of topics of global significance, and the priority of elevating the engineering discipline [see story, p. 16], are expected to boost the university's relevancy in the global arena. Two interdisciplinary research themes—Energy and Sustainability, and Improving the Quality of Life [see stories, p. 10–12]—have been selected, and at least two other priority themes will be determined in the coming months.

MANY VOICES, ONE VISION:

JOINING PRIORITIES WITH VALUES AND CORE PRINCIPLES

IIT Priorities

- **Distinctively define the IIT graduate**
- **Increase the impact of IIT's research by focusing on interdisciplinary themes**
- **Promote innovation and excellence throughout the university**
- **Elevate engineering's reputation to international stature**

IIT Values and Core Principles

- **Focus on students**
- **Strengthen faculty and staff**
- **Foster leadership and ethical decision-making**
- **Commit to diversity and excellence**
- **Focus on resource management**
- **Heighten reputation**
- **Engage alumni**

MVOV

Another new concept, the Innovation Sandbox, is outlined in the vision and priorities, and rooted in the university's Bauhaus legacy, which places a premium on innovation, creativity, and new technology. To be developed over time, the Innovation Sandbox will serve as a virtual studio intended to generate and promote new ideas. An incentives program will encourage students and faculty to develop creative initiatives that will benefit society and the university.

Similarly, the strategic priority of promoting innovation and excellence throughout the university taps IIT's "many voices" as a resource. MVOV calls for increased university-wide participation of all members of the IIT community in order to usher the plan's success. This includes improving faculty and staff retention, customer service, and campus operations, and introducing new survey tools and efforts to reward quality work.

Also new is the context in which education is defined. More than just bettering academic programs and recruiting talented students, MVOV aims to prepare students for change—producing graduates who are open and creative thinkers with relevant skills [see story, p. 20] developed through enhanced IIT Leadership Academy and Interprofessional Projects (IPRO) courses, and development of the new International Academy.

"We want to provide our students every tool possible to be experts in their chosen discipline and to have the confidence to advance society," says Provost and Senior Vice President for Academic Affairs Alan Cramb. "That means offering students challenging and relevant courses and research projects that stimulate creativity. We will teach our graduates how to think in many ways—as an engineer, a scientist, a lawyer, a designer, an architect, a psychologist, and as a business person—all of which will help them see the world from multiple perspectives and prepare them for a life of reaction to change."

In shaping the university's new priorities over the past 16 months, "we looked to our core strengths while also redefining the university of the future," says Anderson. His paper on this two-tiered approach, "Innovation in a Technology-Oriented University: IIT as an Innovative Studio," was posted on the MVOV website for discussion during the planning stage. "We need to focus on the areas where we can make the biggest impact, but we also must wholly encourage freedom of thought and innovation if we are to make lasting improvements."

The last major strategic plan to be implemented at IIT was the *Report of the National Commission for IIT*, released in 1994. The report, written by IIT trustees, outside experts, and faculty and administrative leaders, was published during a particularly difficult time in the university's financial history.

"During the National Commission, IIT was in grave condition," says Baker, who served as executive director of the commission. The group's recommendations emphasized making enrollment more competitive and selective, and addressing IIT's location and fiscal concerns. This led to the Camras Scholars program, the IPRO program, and a capital campaign that also helped to finance new buildings and facilities improvements.

"IIT is in a different place now, thanks to the outcomes of the National Commission," says Baker. "Because of it, IIT has grown stronger in the past decade and is in a position where its can prioritize innovation and taking the university to the next level. Creative ideas such as the Innovation Sandbox would not have been feasible in 1994."

With MVOV slated for deployment through 2014, ultimate measurement of its success is five years away. Only then will its metrics—which outline everything from minority faculty recruitment and research expenditures to retention and successful customer transactions—reveal its outcomes.

"I am confident that we have developed a plan that is attainable and that reflects the goals and aspirations of the IIT community at large," Anderson says. "Our university has all the potential to be a leader in developing ideas and graduates that will have an impact on the professions and future technology." ■

FOLLOW MVOV

Stay informed of IIT's development and implementation of the *Many Voices, One Vision* strategic plan in upcoming issues of *IIT Magazine* and on the MVOV website, http://manyvoices.iit.edu. Online, you can also read posts to the MVOV Reading Room, which include thought-provoking articles and discussion about strategic planning, a subscription list for updates on MVOV progress, and a forum where the IIT community can discuss the plans.

MORE ONLINE

Many Voices, One Vision website: **http://manyvoices.iit.edu**
The "Blue Ocean" approach to creating unique markets, in *Harvard Business Review:* **www.courtenayhr.com/images/Blue%20Ocean%20Strategy.pdf**
"Innovation in a Technology-Oriented University: IIT as an Innovative Studio": **http://manyvoices.iit.edu/iit-innovation-paper**

MISSION AND VISION

IIT's new vision and mission were developed during the *Many Voices, One Vision* strategic planning process.

Vision

IIT will be internationally recognized in distinctive areas of education and research, using as its platform the global city of Chicago, driven by a professional and technology-oriented focus, and based on a culture of innovation and excellence.

Mission

To provide distinctive and relevant education in an environment of scientific, technological, and professional knowledge creation and innovation.

Passion Ignited by a Lifetime of Learning

By Marcia Faye

Natacha DePaola's path to dean of IIT Armour College of Engineering was paved with inspiration, dedication, and—toothpaste.

DePaola recalls that when she was 8 years old and growing up in Venezuela, she eagerly looked forward to weekly visits to her grandmother Rosa's home along the shores of the Caribbean Sea. DePaola dearly loved her grandma and told her that she was preparing a remedy to help fade the age spots beginning to appear along Rosa's hands and arms. On Sunday afternoons, DePaola retreated into her bedroom closet, where she had set up a tiny chemistry laboratory and mixed together dollops of various emulsions and ointments from her family's medicine cabinet, which she thinned with rubbing alcohol. One special ingredient was toothpaste.

She would let the preparation settle, bottle the precipitate, and present her efforts to Rosa, who reported that the cream was indeed working. Of course, it was not. But Rosa knew that her granddaughter was a budding scientist and didn't have the heart to tell her the truth.

As DePaola grew up, her interest in science developed, moving from chemistry into physics and mathematics. A self-described "nerdy high school student," she was glued to the television, watching Public Broadcasting System science shows, but was also popular with her peers, and even tutored many of them in math during her junior and senior years. DePaola continued to serve as a high school math and physics tutor during all her years at Simón Bolívar University, where she was a mechanical engineering major and physics teaching assistant. In college, her interests took her in the direction of biomedicine, and she spent countless hours in the college library reading about advances in the field.

DePaola left South America to enter the master's program in mechanical engineering at Massachusetts Institute of Technology (MIT), where she focused on the flow of biofluids and its applications for intravenous therapies and injections. She was one of only 10 people yearly admitted into the doctoral program in medical engineering and medical physics jointly offered by MIT and Harvard Medical School, and graduated with her Ph.D. in 1991.

"I think that really was the best time of my life," says DePaola. "I had superb research mentors who were not only wonderful scientists but also really extraordinary individuals who care about students—their education, career, and life success. I constantly try to live up to what I learned from my mentors and try to be for my students what my mentors were for me," she says.

In her dually historic role as Armour's first female dean and first Hispanic dean, which she began on August 1, DePaola looks forward to mentoring many students, though not primarily because of either her gender or her race.

"I'm fully committed to diversity, but I believe that you don't need to be a minority to be fully committed," she says. "It's something that comes with the person; not with the gender. In fact, many of the main advances in support of making diversity happen were made by people who are not in minority groups. But they have a shared commitment and passion for diversity, which I think is a very important component in an academic institution, particularly at IIT, being a part of Chicago. The strategic plan of the university speaks to diversity very well."

The new dean says that the structure of the *Many Voices, One Vision* plan—with its emphasis on IIT's values and core principles—will make her job of crafting Armour's strategic plan and aligning it with the university's an easy one, and is at the top of her to-do list.

Natacha DePaola New Engineering Dean

The Carol and Ed Kaplan Armour College Dean of Engineering Chair

Photo: Bonnie Robinson

"I'll be looking at the strength of the faculty and how we can go beyond where we are right now, exploring ways for the faculty to grow and how we can support that for higher achievement," she says. "It's crucial that we determine what those unique aspects of an IIT Armour College of engineering education are and get the word out."

Thomas T. Andersen, associate dean for graduate studies and medical student research at Albany Medical College, worked with DePaola on the development of inter-institutional programs between the college and Rensselaer Polytechnic Institute (RPI), where DePaola served most recently as chair of the Department of Biomedical Engineering. He says that DePaola has the ability to quickly see the opportunities and importance of innovation in education.

"She eagerly did the 'heavy lifting' in developing our new combined-degree program (B.S./M.D.); she recognized the exciting opportunity that our two institutions could offer, and she prioritized the needs of the students in the development of the new program," explains Andersen. "She made a lasting contribution, and I believe that our students will make an important impact on the health care needs of the country over the next several decades because of what Natacha did here."

Considering IIT's goal to increase the number of female undergraduate and graduate students over the next five years, DePaola is hoping to offer Armour outreach programs targeted to girls in grades five through eight. She also plans to support role models among female faculty members to open young minds to engineering and science as being career possibilities and disciplines that are eminently exciting.

The intellectual curiosity and enthusiasm for knowledge and discovery that took root during DePaola's own middle school years continue to define her personality today.

"The thrill is in discovering how we can use our knowledge of physics, engineering, and mathematics to understand disease better and to develop new therapies to treat disease," she says. "If you can do something that will improve the quality of life and that will help patients—I think that's what motivates a lot of biomedical engineers. The tools that we have now, we didn't have 20 or even 10 years ago. The advances that have been made and the knowledge of biology we have now are fantastic."

DePaola's longtime research, which earned her a National Science Foundation Faculty Early Career Development Award during her 15-year tenure at RPI, focuses on cellular mechanics, biofluid dynamics, and tissue engineering. In 1996, DePaola's revelation that cumulative wear and tear on our arteries by the impact of flowing blood means that we all will face some degree of arteriosclerosis was picked up by *Discover* magazine. Her findings showed that the damage occurs where arteries bend sharply or branch with the impaired flow perhaps triggering the disease. She continues to devote the bulk of her research efforts to finding a solution for preventing arteriosclerosis and cardiovascular disease.

Considering IIT's goal to increase the number of female undergraduate and graduate students over the next five years, DePaola is hoping to offer Armour outreach programs targeted to girls in grades five through eight. She also plans to support role models among female faculty members to open young minds to engineering and science as being career possibilities and disciplines that are eminently exciting.

While DePaola knows that her dean duties will leave her less time in the laboratory, she plans to continue her research collaborations with colleagues at RPI and Albany Medical College, and to form new collaborations with researchers at IIT and other institutions in the Chicago area. She and Deanna Thompson, assistant professor in RPI's Department of Biomedical Engineering, are working on a neural tissue engineering project, trying to understand the process whereby stem cells give rise to neural tissue, which the researchers have found seems to greatly depend upon the influence of neighboring vasculature.

DePaola and surgeons from Albany are also pursuing new treatments for osteoporosis, looking at how the physical environment can serve as a tool for modulating the metabolism of the bone-forming cells so that therapies could potentially be developed. The team is investigating ways to affect the differentiation of stem cells into bone cells using a combination of biological and physical stimuli, and how to improve the odds of their integration within the body by isolating and pre-treating the cells outside of the body.

While DePaola admits to being "data-driven," maintaining that the successful outcome of a project depends upon detailed information gathering, proper analysis, and careful consideration of all the parameters, she firmly believes in the human component.

"You always need to make sure that everybody who has a stake in the project is included," says DePaola. "It's important to get their input and try to see things from their perspective."

DePaola has practiced this people approach since she put herself in her grandmother's shoes as a little girl concerned about the appearance of age spots. And the influence of so many of her family members has reinforced this approach and the importance of DePaola's role as an educator: her mother, a retired professor of physics and mathematics; her father, an economist; her grandfather, who founded a preparatory school; her aunt, another educator; and her husband, Aleksandar Ostrogorsky, who joins DePaola at IIT as a professor in the Department of Mechanical, Materials, and Aerospace Engineering.

In fact, it was the human component that sold DePaola on IIT when she came to Main Campus for her interview.

"The level of excitement that people have about Armour College and the level of commitment that everyone has linked into the community gave me reason to believe that this would be a great opportunity," she says. "I met with students and faculty, and with some of the trustees whose support and enthusiasm toward the institution and engineering is breathtaking. Everybody is ready to contribute and make it happen. I'm very excited. There are a lot of expectations of the dean of engineering, and I'm up to the task." ■

MORE ONLINE

American Heart Association: **www.americanheart.org**
National Osteoporosis Foundation: **www.nof.org**
National Science Foundation: **www.nsf.gov**

All into Consideration

BY MARCIA FAYE

As an internationally known expert in chemical-reaction technology and process scale-up with The Dow Chemical Company, Hank Kohlbrand (CHE '73) has traveled the world. Among a veritable bazaar of mementos from his visits to faraway lands, on display in his office at Dow headquarters in Midland, Mich., is a marble elephant Kohlbrand purchased in India. Within the elephant is carved a smaller elephant and within that one, an elephant that is smaller yet. What gives the piece its unique appeal, says Kohlbrand, is the artistic rendering of all three elephants together, forming a most interesting whole.

"In a country like the United States, where we sometimes take for granted much of what we have," he says, "being able to think about other places is oftentimes a thought-provoking reminder that you shouldn't just look at how things may have changed since yesterday, but look instead at the absolute situation and appreciate it."

Taking a global view—both literally and philosophically—is something that Kohlbrand has been doing since his days at IIT Armour College of Engineering, when he quickly discovered that to perform well on his thermodynamics quizzes, he would need to understand and apply both prior learning and new lessons. It is a vision Kohlbrand has also adopted as incoming president of the American Institute of Chemical Engineers (AIChE), where he has garnered a reputation for finding answers based on his longtime involvement with the organization and his progressive attitude. Kohlbrand will begin his presidency in 2010 after serving this year as president-elect.

"BEING ABLE TO THINK ABOUT OTHER PLACES IS OFTENTIMES A THOUGHT-PROVOKING REMINDER TO LOOK INSTEAD AT THE ABSOLUTE SITUATION AND APPRECIATE IT."

"Hank Kohlbrand's experience with AIChE over the past 30-plus years, coupled with his leadership skills and forward thinking, will provide AIChE with a truly outstanding president," says H. Scott Fogler, Vennema Professor of Chemical Engineering at the University of Michigan and AIChE president. "I have observed firsthand how Hank defines and thinks through the tough problems AIChE is facing and then suggests innovative solutions."

Besides continuing the strategy begun by his predecessor, Kohlbrand will work to increase AIChE membership, keep programs timely and relevant, and ensure that activities accommodate an ever-broadening definition of chemical engineering—one that places more emphasis on biotechnology, sustainability, and process safety, for example. He says that today's chemical engineers also need to recognize the great impact they can have on addressing some of the world's major social issues.

Photo: Laura J. Vosejpka

"Solutions to the problem of having potable water, for example, will reside in many cases with the chemical engineer taking scientific principles and putting them into action, analyzing processes and equipment," says Kohlbrand, Dow's global research and development (R&D) director of engineering and process sciences in core R&D. "There's a societal aspect whereby if you could take away the burden of having potable water, it will allow people to spend their time on other things that will improve their lives."

Through its Institute for Sustainability, AIChE is involved in projects to convert solar, wind, and ocean wave energy into forms that are accessible and affordable. Youth outreach and teacher mentoring is another focus area of the institute, as AIChE looks for ways to encourage K–12 students to consider careers in engineering, science, and mathematics as well as provide them with an outlet to address their sense of social consciousness and satisfy their yearnings to make a difference in the health of the planet. AIChE members and student chapters have joined with the group Engineers Without Borders on various projects, which gives chemical engineering students the opportunity to work together as a team with students in other engineering disciplines to help solve critical problems affecting developing global communities.

Kohlbrand recalls his own experience as part of a Dow engineering team whose effective internal collaboration produced an innovation of far-reaching benefit. In 1974—the year that Kohlbrand became a Dow employee—he and some 20 colleagues began searching for ways to more safely work with materials that were stored in large quantities at Dow, a multibillion-dollar diversified science and technology corporation. The team's four-year effort resulted in the accelerating rate calorimeter (ARC™), designed to simulate runaway chemical reactions in large containers such as railcars, storage tanks, or even chemical reactors. The calorimeter went through a series of patents, was commercialized in 1978, and won several industry honors, including the John C. Vaaler Award, the A. O. Beckman Award, and two R&D 100 Awards, which qualifies a product as being one of the most innovative ideas of the year.

Kohlbrand led the sub-team that converted data from the ARC to predict real-world scenarios as well as the efforts to license the invention to a company that heard about the calorimeter and wanted to develop a commercial version.

"Many people who use scientific instruments only see the final product," says Kohlbrand, who is chair of the IIT Department of Chemical and Biological Engineering Advisory Board. "They don't realize that when something is new, it doesn't look elegant—it doesn't have nice paint or flashy dials. The calorimeter was really kind of an ugly thing when we first started. It was actually designed to blow up; that's one of the reasons you get such good data," he adds with a chuckle, noting that the tiny ARC only held about 10 grams, or 10 cc, of sample but was contained within a mini-refrigerator-sized safety containment. "The process of watching the calorimeter evolve—from a concept to a device that worked to a commercial entity that turned out to be very successful—was quite an eye-opening experience."

With the ARC still in use at many companies, Kohlbrand is now largely responsible for determining which projects Dow is capable of undertaking in the areas of process chemistry, process development, reaction engineering, modeling, fluid mechanics and mixing, process separations, and solids processing. He also plays a significant role in managing interactions between R&D and manufacturing, focusing on the development of new products and process technology.

High-priority projects Kohlbrand's division is developing include alternative feedstocks, such as the use of plant oils as chemical feedstocks; green chemistry procedures; process synthesis, intensification, and reliability analyses; integrated photovoltaic cells; coal-to-chemicals conversion; water purification methods; and a number of new product proprietary projects for Dow's many clients.

"The scope of what we can do today has increased tremendously," says Kohlbrand, about the changes he has seen in business and technology over the course of his career. "Our ability to use computer modeling to enhance our experimental programs has allowed us to fundamentally change the way that we develop technology and understand science. We can use computers to explore many different design options for a plant instead of putting together one design and tediously going through calculations by hand. On the business side, when I started in the industry, companies were led and organized geographically and functionally. There is a lot more customer focus now, with commercial leadership. We are much more directed by the markets that we serve than by the products that we make."

While Kohlbrand recalls that there was a high school chemistry teacher and a grade school science teacher whom he admired, he most respects leaders who have made an impact on the world, from Joseph Smith, the Mormon Church founder who created a series of influential governing principles, to Benjamin Franklin, who made contributions to printing, science, and government.

"Patton was not a particularly nice guy, but he sure showed the tenacity and the ability during the war to really make a difference," says Kohlbrand. "He was wired for conflict."

In 2002, Kohlbrand was recognized for his lifetime of career accomplishment with IIT's Professional Achievement Award and in 2009, the Charles W. Pierce Distinguished Alumni Award. In 1997, Kohlbrand added an especially unique credit to his name: he was selected as the Ralph Peck Distinguished Lecturer, in a longtime tradition that honors the former Department of Chemical and Biological Engineering chair and thermodynamics professor whose 10-minute quizzes taught Kohlbrand not only a tough science, but how to incorporate all of the component parts into a most interesting and valuable whole. ■

MORE ONLINE

American Institute of Chemical Engineers: **www.aiche.org**
The Dow Chemical Company: **www.dow.com**
Engineers Without Borders: **www.ewb-usa.org**

leave only footsteps

When he was a kid,
Raymond Ballard (CHE, 4th year) wanted to be a veterinarian.

When he was in his teens, he thought about becoming an airline pilot.

But in high school, he met a physics teacher who changed all that.

"His name was Bill Ennis, and he was inspirational," says Ballard, smiling. "He had a great career, including working in a particle accelerator lab at Fermilab. He gave it up to teach high school physics. He said if he could get 20 students to do what he had done, his impact on science would be 20 times greater."

After several of Ennis's graduates attended IIT and gave the university glowing reports, he began to suggest the university to his juniors and seniors. At least one has enrolled at IIT every year since. But Ballard's path is somewhat unusual. His triumvirate of passions includes his major, chemical engineering; his minor, political science; and his avocation, community service. After graduation Ballard intends to return to his native Alaska to work in engineering and then enter law school, possibly at IIT Chicago-Kent College of Law.

"There's a lot of law involved in working with engineering companies," Ballard says. "It's important to understand the technical aspects of what they're doing. There's patent work, dealing with renewable energy, working with the oil and gas industries. They need so much legal work, and most lawyers don't have a technical background. There are lots of opportunities." Eventually, he hopes to meld his passions and enter politics.

Ballard's commitment to community service stems from his many years in the Boy Scouts, where, at age 17, he became an Eagle Scout. It's a rank attained by just 2 percent of all scouts, including such accomplished men as Neil Armstrong, Gerald Ford, and Bill Gates.

Following one of the Boy Scouts tenets of providing service to others, Ballard began working on roadside cleanup and canned-food drives at as early as age 11. "I helped churches construct things that would sustain them, like a storage shed," he says, sounding matter of fact, as though it were something every sixth grader would do.

Scouting significantly impacted his life in more than one way. When he was 17, he and his troop went to a Scout Jamboree, an event that brings together 35,000 scouts from all over the world. It was extremely hot, and Ballard joined several adults in erecting a large tent in order to keep the scouts cool. As they lifted the tent, a pole struck a power line, killing four of the leaders. "It was terrifying," Ballard says quietly. "Their kids were there. One of the leaders was the camp director, so just about every scout knew him. These men were all 150 percent committed to scouting, to making sure we were the best people we could possibly be. It was horrible.

"After that I told myself I would do everything possible to get everything out of life that I could."

The following year Ballard became active in his high school's student government and more involved with community organizations.

When he enrolled at IIT, he joined Union Board and was selected president last year. According to Erin Gray, director of student life, Ballard helped revitalize Scarlet Fever, a group within the Union Board that promotes athletic events on campus. He became a familiar figure, walking around campus with face paint to remind students of that evening's game. "Ray is at the forefront of getting students involved in IIT and making it a better place," says Gray. "He's a good role model, and a good representative of the student body."

Ballard laughs when he thinks about the face paint. "It's not just about the fun and games," he says. "At the end of the day, we know that our name is only as good as our institution. When we graduate, we need to make sure that every graduating student feels the same way and commits 110 percent to bettering the institution back home and bettering the name of IIT abroad."

LIFE ON CAMPUS

The IIT Office of Student Life offers more than 70 organizations for student involvement, including clubs based on nationality, religion, majors, and Greek life, in addition to common interests. The following is just a sample. Visit **www.iit.edu/student_life/organizations/current_organizations.shtml** for the full list.

- 33rd Street Productions (drama)
- Beard and Mustache Club
- Chess Club
- IIT Tennis
- Illinois Tech Cycling
- Illinois Tech Robotics
- Japanese Film and Animation Society
- Medieval Society
- Rock Climbing
- Tech Runs Around Chicago
- TechTronics A Cappella
- The American Odyssey Travel Club
- Up 'Til Dawn (for childhood cancer)
- Water Environment Federation

BY LINDA PACKER

William Grimshaw, professor of political science, says Ballard's dedication to developing campus life, in terms of encouraging students to become engaged and involved, is something faculty and administrators can't do. "He has an extraordinary commitment to enriching campus life," Grimshaw states. "It's a daunting task to get IIT students away from their computers, and Ray has had to struggle. But he never lets it get him down."

Ballard emphasizes that he's still growing. One of the things he likes most about IIT is that rather than concentrating on learning facts and methods, he learns how to think. "Teachers aren't as concerned with me getting everything 100 percent right; they're trying to teach me to think like an engineer," he says. He talks enthusiastically about the Interprofessional Projects (IPRO) program for the same reasons. For his course last year, his team of students studied the process model of a coal-fired power plant and recommended a solution that would effectively eliminate liquid waste.

"We learned how to research and analyze. We ultimately developed not just an effective design, but a financially feasible design," he says. For Ballard, it was more than an academic requirement and a valuable exercise in teamwork. "With a group of 10 people, you encounter all kinds of personalities and situations, and you learn to deal with them. Some people weren't committed to the project. Some were pretty domineering. There were varying levels of expertise. You have to learn how to work together."

In addition to his IPRO project and engineering and political science coursework, Ballard has had other opportunities to hone his leadership skills at IIT—his latest as 2009–10 president of the Student Government Association (SGA). As SGA president, he wants to make it easier for students to share issues with the SGA, to promote what the organization has already accomplished, and to inform the student body about the SGA's agenda. He says, however, that change is often slow in coming. "Student government is like real government. It takes a long time for change. And you're never going to make everybody happy, but you have to keep trying and you have to keep the long term in mind."

And as he continues on his path, both at IIT and after graduation, Ballard says community service will always be a guiding force. He remembers a longtime scouting tenet: when you go into the wilderness, leave only footprints behind. "I always want to be in a place where I can connect with people," he says. "And wherever I go, I want to leave it better than when I arrived." ■

Photo: Bonnie Robinson

MORE ONLINE

IIT Student Government Association: **http://sga.iit.edu/about.php**
IIT Leadership Academy: **http://leadershipacademy.iit.edu**

LOIS GRAHAM

According to a report released in spring 2009 by the National Research Council, female scientists, mathematicians, and engineers at major research universities appear to have finally caught up with their male counterparts in securing promotion and tenure, although they continue to fall behind in salary and access to some other resources.

It is likely, however, that the "other resources" do not include washroom facilities for women.

Lois Graham (M.S. ME '49, Ph.D. '59) can recall the day when she did not have access to a women's restroom in IIT's Department of Mechanical, Materials, and Aerospace Engineering (MMAE) because one did not exist. Little wonder, considering that she was MMAE's first female graduate student. IIT administration, which was happy to admit Graham into the program and even awarded her a graduate assistantship, accommodated her needs as quickly and as efficiently as possible.

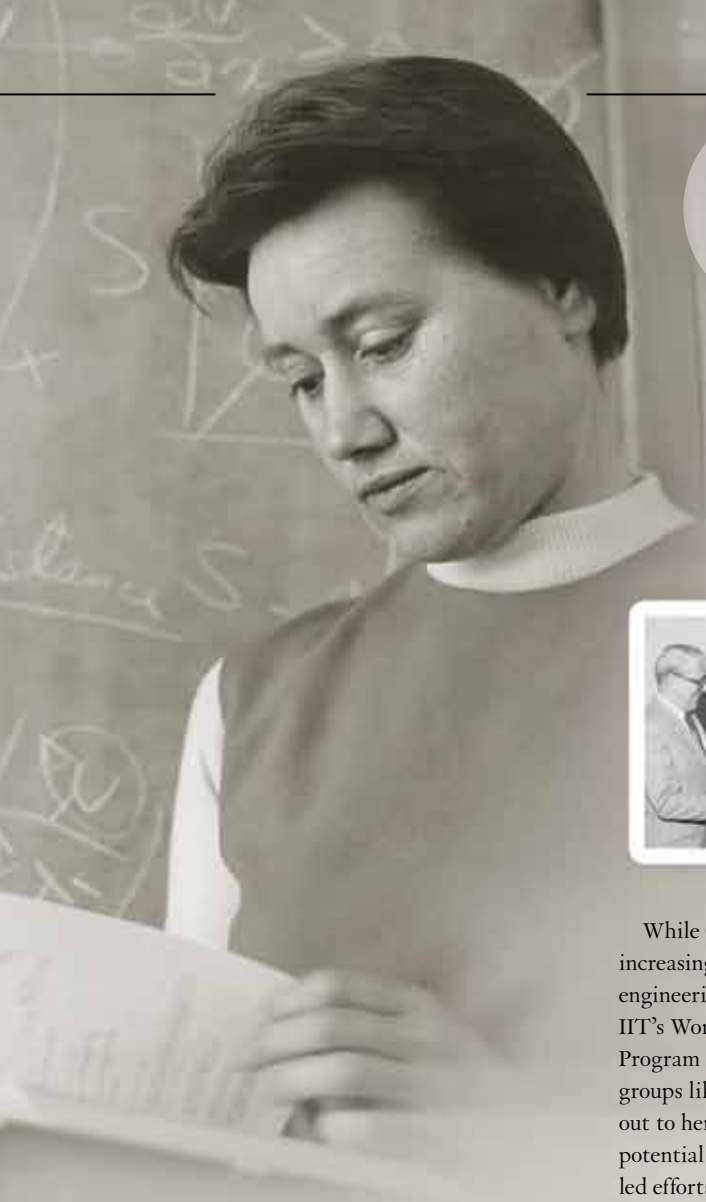
"They took out a closet where the cleaning equipment was kept, and put in a toilet and a sink, and that was for me," recounted Graham, in a 2003 interview for the Society of Women Engineers Oral History Project.

Graham remained in the MMAE department for the next 39 years, adding to her list of firsts begun when she and another classmate in 1945 were the first women to graduate with bachelor's degrees from Rensselaer Polytechnic Institute (RPI). At IIT, Graham became the first woman to obtain advanced degrees in mechanical engineering and the first woman in the United States to earn a doctorate in the field. Before she retired in 1985, Graham served to influence countless students through her roles as professor, chair, mentor, and director of science and engineering programs designed to encourage women and minorities.

An early influence for Graham was another female who made her own distinctive mark in the annals of history—aviatrix Amelia Earhart, the first woman to fly solo across the Atlantic Ocean. "At that time, there was no real future in aviation for a woman as a career but aeronautical engineering was a possibility," explains Graham, from her home in Canton, N.Y., noting with humor that a related career had entered her mind but was subsequently ruled out. "I did consider being a stewardess on an airline but there were weight and height restrictions, and I literally outgrew that choice." She entered RPI on the advice that mechanical engineering was a broader field that could also lead to aeronautics.

After graduating from an accelerated bachelor's program, Graham worked as a test engineer at the Carrier Corporation but became bored and decided to resume her education. An urge to travel and an interest in the energy work being done by William Goodman and Max Jakob brought Graham to IIT. Although she was the only woman in her classes, she says she was fortunate to make friends with several of her classmates and interacted with them socially as well as academically. As a teaching assistant, Graham taught veterans her age and older who were attending IIT on the GI Bill. In 1949, she became the first female faculty member of the MMAE department and in 1975, was awarded full professorship.

"It wasn't until I was on the faculty that I actively began recruiting women to the fields of science and engineering," says Graham. Five years into her first faculty appointment, Graham made a strong impression on Eileen Duignan-Woods (MAE '70), a 14-year-old who wanted to fly aircraft but, like Graham, knew her aviation career choices would be limited. Duignan's father, Arthur Ambrose Duignan, took evening courses at IIT before World War II interrupted his education, and later brought his daughter to the Office of Admission, where a counselor told her about Lois Graham.



"The staff was so proud of her," says Duignan-Woods. "My father was convinced; I was encouraged. I made the decision to study mechanical engineering and go to the best school—according to my father—and that was IIT."

At orientation in 1957, Duignan-Woods finally met the "first-class role model" whose accomplishments and can-do attitude so affected her. "There was only a small handful of women studying engineering at IIT in those days," says Duignan-Woods. "She skillfully brought us into the Society of Women Engineers (SWE) and gave us a chance to meet other courageous and successful women engineers around Chicago, the nation, and eventually, the world."

While Graham was passionate about increasing the number of women in engineering, founding and directing IIT's Women in Science and Engineering Program and exposing women to groups like the SWE, she also reached out to her male students and even potential students. For 10 years, she led efforts to introduce engineering to underrepresented groups through the Minorities in Engineering Program. And years after leaving IIT, Duignan-Woods, now founder and president of the mechanical-consulting firm E.D.W. Associates, Inc., had the chance to work with former classmates who shared their thoughts about Graham with her.

"Not only did I find them to be exceptional engineers who really understood the thermodynamics she taught them," says Duignan-Woods, "but they spoke of Lois Graham with a reverence and respect I've never witnessed before or since. She was a tough teacher; she was also fair and ethical. Most importantly, she was an outstanding engineer."

Graham admits that while being a pioneer was not always easy, it was always gratifying. "Although I experienced discrimination and had to constantly prove myself, I loved my work and enjoyed my colleagues," she says. "My students helped me to develop my methods and style. I took as much pride in my best students as I did in those who had a greater struggle but succeeded."

Even as she lives a quiet life of simple pleasures—doing puzzles, participating in an exercise class for seniors at the local hospital, attending concerts at a nearby college—with her husband, Sanford Weil, Graham continues to impact her profession.

The recipient of accolades from academic institutions and professional organizations alike, Graham prizes an honor given to her from IIT above all others. "None has meant more to me than to be selected as a Person of the Millennium by students who never knew me," she says. "To have a reputation strong enough to warrant such respect is really awesome." A semicircular object made of glass, the award, dated December 8, 1999, recognizes Graham as a visionary who will make a lasting impression into the next millennium.

"Most female engineers will never understand what it was truly like and how difficult it was to be a woman in engineering in Lois Graham's generation," says Duignan-Woods. "But I'm sure that she would smile and approve because that means things have changed for the good. She won't agree, but Lois Graham deserves a large share of the credit for that change."

—Marcia Faye

Archival images courtesy IIT Archives (Chicago)

A LASTING IMPRESSION FOR THE MILLENNIUMS

Share Your News!

We want to hear from you! Send us your class note at **alumni@iit.edu.**

classnotes

1940s

→ Warren Spitz
(ARCH '42, M.S. CRP '68), Northbrook, Ill., is an architect, urban planner, and professional engineer. His firm is SPACE unlimited. He is an avid collector of art about music and enjoys swimming and playing tennis.

1950s

Richard Broun
(ARCH '56), Bethesda, Md., has retired from the United States Department of Housing and Urban Development (HUD) after 41 years of federal service. Among the positions he held was director of HUD's Office of Environment and Energy, and environmental clearance officer with oversight responsibility for reviews conducted throughout the country. Broun was the recipient of a Presidential Meritorious Service Award. He is married to Karen E. Daly.

→ Shirley Farmer
(ENGL '57, LAW '61), New York, is a lawyer in private civil practice and is also a professional opera singer.

→ Ralph Norris
(CE '57), Freeport, Maine, is a retired civil engineer. He is passionate about the tenor saxophone and teaches jazz combos at a local high school.

→ H. P. Davis Rockwell
(ARCH '57), Chicago, is the sole proprietor of his own architecture and landscape architecture firm.

1960s

→ Richard Ward
(ME '60), Chicago, is president of the downtown Chicago New Eastside resident association, representing the 12,000 persons that live in the community and administrating the website www.neweastside.org.

→ Martin Keane
(EE '61), Chicago, received an M.S. in mathematics from the University of Hawaii and a Ph.D. in mathematics from Northwestern University. Keane is currently a business consultant in Chicago.

→ Lawrence Elewitz
(MATH '63, M.S. '67), Dallas, Texas, is retired from a career in software programming and engineering information systems. He has three children.

→ Robert Gordon
(ARCH '63, M.S. CRP '67), Chicago, is principal of Robert Gordon Associates: Architecture/Planning/Design. Gordon is also the author of *Perspective Drawing: A Designer's Method* (Fairchild Publications, 2008).

→ Barbara Crane
(M.S. PHOT '66), Chicago, is an artistic photographer and a prominent educator whose work is exhibited worldwide. Two new books of her work were published last spring. Her show, Barbara Crane: Challenging Vision, will open this October at the Chicago Cultural Center as part of the city's year-long Modernism celebration. Crane has a studio in Chicago and lives with her husband, the painter John Miller.

Ronald Hankin
(LAW '66), Lakewood, Ill., is author of *Navigating the Legal Minefields of Private Investigations,* an Amazon bestseller. Hankin is a former United States Marine Corps major, FBI agent, lawyer, commercial pilot, and private detective.

→ Janet Timmons
(MATH '67), Dallas, Texas, retired as a software engineer and now works as the Hebrew coordinator for Temple Emanu-El Religious School in Dallas.

John Balestrery
(M.S. CRP '68), Merced, Calif., is developing Sunrise, a unique residential project in Federación, Brazil, featuring round-shaped solar-powered homes.

→ Kenneth Ricker
(CE '68), Phoenix, is president of Ricker, Atkinson, McBee, Morman, & Associates, Inc., a geotechnical/construction QC firm. He and his wife have two children and two grandchildren.

→ Richard Laurent
(DSGN '69), Chicago, is a full-time painter (www.laurentart.com) who maintains an art studio in the historic Fine Arts Building.

→ Arnold Lingertat
(MAE '69), Naples, Fla., is former director of engineering with Johnson & Johnson. He is enjoying retirement with his wife, Erika, and his children and grandchildren.

→ Bruno Tassone
(LAW '69), Chicago, is a retired Cook County Judge, rated by the Illinois State Bar Association as being highly qualified. He has received the Distinguished Jurist Award, presented by the Chicago Bar Association, and has been rated as one of the Top 10 Mediators/Arbitrators in Illinois for the years 2005, 2006, 2007, and 2008 in the magazine *Law & Politics,* published by *Chicago Magazine.*

1970s

→ James Condon
(MATH '72, M.S. IE '73), Chicago, is an owner of Triangle Assets, a financial services company.

J. Powers McGuire
(LAW '73, LLM '81), Augusta, Maine, competed in the World Pizza Championships in Italy in April.

Sol Rajfer
(LAW '73), Chicago, concentrates his practice in criminal and traffic law. He has been an instructor in the Trial Advocacy Program at Loyola Law School and is a past member of the Chicago Bar Association Judicial Evaluation Committee.

Paul Finer
(LAW '74), La Grange Park, Ill., received the 2008 Harvey Morse Founder Award from the Florida Association of Private Investigators.

→ John Leonard
(ECON '74, M.A.S. BA '77, LAW '81), Chicago, is retired from his position as manager of collections and compliance for Cook County. He now works part-time in real estate.

→ Thomas Sharp
(EE '74), Phoenix, is a senior consultant with Federal Engineering, Inc., performing radio system engineering. He and his wife have twin sons, aged 28, and four grandchildren. He serves as an elder in the Presbyterian Church and enjoys helping Explorer Scouts learn electronics and ham radio.

Hon. Margaret Frossard
(LAW '76), Chicago, was elected to the Board of Managers of the Chicago Bar Association for 2009–10. Frossard sits on the Illinois Appellate Court, First District.

→ Mark Grach
(M.B.A. '76), Chicago, is employed with DLK Solutions, LLC and is active with community health-care organizations. Grach is immediate past chair of Access to Care, an organization that helps the uninsured find health care. He and his wife, Shelly Stern Grach, live in Chicago's Gold Coast neighborhood.

• Robert Walke
(ME '76), Westlake Village, Calif., is director and chief engineer of F/A-18 Programs with Northrop Grumman Corp. He and his wife, Sylvia, have three children, ages 16, 14, and 12.

Susan Solomon
(CHEM '77), Boulder, Colo., received an honorary degree from the University of Pennsylvania.

Patrick Burns
(LAW '78), Lake Bluff, Ill., was named 2009–10 president of the Intellectual Property Law Association of Chicago at the organization's annual meeting in May.

David Lourie
(CE '79, M.S. '81), Metairie, La., is the new president of ASFE/The Best People on Earth, a not-for-profit association of "earth-engineering" firms that employ 125,000 individuals worldwide. Lourie is the 39th individual to serve as ASFE's president and chair of the group's board of directors.

→ Bruce Melanson
(CS '79), Peoria, Ariz., is a software engineer who enjoys golf. He and his wife, Susan, enjoy travel, sightseeing, and hiking.

Amy Lee Segami
(ME '79, M.S. '82), Chicago, was named as a 2009 recipient of the IIT Julia Beveridge Award.

→ Michael Siegel
(M.A.S. CRP '79), Phoenix, is a principal with the Environmental Planning Group (EPG, Inc.), based in Phoenix. He and his wife, Nona, have two adult children.

Robert Strunck
(LAW '79), Chicago, assistant Cook County public defender, Murder Task Force, won an acquittal for his client in People of the State of Illinois v. Antonio Gibson on April 29, 2009. Gibson was charged with the first-degree murder of three individuals and the attempted murder of another.

1980s

→ David Kash
(LAW '81), Scottsdale, Ariz., is a shareholder in the law firm Ryley Carlock & Applewhite.

Heidi Rank
(ARCH '81), San Luis Obispo, Calif., received an award for employee excellence for the third quarter for the San Jose Office of Gilbane Building Company, last November, and won the overall award for the entire region last year. She is also teaching at San Jose City College and on the college's curriculum advisory board for construction technology.

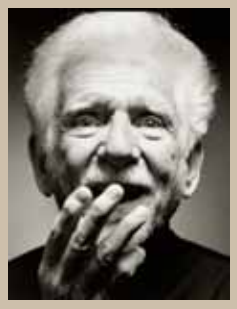
Angelina Lee
(ARCH '82), Hinsdale, Ill., married Jeff Tapper in 2000.

Randy Keller
(CE '83), Worth, Ill., challenged incumbent Mayor Ed Guzdziol for the Worth mayor's seat in the April 7 election. Keller is a regional manager and engineer for Nicor.

Michael Plesniak
(ME '83, M.S. '84), Washington, D.C., a professor of engineering and applied science at George Washington University and chair of the university's Department of Mechanical and Aerospace Engineering, was named as a fellow of the American Physical Society.

→ Rie Ando
(ARCH '84, M.B.A. '93), New York, is a vice president in derivatives–legal with Lehman Bros. Holding, Inc., after serving as head of the Transaction Management Group–Asia at Lehman Brothers Japan.

→ Prasad Kodukula
(Ph.D. ENVE '84), Chicago, is the founder of Kodukula & Associates and president of Constant Compliance, Inc.



Martin Cooper
(EE '50, M.S. '57), Del Mar, Calif., was awarded the 2009 Prince of Asturias Award for Technical and Scientific Research. Along with co-winner Raymond Tomlinson, who developed the "at" symbol for use in electronic messages, Cooper was acknowledged for his role in revolutionizing the way people communicate. In 1973, Cooper introduced the world's first handheld cell phone, and he continued to pioneer advancements in wireless communication during his 30-year career at Motorola. He is executive chairman and co-founder of ArrayComm, Inc.

Each year the Prince of Asturias Foundation awards eight prestigious prizes in fields including the arts, humanities, science, and international development. The awards are named for Crown Prince Felipe de Borbón, who is prince of Asturias, a northern region of Spain.

→ Timothy Murphy
(CE '84), Chicago, president of Murphy Pavement Technology, Inc., was hired by the Illinois Department of Transportation (IDOT) and Illinois Asphalt Pavement Association (IAPA) to travel around the state of Illinois to deliver the IDOT enhanced recycled-asphalt pavement specifications. Based on the effort, IAPA awarded him as the group's Most Active Member.

→ David Galowich
(LAW '85), Chicago, is a partner at Madison Realty Group, Inc. He and his wife, Dana, live in Chicago and have two children. Galowich also holds an aviation license.

Desiree Grode
(LAW '85, LLM TAX '93), Chicago, is a Democratic candidate for Second District Cook County Board Commissioner. The primary is scheduled for February 2, 2010. Grode also maintains her own trust and estate law practice.

Anita Alvarez
(LAW '86), River Forest, Ill., was elected president of the Chicago Bar Association for 2009–10.

→ Ismail Manasra
(EE '86, M.S. '88), Chicago, works for Sargent & Lundy, LLC, a company that specializes in professional services for electric power and energy-intensive clients.

→ Bruce Meyer
(LAW '86), Scottsdale, Ariz., is managing director for Copperwynd Financial, in Phoenix. He and his wife have three children. He serves on the board of the Arizona Kidney Foundation.

→ Donald Richardson
(DSGN '87), Scottsdale, Ariz., is an investor/day trader.

→ David Goldwin
(LAW '88), Phoenix, is vice president and divisional counsel at TSYS Acquiring Solutions, LLC.

→ Robert Roach
(M.S. CS '88), Chandler, Ariz., is a distinguished member of the technical staff at Motorola. He and his wife, Teri, reside in the Ahwatukee Foothills area of Phoenix.

→ Dale Sahs
(M.A.S. BA '88), Phoenix, is senior vice president, POS services, managed services, at TeleCommunication Systems, Inc., TSYS.

Kirankumar Topudurti
(Ph.D. ENVE '88), Champaign, Ill., deputy director of the Construction Engineering Research Laboratory, won the 2009 National Society of Professional Engineers' Federal Engineer of the Year Award.

→ Chris Amantea
(LAW '89), Manhattan Beach, Calif., is a partner in Hunton & Williams, LLP.

→ John Baggio
(ME '89) and **Donna (Junkroski) Baggio** (ME '89), Tinley Park, Ill., have two sons, ages 8 and 5. John is regional vice president with Primerica Financial Services.

Kevin Smith
(CS '89), Chicago, was recognized as the 2009 Distinguished Administrator of the Year for Olive-Harvey College, one of the City Colleges of Chicago, for his work as the new associate dean of instruction.

1990s

Leo Dombrowski
(LAW '90), Chicago, is a partner with Wildman, Harrold, Allen & Dixon, LLP, specializing in environmental, toxic tort, and litigation matters. For the past 10 years, Dombrowski has also represented several military veterans *pro bono* in their efforts to obtain benefits from the Department of Veterans Affairs.

→ Chia-Yu Fu
(M.S. MAE '90), Chandler, Ariz., is a manager with Foxconn Technology Group (Taiwan). He and his wife, Yu-Chuan, have two children, ages 13 and 8.

→ Paul Giamarusti
(EE '90), Chicago, is global program manager for Motorola, Inc. He and his wife, Gabrielle, have two children, ages 6 and 5.

Karl Schwappach
(LAW '90), Minneapolis, has joined the technology and intellectual property group at Stoel Rives, LLP in Minneapolis.

→ John Butler
(EE '91, M.S. CS '98), San Francisco, is a software engineer with Advent Software, Inc.

→ Adina Lund
(CE '91), Glendale, Ariz., is an engineering supervisor with the City of Peoria. She and her husband, Steve, enjoy traveling to California and Hawaii, and have one child, age 3.

→ Steven Mannina
(M.S. CS '91, M.B.A. '03), Chicago, is chief information officer at the Cook County Treasurer's Office. He and his wife, Susan Schwendener, live on the Near North Side, and he enjoys riding his bike to work every day.

Arthur Wilhelmi
(LAW '93), Joliet, Ill., 43rd District Illinois state senator, was the guest Commencement speaker at the University of St. Francis in May 2009.

Dania Chastain
(Ph.D. PSYC '94), Charlottesville, Va., is serving a two-year term as president of the Eastern Pain Association.

→ Joseph Fox
(LAW '95), Chicago, is an attorney with Greer, Burns & Crain, Ltd., an intellectual property law firm.

→ Mary Kosinski
(LAW '95), Scottsdale, Ariz., is the executive assistant for regulatory affairs (in-house counsel) for the Arizona Department of Insurance. She and her husband, Ross, love to explore Arizona with their three adult children, ages 24, 22, and 20.

→ Juliet Pahed Straley
(ARCH '95), San Francisco, is a senior associate with Anshen + Allen Architects. She and her husband, Rob, are avid Formula One race fans and when possible, try to integrate F1 Grand Prixs into their vacation travels. They are also new parents.

Cheryl Hyman
(CS '96), Lansing, Ill., has been promoted to vice president of ComEd's new Department of Operations Strategy and Business Intelligence, which will cover the areas of operational strategic initiatives, business intelligence, and operational analysis, and serve as the strategic arm of the company. A 12-year ComEd veteran, Hyman will prioritize and manage the company's operational strategic initiatives and support a strategic focus on the vision, values, and culture throughout the company.

Elizabeth Wells
(LAW '95), Chicago, continues to serve on the Board of Managers of the Chicago Bar Association for 2009–10. She is a partner with Schiller DuCanto and Fleck, LLP in Chicago, where she concentrates her practice on retirement benefits related to domestic-relations matters.

Frank Addante
(EE '99), Los Angeles, is cofounder and chief executive officer of the Rubicon Project, an online advertising optimization company established in 2007. The project has developed a technology that uses billions of pieces of proprietary market data to match each publisher ad impression to the best money-making opportunities from ad networks.

Brooks Atwood
(ARCH '99), New York, is cofounder and principal of the New York City office of POD DESIGN+MEDIA®. The firm recently designed the Listening Studio, an audio and video installation used as an audio test within a custom-designed laboratory space at the Center for Hearing and Communication in Manhattan.

→ Christopher Campbell
(LAW '99) Ladera Ranch, Calif., is vice president of business development at Lakeshore Branding, an Internet marketing and Web design firm for small- to medium-sized businesses.

Cathy Higgins-Mora
(LAW '99), Chicago, is a partner at Hughes Socol Piers Resnick & Dym, Ltd., where she began practicing United States immigration and nationality law in 2000. Higgins-Mora represents all types of individuals and corporations in all aspects of immigration law, and continues to advocate for comprehensive immigration reform.

→ Garurank Saxena
(Ph.D. CS '99), Chandler, Ariz., works for Motorola. He has taught at IIT and DePaul University as an adjunct professor.

2000s

→ John Johnson
(ARCH '00), Chicago, is director of facilities and operations at the Museum of Science and Industry.

David Ballard
(LAW '01), Chicago, has been promoted to partner at Barnes & Thornburg, LLP.

Robert Delaney
(M.P.A. '03), Chicago, is a sergeant with the Chicago Police Department and works in the 16th District. Delaney is married and has three children.

Ryan Blackney
(LAW '04), Woodstock, Ill., assistant McHenry County state's attorney, has been admitted by the Supreme Court of Illinois as a member of the Capital Litigation Trial Bar, which was created in 2001 to ensure that attorneys who prosecute or defend death penalty cases have the ability, knowledge, and experience to do so in a competent, ethical, and professional manner. Only 10 attorneys in McHenry County are certified to prosecute or defend capital cases.

David Taylor
(EE '04), Naples, Italy, married Annabella Nakao in 2005 in Corpus Christi, Texas.

Lauren Radtke
(M.S. PSYC '05, Ph.D. '08), Chicago, received a fellowship to Linden Oaks Hospital in Naperville, Ill.

Athena Thomas
Roanoke, Va., joined AECOM Design. She is currently a registered architect in the European Union, affiliated with the American Institute of Architects International Associate Program, and is actively seeking registered architect status in Virginia. Thomas is also a LEED Accredited Professional and a member of the United States Navy Reserve Construction Battalion force.

This year, 90% of students will not be able to afford their college education.

But you can change this with the stroke of a pen.

Our students rely heavily on the generosity of alumni and friends to achieve their own dreams of an IIT education. In addition to outright gifts, realized estate gifts have made it possible for a significant number of students to receive scholarship awards.

Estate plans from today's Gunsaulus Society members continue to ensure the future availability of scholarship funds. Whether you choose to add to an existing scholarship fund or to establish a named fund of your own, creating a planned gift through your estate will help keep classroom seats filled while leaving a long-term legacy at IIT.

To discuss how to include IIT scholarships in your estate plan, please contact Elaine Clay, assistant director of planned giving, at 312.567.5028 or plannedgiving@iit.edu.

Only 1 in 10 students could attend IIT without scholarship assistance.

Gunsaulus | SOCIETY

ALUMNI AWARDS

Service Awardees

[Left to right] Alumni Service Award winners Maurice "Jerry" Frank (M.S. MATH '69, Ph.D. '72) and Earl Zwicker (M.S. PHYS '52, Ph.D. '59)

Alumni Medalist

[Left to right] Alan Cramb, IIT provost and senior vice president for academic affairs, with Alumni Medal winner Frank Crossley (CHE '45, M.S. MET '47, Ph.D. '50), Desne Crossley, and Kenneth Hollman

Judges Team

[Left to right] Alumni Awards judges team members Ellen Jordan Reidy (PSYC '79, M.B.A. '81) and Amy Lee Segami (ME '79, M.S. '82)

Pentagon Tour

President John Anderson and Lieutenant Colonel Kristina O'Brien (BA '90), who hosted a Pentagon tour and reception in Washington, D.C., on February 24

Remembering Karl Menger

IIT alumni and friends at the Third Annual Karl Menger Lecture and Awards event, organized by the Department of Applied Mathematics, on April 20

Golden Alumni Society

Russell Betts, dean of the College of Science and Letters [second from right], with Golden Alumni Society medalists [left to right] Earl Sherman (ME '43), Sherwin Small (ARCH '56), and Dave Steinberg (ME '48) during the Los Angeles regional chapter alumni event on March 17

events

Upcoming Alumni Events

For information about upcoming alumni events listed below and other alumni activities, contact the Office of Alumni Relations at 312.567.5040 or alumni@iit.edu.

Golden Alumni Society Reunion

Friday, September 25, 2009
Hermann Hall
IIT Main Campus
Chicago

The Golden Alumni Society recognizes alumni who are celebrating the 50th anniversary of their graduation from IIT at a luncheon ceremony on campus during Homecoming weekend. This year the ceremony will pay special recognition to the military service of IIT alumni. All members of the Class of 1959 and earlier are invited to attend. For more information, visit http://alumni.iit.edu/goldenalumni.

Homecoming

Saturday, September 26, 2009
IIT Main Campus
Chicago

Join alumni and current students to celebrate your lifelong connection to IIT! Show your school spirit and rediscover the traditions that made your time at IIT memorable. Bring the whole family to the Family Fun Carnival, with rides, games, and a parade. Food and fun are available for all! For more information, visit http://alumni.iit.edu/homecoming.

Learning Modern Exhibition

Saturday, September 26, 2009–Saturday, January 9, 2010
Sullivan Galleries
The School of the Art Institute
Chicago

The Learning Modern exhibit brings the critical role of education in the mid-twentieth century into the contemporary critical practices of artists, architects, and designers. In addition to highlighting the history of IIT and the Institute of Design (ID), the exhibit will feature work by ID alumnus Ken Isaacs.

Alumni Holiday International Discovery Tour

Wednesday, October 7–Monday, October 19, 2009
China and the Yangtze River

China is one of the world's most charismatic countries. Come explore the celebrated cities of China and the Yangtze River, and see legendary wonders not easily accessible independently.

Thirsty Thursday at Jimmy Fig's

Thursday, October 8, 2009
160 North Franklin Street
Chicago

Join other Chicago-area alumni for an after-work networking event.

Musical: *The White City: Daniel Burnham's Dream*

Sunday, October 11, 2009
Carr Memorial Chapel
Main Campus
Chicago

The White City: Daniel Burnham's Dream tells the story of Daniel Burnham, who oversaw the layout and construction of the 1893 Chicago World's Fair and prepared one of the largest city-planning efforts for Chicago. Ticket proceeds from the musical will benefit the Carr Memorial Chapel restoration project and are available for purchase at www.mies.iit.edu.

Alumni Awards Nominations Due

Friday, October 16, 2009

Do you know of an outstanding accomplished alumnus or alumna? Is so, nominate him or her for one of the 2010 IIT Alumni Awards. Nominations are due on October 16, 2009. Information about how to nominate an individual for one of the awards can be found at http://alumni.iit.edu.awards.

Fifth Annual Pumpkin Launch

October 2009
IIT Main Campus
Chicago

Professional Engineer/Engineering Intern Review Course

Classes begin Friday, January 22, 2010

The course, which prepares engineers for the state certification exams held April 23–24, meets live in Chicago and Wheaton, Ill., and will be available online. IIT alumni will receive a discount. For more information, please visit www.cpd.iit.edu/pe-ei.

Engineers Week Speakers Forum

Thursday, February 18, 2010
IIT Rice Campus
Wheaton, Ill.

Hear a discussion about current topics in engineering. This free event includes a light dinner. For more information, please visit www.dupageeweek.iit.edu.

Engineers Week Expo

Saturday, February 20, 2010
IIT Rice Campus
Wheaton, Ill.

Plan to attend this family-friendly, free event that makes engineering, science, and mathematics fun and accessible to learners of all ages. Kids can join in hands-on activities that feature Lego robotics, model airplanes, lasers, and bicycles. An alumni-only event will take place from 10–11 a.m. Expo events will run continuously until 3:30 p.m. Advance registration is required. For more information or to register for the alumni event, please visit www.dupageeweek.iit.edu.

Asian Alumni Meeting

Friday–Sunday, February 26–28, 2010
Mumbai, India

Activities include a welcome dinner, sightseeing outing, and food processing and safety innovation symposium.

NetSecure—the IT Security and Forensics Conference and Expo

Thursday, March 4, 2010
IIT Rice Campus
Wheaton, Ill.

Are you or your organization involved in IT security or forensics? If so, you are welcome to participate in the IT Security and Forensics Conference and Expo. This multi-track technical conference attracts 200-plus professionals to discuss security, forensics, ethical hacking, policy and compliance, privacy, security of wireless and cloud computing, identity theft, and much more. For more information, visit www.iit.edu/cpd.

Velocity moving ahead

With The Velocity Initiative, the IIT alumni reengagement effort launched in January, IIT students and new graduates are traveling around the country to interview IIT alumni about their personal and professional lives, and to learn how alumni want to engage with the university.

Velocity gained momentum during the summer months with increased ambassador visits to suburban Chicago. Twenty-eight student ambassadors visited alumni in Oak Park, Naperville, Wheaton, Glen Ellyn, Evanston, Highland Park, Wilmette, and other suburbs and Chicago. Some students worked in their home states of Alaska, California, Minnesota, and Wisconsin.

The full-time student ambassadors continued their nationwide travels, interviewing alumni in Washington, Oregon, Ohio, Arkansas, New York, and Massachusetts.

Edward Murray (PHYS '68), an alumnus interviewed during the summer, was impressed with the message Velocity sends to alumni.

"This interview was extremely important in terms of showing interest to individuals instead of to prior graduation year groups. It leaves a great impression about the value of the alumni. It's like stoking the coals of the passions for the university that I had 41 years ago when I graduated," he says.

The future progress of Velocity will be chronicled in upcoming issues of *IIT Magazine*. For more information, contact Molly Galo, manager of The Velocity Initiative, at 312.567.5065 or mgalo@iit.edu.

● *www.iit.edu/giving/velocity*

discoveries

Fun facts we've learned about IIT alumni during Velocity interviews:

- Together, the interviewed alumni hold 63 patents, including one for the fastest machine gun and one for an insulated wine tote
- An ID alumnus studied under Ansel Adams and is the official photographer for the Golden Gate Bridge
- An EE '72 alumnus invented the first electronic chess game, is featured in the World Chess Museum, and wrote the computer code to allow a computer to defeat humans at a game of war
- A CPE '98 alumna founded her own company, which consults on U.S. space missions
- An ME '52 alumnus is a former United States Under Secretary of Defense

See What's New Through Velocity

The Velocity Initiative is revealing new and exciting information about your fellow classmates. In this and future issues of *IIT Magazine*, all alumni class notes that resulted from a Velocity interview are marked with the → icon. To submit your own class note online, visit www.iit.edu/alumni or write to us at alumni@iit.edu.

obituaries

John F. Mitchell

EE '50
Inverness, Ill.

Affectionately known as "The Brick," the Motorola DynaTAC—the first handheld portable telephone—revolutionized the telecommunications world of the early 1970s, and beyond. John Mitchell, who rose through Motorola, Inc.'s ranks from product development engineer to general manager of the communications division to president and chief operating officer, led the evolution of the first generation of cell phones, a field Motorola would dominate for more than a decade.

After graduating from IIT, Mitchell spent three years in the United States Navy and then worked as a development engineer for Kellogg Switchboard & Supply Co. for a short time before joining Motorola. Prior to the development of the cell phone, Mitchell and his team of engineers produced the first transistorized pager and obtained a patent for the concept of portable cell telephony, including small antennae used to help free mobile phone units from car trunks, where they were typically installed.

In 1998, after a 45-year career at Motorola, Mitchell retired as vice chair of the board, a position he had held since 1988. He received the IIT Professional Achievement Award in 1985 and the IIT Alumni Medal in 1994. A philanthropist and member of IIT's Philip Danforth Armour Society, Mitchell established endowed scholarship funds for the Camras Program, the Leadership Academy, and electrical engineering students. To date, the John F. Mitchell Scholarship Funds have supported more than 70 students at the university.

Mitchell is survived by his wife of 68 years, Margaret, two sons, a daughter, and grandchildren.

Axel Meyer

Ph.D. PHYS '56
DeKalb, Ill.

Axel Meyer dedicated his life to science, education, peace, and justice. One year before graduating from IIT, Meyer became a professor of physics at the University of Florida, a position he held for four years. From 1960–67, he was a researcher at Oak Ridge National Laboratory, in Tennessee, and then returned to academia at Northern Illinois University, where he was a professor of physics for 26 years. Meyer's specialty field was liquid metals. He was published widely, and with a longtime collaborator, contributed to developing a recognized theory of the behavior of liquid metals.

A proponent of renewable-energy resources and conservation, Meyer was a familiar figure in DeKalb, carrying a rainbow flag while participating in the city's weekly peace vigil. He greatly enjoyed helping students understand the vital role of physics in society, and led efforts to oppose nuclear technology. Along with his wife, Cecile, Meyer co-founded the DeKalb Interfaith Network for Peace and Justice, whose mission was to educate the community about the role of the United States in various military activities in South and Central America.

Meyer is survived by his wife of 58 years, two daughters, a son, a sister, and several grandchildren.

Sister Mary Berchmans Wysocki, C.R.

M.S. SOCT '66
Salem, N.J.

A child of the Great Depression, Mary Wysocki contemplated becoming a nun as early as in the fifth grade, when she read a pamphlet written by a Jesuit priest. At the age of 13 and after the death of her mother, Wysocki moved into a boarding house on the Resurrection High School campus in Chicago and became a member of the Congregation of the Sisters of the Resurrection. After obtaining a bachelor's degree in education from DePaul University and a master's degree in sociology for teachers from IIT, Wysocki launched a career in education that lasted 67 years.

Wysocki taught grade school and high school in Panama City, Fla., where she also served as a principal. In Chicago, she taught at schools in the city's North Side and Ingleside neighborhoods, and returned to Resurrection High School, where she remained for 38 years, holding many different roles; she taught social studies, English, and religious studies, was chair of the social studies department, and served as dean of students. An avid gardener and horticulturist, Wysocki was known for her passion for learning and applied for grants every year so that she could take summer classes to study a variety of topics.

inmemoriam

William E. Heller
ME '41
Roanoke, Va.

Walter R. Poppe
ME '43
Green Valley, Ariz.

Richard F. Gilbert
ME '44
Deerfield, Ill.

William J. Andrle
FPSE '47
Wheaton, Ill.

Benjamin J. Gordon
ME '47
Newtown Square, Penn.

William D. Gauthier
EE '48
Elk Rapids, Mich.

Glenn R. Peterson
IE '48
Sacramento, Calif.

William R. Thayer
IE '49
Baton Rouge, La.

Stanley F. Kambic
ME '50
Fort Myers, Fla.

John C. Pace
M.S. GT '51
Crestwood, Ill.

Walter A. Bajek
ME '52, M.S. '63
Lombard, Ill.

Paul W. Beck
Ph.D. CHEM '52
Manhasset, N.Y.

Aaron F. Kritzler
IE '52
Tel Aviv, Israel

Melvin S. Abrams
MATH '55
Lafayette, Colo.

Ora M. Turner
B.S. '56
Chicago

Robert L. Sindelar
PSYC '57
Littleton, Colo.

Georgia L. Lipke
LAW '59
Boynton Beach, Fla.

Edmund Kozlowski
DSGN '65
San Mateo, Calif.

Philip M. Sandora
IE '65
Maplewood, N.J.

Naim J. Elias
M.S. MT '67
South Barrington, Ill.

Gary L. Nelson
M.S. MT '68
New London, Wis.

Lawrence I. Frankle
LAW '76
New Buffalo, Mich.

Edward F. Slyfield
LAW '79
Lombard, Ill.

Douglas S. Brown
LAW '87
Windsor, Conn.

Stephen G. Vandeven
M.B.A. '91,
Ph.D. MSC '99
Naperville, Ill.

Nora A. Barber
LAW '94
Moss Point, Miss.

William C. Croft
University Friend
Glenview, Ill.

MVOV
MANY VOICES, ONE VISION

Many Concepts, One Course: Forward

By Marcia Faye

From its beginnings as Armour Institute of Technology and Lewis Institute, IIT has reaped the benefits of many institutional plans as the university has evolved in a world undergoing dramatic scientific, cultural, political, and socioeconomic transition. In 1978, as part of the launch of a $100 million development program for IIT, Sidney A. Guralnick, former provost and executive vice president, traced the history of the university through changes in its organizational structure and goals, and divided IIT's first 90 years into three eras: 1888–1939 (1888 was the year Chicago–Kent College of Law was founded), 1939–1974, and 1974–. While Guralnick left the last era open, one could conceivably cap those years with 1994, when, guided by The National Commission for IIT and encouraged by a revitalization of the South Side community surrounding Main Campus, IIT would embark on a new era of transformation.

"IIT's presidents have turned to strategic planning at critical junctures in the institute's history—primarily times of financial stress—to develop bold visions that inspired trustees, faculty, and outsiders to provide the financial support and intellectual excitement to take the institution to the next level," explains David Baker, vice president for external affairs.

Although IIT was not officially founded until 1940, when Armour Institute and Lewis Institute merged, various types of institutional plans—characterized by stages of growth and expansion—helped to carry IIT and its predecessors ever forward:

The Development Plan (1932)

Armour Institute of Technology trustees, led by Chair James D. Cunningham, create a plan that encourages the institute to recognize new principles commensurate with modern developments in science and engineering, and positions it to move ahead as an education leader.

Overall Intent Structure (1974)

As the newly incorporated university grew, class offerings expanded as did the number, gender, and academic orientation of the students. Accordingly, institutional plans broadened in scope. IIT President Thomas L. Martin Jr. developed a plan to give shape to the increased interrelated objectives, hopes, and desires of the university community. The goal of the Overall Intent Structure was to bring IIT to national recognition as a leading independent institution distinguished by its graduates, research, and programs.

Commission on the Future of IIT (1975)

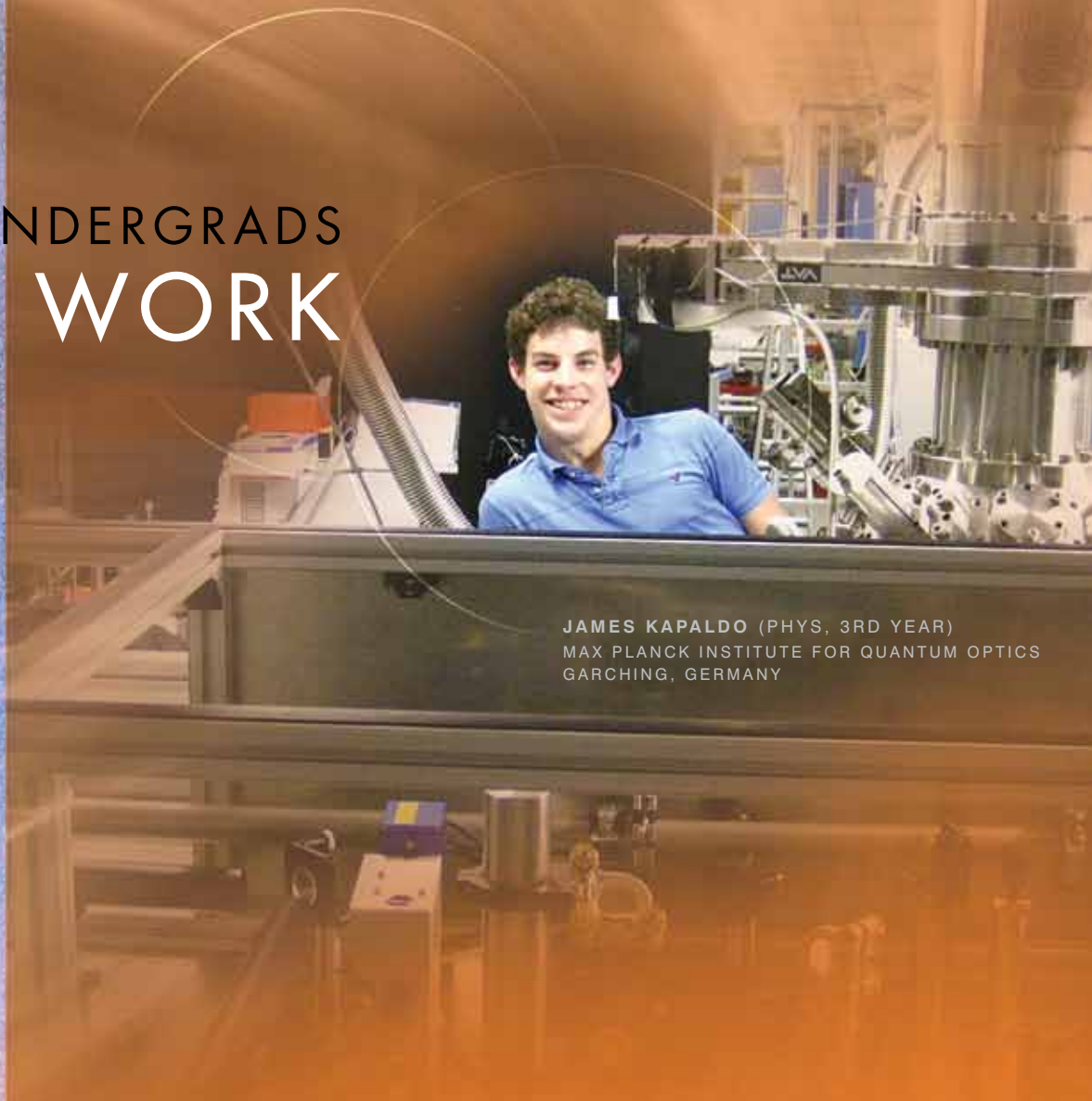
IIT tapped into the wisdom and experience of 133 business, industry, and community leaders who analyzed the university and the changing needs of society, and made their recommendations through the Commission on the Future of IIT (COMFIIT). Many important milestones were reached during the COMFIIT decade, including IIT's reorganization into colleges ready to meet the needs of specific market segments and the establishment of numerous computer and technological initiatives.

The National Commission for IIT (1994)

The National Commission for IIT was convened to set a direction for the university in the twenty-first century. With President Lew Collens and Robert W. Galvin, commission chair, at the helm, commission members drew up a plan that included recommendations to create a unique interprofessional program as part of a redefined and distinctive undergraduate program and to rebuild Main Campus. The rebuilding aspect was the most ambitious since 1940, when Ludwig Mies van der Rohe was commissioned to design a master architectural plan to expand Main Campus.

"Many Voices, One Vision: A Strategic Plan for IIT 2010–2014 (MVOV) has charted the course for the next phase of educational excellence at IIT," says Baker, about the plan, which was approved by the Board of Trustees this May. "By building on the university's core strengths and fueling creative endeavors through MVOV, our academic community is uniquely positioned to help IIT secure its place among the world's finest academic and research institutions."

PHYSICS UNDERGRADS AT WORK



JAMES KAPALDO (PHYS, 3RD YEAR)
MAX PLANCK INSTITUTE FOR QUANTUM OPTICS
GARCHING, GERMANY

IIT's College of Science and Letters is committed to giving every undergraduate who wants it a chance to do research. For example, this summer, one in five physics undergraduates had a summer internship, like James Kapaldo. He worked at the Max Planck Institute for Quantum Optics in Germany, where he had access to specialized equipment and was able to further develop his understanding of experimental physics.

Do you know a young person who dreams about transforming the future?

If you know prospective students who share your passion for innovation and technology, we invite you to refer them to us. Please contact Gerald P. Doyle, vice provost, undergraduate admissions and financial aid, at 312.567.5203 or doyle@iit.edu.

IIT College of Science and Letters

Department of Applied Mathematics
Department of Biological, Chemical, and Physical Sciences
Department of Computer Science
Lewis Department of Humanities
Department of Social Sciences

To learn how you can become involved with the College of Science and Letters, please contact:

Russell Betts
Dean, College of Science and Letters
Professor of Physics
312.567.3800
betts@iit.edu

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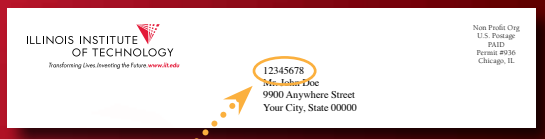

- Go to **alumni.iit.edu**
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- Then enter your **personal ID number,** located above in the address block of this magazine
- From there you'll be prompted to choose a login and password
- Create a personal profile for your old friends to see, read the news, and enjoy the community!

If you are an IIT Chicago-Kent College of Law or IIT Institute of Design graduate, you may be familiar with preexisting online communities that those academic divisions have created. The IIT Alumni Association Online is a similar, but separate, system that enables you to connect with all of IIT's 60,000+ alumni and stay up to date on university-wide news and events.