

iitmagazine

ILLINOIS INSTITUTE OF TECHNOLOGY

SPRING 2016



BUILDING IT BETTER

**Research That Makes
Good Things Greater**

Legal Polytechnics

Nayar Prize

Titan of Supercomputers



letter from the President

This issue of *IIT Magazine* focuses on the research activities of our faculty, alumni, and students. I remember my early days as a faculty member when my academic life was focused on teaching and research. I look back fondly on that time when I was able to work with very dedicated and smart students to find the solutions to some tough problems. While our collaborations were meaningful and fruitful, I believe the most gratifying aspect of being a professor was seeing those students become independent thinkers capable of achieving great advances in their chosen thesis topics.

Our own Illinois Tech faculty serve as mentors to our students in programs ranging from undergraduate summer research to Armour College's R&D experience. This year five junior faculty were recognized with prestigious National Science Foundation CAREER Awards for exemplifying "the role of teacher-scholars through outstanding research, excellent education, and the integration within the context of the mission of their organizations." This year marks the most winners in the history of our university—four in engineering and one in science:

- Lin Cai, assistant professor of electrical and computer engineering
- Lili Du, assistant professor of transportation engineering
- Carrie M. Hall, assistant professor of mechanical, materials, and aerospace engineering
- Ankit Srivastava, assistant professor of mechanical, materials, and aerospace engineering
- Jeff Wereszczynski, assistant professor of physics

Many of our alumni also are both excellent researchers and supporters of innovative research at Illinois Tech. In 2015 students, faculty, and staff were encouraged to submit research proposals to be selected for the Nayar Prize, established by Board of Trustees member Madhavan Nayar (M.S. IE '68) and his wife, Teresa, on behalf of the Nayar Family Foundation. You can read more about Nayar, the prize, and the three teams that have been selected to participate in the first phase of the prize period beginning on page 10 of the magazine.

In my first six months as president of Illinois Tech, I have been meeting with other alumni in my travels to Washington, D.C., Phoenix, Los Angeles, New York, and Tokyo. We have discussed topics ranging from the future of our university to the successes many of them have achieved. One alumnus credited his Illinois Tech education as being the foundation behind all of his professional accomplishments.

My next alumni gatherings are scheduled in additional cities across the United States and Asia. I look forward to hearing more from our graduates about their interest in advancing our university, their pride in Illinois Tech's past and present endeavors, and their excitement about the future of our institution.

Alan W. Cramb

President

IIT MISSION STATEMENT

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

- Armour College of Engineering
- Chicago-Kent College of Law
- College of Architecture
- College of Science
- Institute of Design
- Lewis College of Human Sciences
- School of Applied Technology
- Stuart School of Business

ADA STATEMENT

Illinois Institute of Technology provides qualified individuals with disabilities reasonable accommodations to participate in university activities, programs, and services. Such individuals with disabilities requiring an accommodation should call the activity, program, or service director. For further information about IIT's resources, contact the IIT Center for Disability Resources at disabilities@iit.edu.

contents

Spring 2016



9 BUILDING IT BETTER Research That Makes Good Things Better

ON THE COVER: An electric power-assist wheelchair wheel undergoes testing in Illinois Tech's Grainger Laboratory for Power Electronics and Motor Drives.

10 The \$1 Million Question
Madhavan Nayar (M.S. IE '68) asked the Illinois Tech community to show its innovations—and it responded with 51 project proposals for the new Nayar Prize.

12 So Long, Status Quo
Daniel Martin Katz's polytechnic approach to legal education is making the case for STEM in law—and aiming to change the practice of law itself.

14 People Power
Two Illinois Tech professors are promoting a research platform that gives product users a more defining role in the design process.

16 Does Success Follow the Leader?
Illinois Tech's new Center for Corporate Performance will assess the asset value of top-level managers and corporate leaders within their organizations.

18 Where Success Comes in Flops
In the world of supercomputing, Jack Dongarra (M.S. CS '73) is a titan of Titan.

20 Outer Limits
Illinois Tech students who designed and sent a research payload into Earth's stratosphere are one step closer to their goal of launching a satellite.

21 Borne Of Prevention
A new program at the Institute for Food Safety and Health will be at the front-lines of training the country's food manufacturers to better prevent future outbreaks.

22 Beyond The Fallout
Five years after the Fukushima disaster, Professor Jeff Terry is researching solutions for safer nuclear fuel production.

DEPARTMENTS

- 02 News Briefs
- 08 Athletics
- 25 Alumni News
- 36 Rewind



10



IIT Magazine Online-Only Content!

Read extended coverage of stories featured in the print edition as well as special online-only content at iit.edu/magazine



PHOTOS: BONNIE ROBINSON

Cleversafe Rising: from Illinois Tech to IBM

From its early days as one of the first startup tenants in University Technology Park on Mies Campus to its recent acquisition by IBM, Cleversafe, now a leading developer and manufacturer of object-based storage software and appliances, has had a close relationship with Illinois Tech students, faculty, and alumni. Cleversafe's success was celebrated on the Illinois Tech campus where it all began at the Cleversafe Investors Celebration Dinner on December 1, 2015. Cleversafe Founder Chris Gladwin [top], also a member of the Illinois Institute of Technology Board

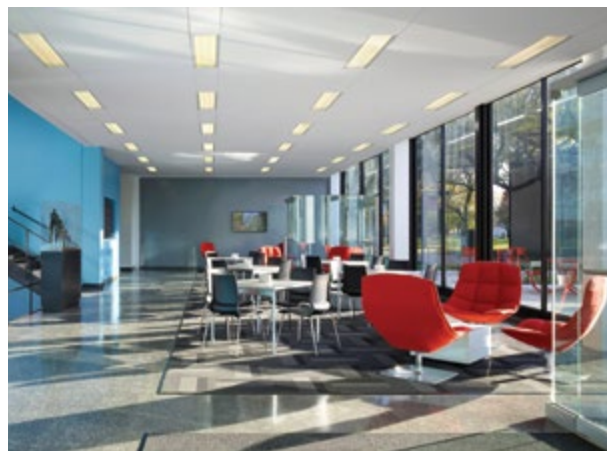
of Trustees, donated \$7.6 million to the university to strengthen its computer science program.

Alumni and Cleversafe employees who returned to campus to speak at the dinner included Kumar Abhijeet (EE, CPE '05) [right] along with Wesley Leggette (CS '12) and Jason Resch (CS '06) [left].

Listen to Chris Gladwin talk about how Illinois Tech helped to build a solid foundation for Cleversafe and what's next for the company in an *IIT Magazine* Video Extra at iit.edu/magazine.



On November 11, 2015, Eric M. Brey [front, center], professor of biomedical engineering, was invested as Duchossois Leadership Professor, an endowed chair funded by University Regent Craig Duchossois.



A rendering of the renovations to the Life Sciences Building
Photo: Gray City Studios

Campaign for IIT Surpasses \$227 Million

Illinois Institute of Technology celebrated its 125th anniversary last year, and each issue of *IIT Magazine* focused on the people, places, and things that make Illinois Tech unique. As we reflect on our milestone celebration and continue momentum through the end of *Fueling Innovation: The Campaign for IIT*, it is these people, places, and things that have ignited our passion to work toward redefining the world in which we live.

People

So far during the campaign, Illinois Tech has proudly invested 15 distinguished faculty members with donor-funded endowed chairs in recognition of their academic excellence and leadership. These faculty members advance the university mission through research and enhance the student

experience in the classroom while helping to raise the visibility of the university.

Places

A generous commitment for a challenge grant from COL (IL) Jennifer N. Pritzker, IL ARNG (Retired) through the Tawani Foundation is allowing Illinois Tech to begin renovations to the Life Sciences Building—a vital facility for core sciences at Illinois Tech. The building will be renamed in honor of her father, the late University Regent Robert A. Pritzker (IE '46), one of our nation's most successful and impactful industrialists.

Things

The Robert B. Kyts Machine Shop was dedicated on September 25, 2015. The space, located in the newly dedicated John T. Rettaliata Engineering Center, was renamed thanks to a gift made by Jadwiga Roguska-Kyts, associate professor of clinical medicine at Northwestern University Feinberg School of Medicine, in honor of her late husband, Robert B. Kyts (MAE '70).

The support of our alumni and friends enables us to attract quality faculty, renovate important spaces, and offer an exemplary education to innovators, inventors, and visionary leaders.

“For 125 years, Illinois Institute of Technology has played a critical role in graduating leaders. While we celebrate our historical contributions to the world,

to be relevant in the long term, we must constantly change so that we can meet the needs of the students of the future,” says Illinois Tech President Alan W. Cramb.

Visit fuelinginnovation.iit.edu to learn more about how the campaign is transforming IIT. Be sure to check out the many innovative alumni, students, and faculty featured on the site.



Ed Monser (EE '81), chair of the Armour College of Engineering Board of Advisors, Jadwiga Roguska-Kyts [center], and Carol and Ed Kaplan Armour College Dean of Engineering Natacha DePaola cut the ribbon to officially open the new lab space.

Campaign Progress December 31, 2015

\$227,688,333 Raised

- 15 Endowed Chairs
- Capital Projects:
 - › Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship: \$32.6 million
 - › Robert A. Pritzker Research Center: more than \$5 million
 - › John T. Rettaliata Engineering Center: more than \$10.3 million
- More than \$38 million raised for scholarships
- Six families have made gifts of \$10 million or more

fuelinginnovation.iit.edu

SHACK MAKEOVER



Take every image you have of the classic beach shack and throw them out to sea.

Four architecture firms and their university collaborators will be bringing their visions of lakefront kiosks to Chicago's Lake Michigan beaches this year. They were all invited as part of a Chicago Architecture Biennial competition that will help make the humble beach shack more closely reflect the architectural significance of the city.

Illinois Tech partnered with the Chilean firm Pezo von Ellrichshausen to create Cent Pavilion, along with three other educational institutions and partner architecture firms. Their 40-foot tower, whose frame is reminiscent of Chicago's iconic steel and glass skyscrapers, consists of eight offset-stacked hexagon boxes whose sizes decrease with the kiosk's ascending height. Once finished, the kiosk will be paneled in wood and dotted with skylights.

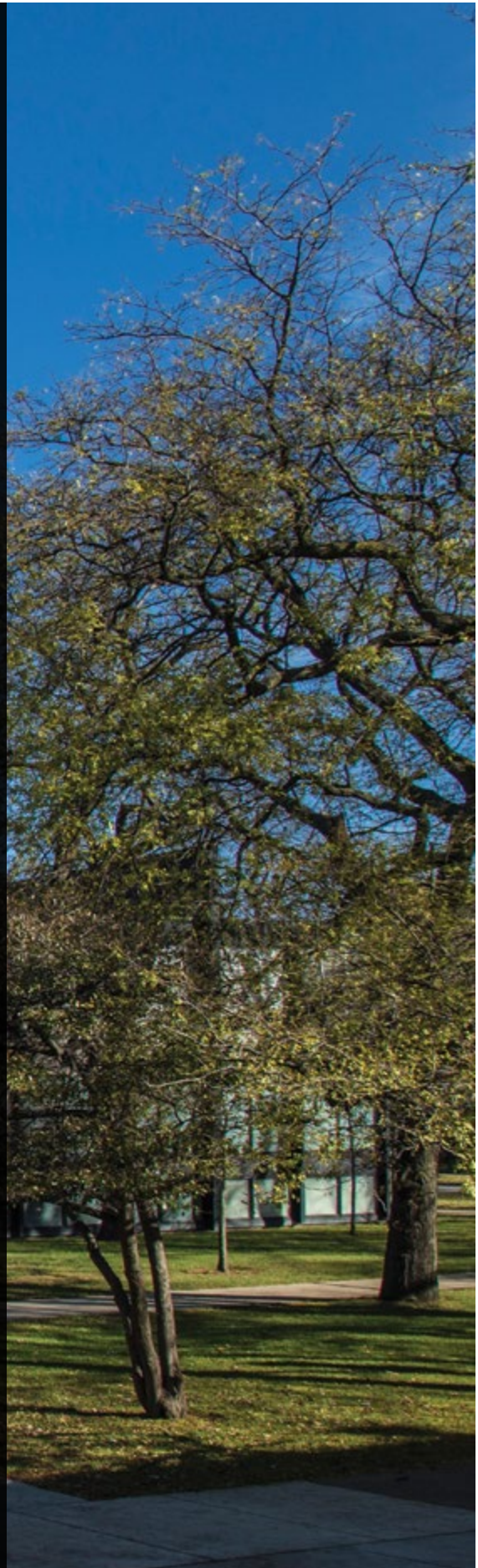
Pezo von Ellrichshausen was the recipient of the 2014 Mies Crown Hall Americas Prize for emerging architects for its Poli House, a home and cultural center composed of handmade concrete and oversized windows and skylights, which overlooks a stretch of rugged Pacific coastline in central Chile.

"Poli has a square floor plan and Cent a hexagonal one, therefore both are centralized structures. The implication of these forms is that they don't have a hierarchy in any direction," say Mauricio Pezo and Sofia von Ellrichshausen, founders and architects. "They are figures that refer to themselves, to their internal space."

Construction on Cent Pavilion will begin in spring 2016.

—CHELSEA KALBERLOH JACKSON

PHOTO: SCOTT BENBROOK



BY MARCIA FAYE AND AMANDA CLEARY EASTEP

CREATING A NEW POWER PARADIGM

Outside Sierra Leone's bustling capital of Freetown is a small village whose inhabitants enjoy the modern convenience of mobile phones—with one hitch. Users can't charge them there because the village is minus one important basic: electricity.



PHOTO: MOHAMMAD SHAHIDEIPOUR

“Our contribution thus far is that we were able to convince the governments of several countries to consider appropriating some money to energy projects.”

—Mohammad Shahidehpour

“A guy picks up the pile of phones each morning and charges them in a neighboring village that has power,” explains Mohammad Shahidehpour, director of Illinois Tech’s Robert W. Galvin Center for Electricity Innovation, noting that the phones are transported 20 miles round-trip by bicycle.

Shahidehpour is also the Carl and Paul Bodine Endowed Chair in Electrical and Computer Engineering and associate director of the Wanger Institute for Sustainable Energy Research, and is busy adding an informal title to his credentials: global energy ambassador. Following his success as the energy architect of Illinois Tech’s smart microgrid project, Shahidehpour has been traveling to nations such as Ghana, Sierra Leone, the United States Virgin Islands, and others sharing his vision of electricity for all. Images of children in India studying beneath the street lights at night because there is no electricity in their homes or of fresh water being pumped to villages in the African desert propel him forward. He maintains that the answer lies in microgrids powered by renewable-energy sources, such as solar, wind, or water. Shahidehpour knows that he is in this mission for the long haul.

“Our contribution thus far is that we were able to convince the governments of several countries to consider appropriating some money to energy projects,” he says.

As important, Shahidehpour offers his expertise and fundraising capability to encourage project development in these countries. One project, a photovoltaic solar array/energy storage unit at the University of the Virgin Islands, is now underway. The project, a partnership between UVI, the Galvin Center, and the Chicago-based energy-solutions company Veriown, is expected to supply about half of the university’s energy needs and is the first step toward developing a campus microgrid. Project analysts predict that

the solar plant alone will save UVI about \$1 million annually. Energy costs in the U.S. Virgin Islands are, on average, four times higher than in the continental United States.

“The Galvin Center and the work of Dr. Shahidehpour and his team were instrumental in securing the largest USDA grant to fund a project of this kind in the Caribbean,” says Steve Johanns, chief executive officer of Veriown, noting that the U.S. Department of Agriculture awarded \$3 million to the project. “I can’t say enough good things about the innovation leadership that Dr. Shahidehpour and Illinois Institute of Technology represent in this area of advanced microgrids.”

Last November, Shahidehpour joined other visionary energy leaders from around the world at *The Energy Times* event “Empowering Customers & Cities,” held in Chicago. He spoke to more than 200 decision makers from utility companies and academia as well as solutions providers, customers, and government leaders such as Mayor Rahm Emanuel. A highlight of his presentation was Illinois Tech’s Mies Campus smart microgrid, which saves the university about \$1 million a year and reduces the time and money lost to power outages while meeting Illinois Tech’s growing energy needs.

Shahidehpour is currently working with ComEd and Argonne National Laboratory on the design of a next-generation community microgrid controller. When completed it will connect the university’s microgrid to a utility-owned microgrid for enhancing the reliability, efficiency, resilience, and economics of distributed electric-power systems.

MORE ONLINE

“Empowering the Global Poor”:

tdworld.com/news/empowering-global-poor

Robert W. Galvin Center for Electricity Innovation: iitmicrogrid.net

Veriown: veriown.com



PHOTO: BONNIE ROBINSON

Preparing to Live the Dream

“Imagine an active volleyball player sitting down and very quietly working with hundreds of tumor microarray samples, each sized at about 1 millimeter in diameter. This is another side of the athletic Irena: calm, patient, and precise,” says Jialing Xiang, professor of biology in the College of Science at Illinois Tech, describing one of her former research students, Irena Grauzinis (BCHM 3rd year). “Last summer she analyzed more than 600 tissue samples and generated very meaningful data for our cancer research project,” Xiang notes.

The 5-foot 8-inch Grauzinis, who served as co-captain and outside hitter for the Scarlet Hawks Women’s

Volleyball team during its 2015–16 season, would also add adventurous to her list of personal attributes. Growing up in Elgin, Illinois, she says that besides playing volleyball she also was active in soccer, dance, gymnastics, and figure skating. She even took the plunge and tried a new sport last year as a member of the Scarlet Hawks Women’s Swimming and Diving team.

“I joined just to experience something new; I like challenging myself,” she says of her one season in the water. “It was a lot of fun for me to learn a new skill that I never thought I’d be able to try and to have the resources of a coach.”

After playing her final year of varsity volleyball in 2016–17, Grauzinis hopes to pick up another new skill set as a medical scribe. Scribes help to unburden a physician’s workload and allow doctors to spend more quality time with patients by entering the medical history, examination notes, and other relevant information into a patient’s electronic health record. The role is also a bridge to professional school as it gives pre-med students like Grauzinis a solid opportunity to learn medical jargon and observe life close up in a clinical setting.

Grauzinis has already spent years preparing for her prospective admission into a medical program. Since 2013 she has been assisting patients and the occupational therapy staff as a volunteer at Chicago’s Mercy Hospital & Medical Center. She recently applied for her third medical brigade trip to South America as a participant in the Illinois Tech chapter of MEDLIFE (Medicine, Education, and Development for Low-Income Families Everywhere). And she worked in Xiang’s laboratory from 2013 to 2015, ultimately earning a College of Science Undergraduate Summer Research Stipend to further her work analyzing the correlation between the amount of a colon cancer indicator (Bax Δ 2) and the cancer’s aggressiveness. Her experiences have helped to forge her desire to one day make an impact on the quality of health care in underprivileged and underdeveloped communities around the globe.

“Nothing is more fascinating to me than the human body and learning how it works,” says Grauzinis. “I knew that I wouldn’t always have volleyball in my life, but my coming out of college with a meaningful degree that I worked hard to achieve is what’s most important to me.”—MARCIA FAYE

MORE ONLINE

“Bax Δ 2 Is a Novel Bax Isoform Unique to Microsatellite Unstable Tumors”: www.jbc.org/content/287/41/34722.full
MEDLIFE: medlifeweb.org

BUILDING IT BETTER

Illinois Tech's alumni, faculty, and students are conducting research that is moving advances in their fields—even the practice of research itself—to the next level.

Supporting and creating socially minded results. Transforming the legal profession. Implementing citizen science. Quantifying corporate performance. Looking beyond the stratosphere. Improving food safety. Developing safer nuclear solutions. Designing faster supercomputers.

Image: Tricolor fluorescence stain of cancer-specific molecules in a mouse model of human brain cancer, part of the Nayar Prize-funded ADEPT Cancer Imager project
Photo: Xiaochun Xu (Ph.D. BME Candidate)

BY MARCIA FAYE



PHOTO: LAURA FORLANO

As cities around the world consider opportunities for driverless cars, The Driverless City project will investigate the elements that will make change possible.

A Noble Experiment

In the early 1980s, as entrepreneur **Madhavan Nayar (M.S. IE '68)** expanded his software consulting firm Unitech Systems from a staff of one man to many individuals, he adopted a nonconformist management philosophy. Inspired by the quality principles set forth by statistician W. Edwards Deming, Nayar chose collaboration as his company's cornerstone.



“What I found when I started and ran the company was that, by and large, the current system at the time did not encourage cooperation; it encouraged competition, especially within the organization, and there are many horror stories of how that manifested itself,” he says, from University Technology Park on Illinois Tech's Mies Campus. “It did not give me satisfaction building a company that I would want to last forever. Most companies that promoted competition from within, over time, seem to disappear.”

Unitech Systems, now known as Infogix, still exists today (it was sold in 2012 to a private-equity investment firm) and its founder still believes in collaboration as exemplified

by his \$1 million gift to Illinois Tech to fund the Nayar Prize. The award supports university teams as they work to develop breakthrough, innovative projects that will produce meaningful results with a societal impact within a three-year period. On November 4, 2015, three teams of faculty researchers were presented with \$100,000 each to jumpstart their efforts during the first year of the prize cycle. At the completion of this first year, only one team will advance to the next phase with \$200,000 in additional funding. Upon the successful completion of benchmarks/performance metrics set by the team, members will receive the final \$500,000 Nayar Prize.

Each recipient team for the first round comprises collaborators from various colleges and disciplines:

- “ADEPT Cancer Imager”—Kenneth Tichauer (Armour College of Engineering/Biomedical Engineering), Jovan Brankov (Armour College of Engineering/Electrical and Computer Engineering; Biomedical Engineering), and Rajendra Mehta (College of Science/Biology) are developing a new imaging system capable of spatially mapping the variable characteristics of cancers at the cellular level.
- “The Driverless City”—Marshall Brown (College of Architecture), Lili Du (Armour College of Engineering/Civil, Architectural, and Environmental Engineering), Laura Forlano (Institute of Design), Jack Guthman (planning attorney who formerly was with the College of Architecture), and Ron Henderson (College of Architecture) are exploring social scenarios, technical solutions, infrastructural prototypes, and model urban codes for the co-evolution of human and non-human transportation systems.
- “Game Development for Early Language Acquisition in High-Risk Children”—Carly Kocurek (Lewis College of Human Sciences/Humanities), Jennifer Miller (Lewis College of Human Sciences/Psychology), Cynthia Hood (College of Science/Computer Science), and Matt Bauer (Lewis College of Human Sciences/Humanities) are designing a research-driven, high-impact interactive game for children ages 24–36 months that will help them to expand their vocabulary and be better prepared to succeed in school.

The six-member prize jury was composed of Frances Bronet, Illinois Tech provost and senior vice president for academic affairs; Illinois Tech Life Trustee Martin “Marty” Cooper (EE ’50, M.S. ’57), Trustee Chris Gladwin, and University Regent Ralph Wanger; Kathleen Brandenburg (M.Des. ’98), founder and chief design strategy officer of IA Collaborative; and Kiersten Muenchinger, associate professor and director of the Product Design Program at the University of Oregon. The jury, which received administrative support from Dennis Roberson, vice provost for

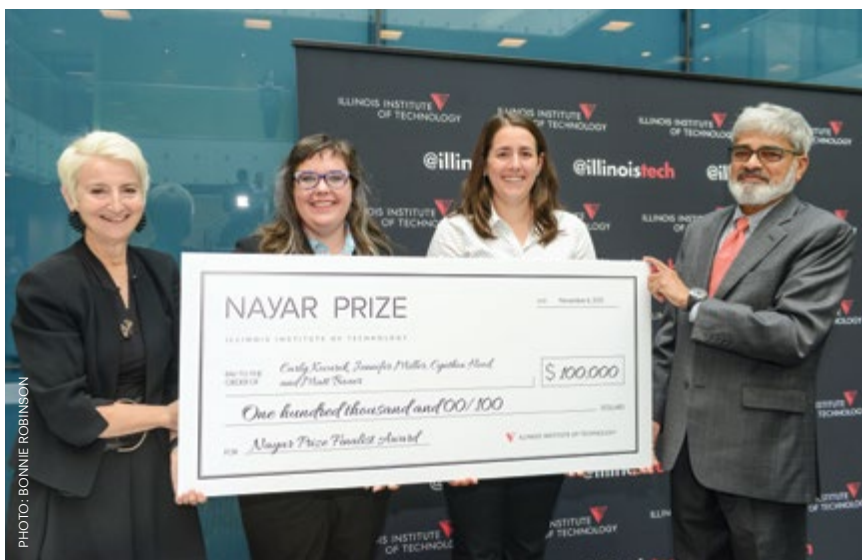
research and Ganesh Raman, deputy vice provost for research, began reviewing applicant proposals in late September.

“We were expecting, at best, maybe 20–30 proposals and we had 51,” said Bronet, to the audience gathered in the atrium of the Technology Business Center, where the prize presentation took place. “We had almost 70 letters of intent submitted. A total of 143 individuals committed to be a part of this proposal process. It was not easy to review, not easy to jury, not easy to select. There were unbelievable proposals and getting down to three was almost impossible. These three represent the very, very best.”

In establishing the prize, Nayar, his wife, Teresa, and the other members of the Nayar Family Foundation felt it important that members of the Illinois Tech academic community be recognized for their “extraordinary problem-solving abilities and their passion to make a real difference in our world.”

Nayar received two bachelor of science degrees from universities in India and came to Illinois Tech to attain his Master of Science in Industrial Engineering. He recalls that as an international student he built a close affiliation and association with the university and says it became his home away from home. From that time, Nayar, now president of E-Prairie, LLC, has been actively involved with Illinois Tech in various roles—including membership on the Alumni Board International Committee and the university’s Board of Trustees—and wants more individuals to be aware of the impact the university can have on meeting many of the world’s challenges.

“I believe that Illinois Tech is not recognized or readily understood by people primarily outside the immediate university community,” he says. “We are doing a number of things to change that, and over time I believe the recognition and perception will be changed. [This prize] is one more thing that we can do. It is an experiment, and only time will tell if it will make a difference.” ●



Illinois Tech Provost Frances Bronet [far left] and Madhavan Nayar [far right] present an honorary Nayar Prize check to Lewis College of Human Sciences faculty members Carly Kocurek [second from left] and Jennifer Miller [second from right].



REBEL WITH A CAUSE

BY KOREN WETMORE



In some ways Daniel Martin Katz, associate professor of law, is as complex as the law itself. Brash and outspoken yet clever and suave, he fires ideas like bullets aimed at disrupting legal practice, scholarship, and education.

So far, he's struck every target.

Katz has proposed a new business model where future legal firms will resemble tech startups and embrace entrepreneurial pursuits. He has developed algorithms that can predict United States Supreme Court decisions with an accuracy rate of 70 percent and shown how those court decisions can move financial markets. At Michigan State University (MSU), his former teaching post, Katz co-founded the successful ReInvent Law Laboratory, a program that teaches law students computational-based topics like quantitative legal prediction along with Lean Six Sigma business-performance skills.

For his polytechnic approach to legal education, Katz earned a place among the *American Bar Association Journal's* 2013 "Legal Rebels," professionals recognized as innovators who are helping to reinvent their field. It is an appropriate award for a man who seeks not only to arm the next generation of lawyers with science and technology skills but also to transform the entire legal profession.

"Dan is purposely challenging the status quo."—Joan Howarth

"I think lawyers have an impoverished view of themselves," says Katz, who joined the Chicago-Kent College of Law faculty last fall. "They think, oh, we're just going to be the lawyers on this—whatever that even means. Why accept those limitations? Why not be the problem solvers?"

The son of two public defenders, Arizona native Katz grasped early on the potential lawyers have to shape the world. The legal field fascinated him but also raised concerns, particularly with how problems and decisions were approached

from a law-centric, single-expert view. Katz also noticed that while a large volume of legal data was available for analysis, it was not structured in a way that could be mined for meaningful information. Future lawyers, he says, will employ analytics and software applications to use that untapped data alongside groups of human experts to predict potential outcomes, risks, and costs in a more efficient, accurate way.

Katz's polytechnic approach capitalizes on the human ability to recognize patterns and relationships while filtering any cognitive biases through data-driven, evidence-based science. It requires multidisciplinary skill sets that include deep substantive law knowledge combined with that of business, science, technology, engineering, and mathematics—none of which are taught in your typical liberal-arts-oriented legal education.

"Dan is purposely challenging the status quo," says Joan Howarth, dean of the MSU College of Law, who hired Katz to spur change in that school's academic program. "He has a much broader range than many academics and is a visionary who moved us in new directions."

His vision for Illinois Tech focuses on advancing the pioneering work already begun by people like Professor Ronald Staudt, director of the Center for Access to Justice & Technology, who invited Katz to join the Chicago-Kent faculty.

"The work I did at MSU was to respond to the critics of legal education. The difference at Illinois Tech is that people have already been doing this stuff. I just want to continue us down that path and accelerate the pace of innovation," Katz explains.

Along with teaching courses such as Civil Procedure and Entrepreneurial Lawyering, Katz will launch the Law Laboratory in 2016 to provide a venue for law students to practice design thinking and R&D approaches. Potential lab projects include analytic work and building technology that can improve legal decision-making in a variety of professions. ●

MORE ONLINE

"Forming Future Progressives": chicagolawyerjournal.com/Archives/2015/05/Dan-Katz-IIT-Chicago-Kent.aspx

Citizen Scientists

Two Illinois Tech professors—one an engineer and the other a psychologist—are combining efforts in a new area of research known as citizen science, which focuses on the human side of design.

For Mahesh Krishnamurthy, associate professor of electrical and computer engineering, and Eun-Jeong Lee, associate professor of psychology, their form of community-based participant research incorporates end users in the product design—and especially the redesign—process in order to improve the quality of life for people with disabilities.

The two began working together two years ago after Krishnamurthy developed an electric wheelchair with “smart” functions such as sensors and adaptive controls, intended to improve the user experience. The focus group segment of the design process was particularly eye opening for him.

“With our wheelchair, we originally thought we had a good solution. But the users brought up so much more. Some thought that the chair was too powerful, that it moved too fast, so there was a perceived sense of danger. As an engineer, I hadn’t thought about those kind of things,” says Krishnamurthy. “It was like building a car with features that no one will use.”

He says that citizen science need not focus on creating new products, but rather improving existing products as well as incorporating participant research into the design process earlier during research and development.

“We’re not trying to reinvent the wheel, because good tech is already available. We’re trying to engineer better

solutions, looking at technology from the standpoint of a complete comprehensive service,” he says.

Since 2014 Krishnamurthy and Lee have worked together to teach two Interprofessional Projects (IPRO) Program courses where their student teams have proposed products to help all students maneuver the campus more easily. One team took cues from the Waze map application to create an online, interactive map of Mies Campus. Their map allows users to post notifications alerting fellow users about issues such as icy patches of sidewalk or wheelchair-accessible restrooms that are out of order—situations that can present unique challenges for students with disabilities.

Krishnamurthy and Lee are continuing to test their various projects, including the wheelchair, and have expanded their list of collaborators to include Illinois Tech’s Center for Disability Resources and staff at Richard J. Daley College and Harry S. Truman College. Along with Illinois Tech colleagues Anijo Mathew (Institute of Design) and Norman Lederman (Mathematics and Science Education), the two also are in the proposal stage for an initiative that would “create a hub at IIT to focus on the quality of life,” says Krishnamurthy.

“As engineers, we can come up with new technology, but unless we know how it helps the users our work is never complete,” he says. ●

MORE ONLINE

“Building Smarter Wheelchairs” in IEEE’s *The Institute*: theinstitute.ieee.org/technology-focus/technology-topic/building-smarter-wheelchairs

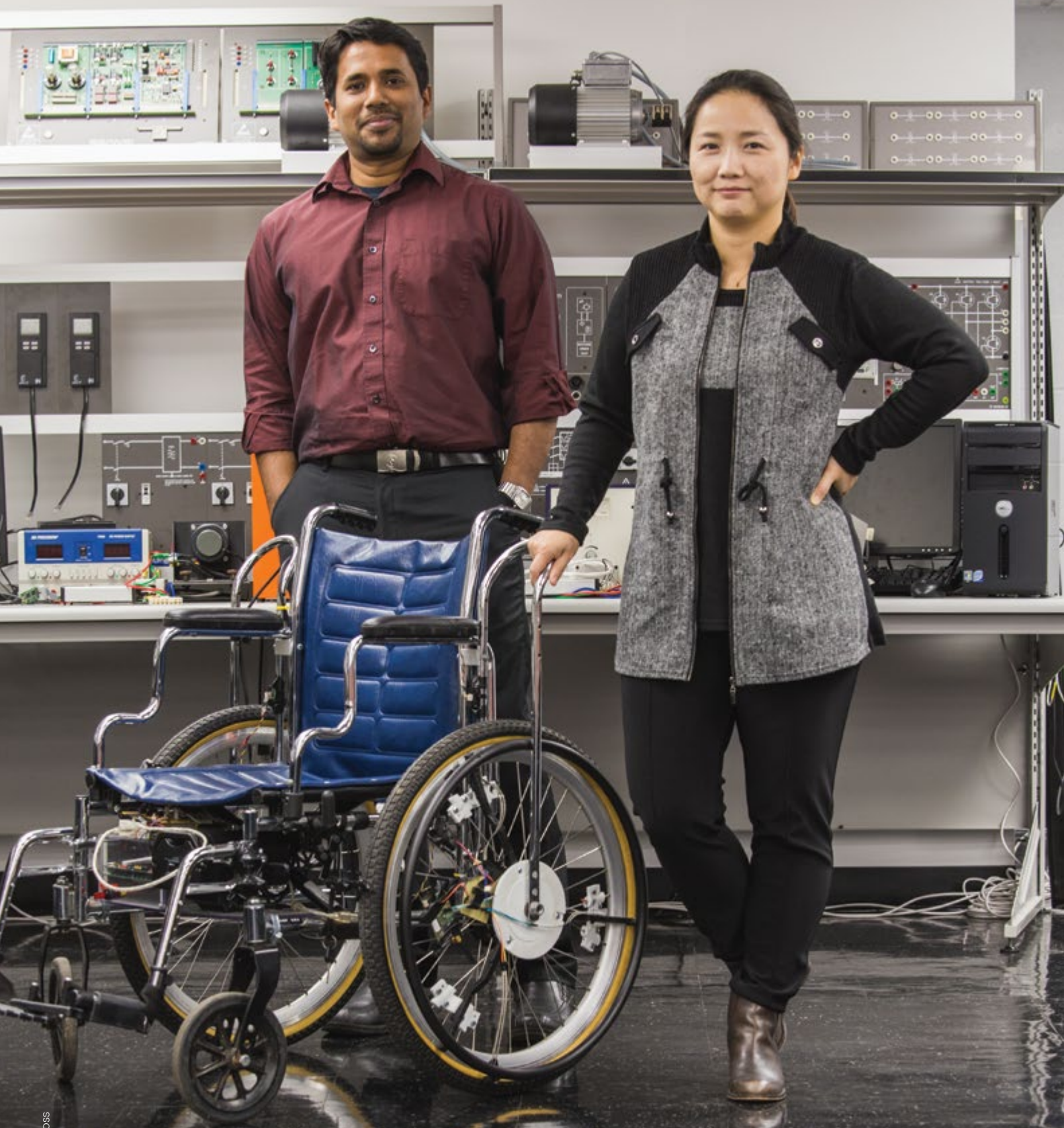


PHOTO: MICHAEL GOSS

From the user perspective, Mahesh Krishnamurthy [left] says, his colleague Eun-Jeong Lee [right] “looks at the stigma of using a certain technology to see how a user can be assimilated to it so his confidence doesn’t take a shot. We want to create a fair playing ground so that new technology can be easily implemented.” Learn more about the special functionality of Krishnamurthy’s electric wheelchair and how citizen science has shaped the chair’s design in an *IIT Magazine Online Exclusive* at magazine.iit.edu.



Big Data for Big Decisions

By Amanda Cleary Eastep



PHOTO: MICHAEL GOSS

The adage “it starts at the top” could apply to any dynamic—a sports team, classroom, or Fortune 500 company—where leadership is central to a group’s success. But in business, can the value and performance of top-level managers and corporate boards be quantified?

Illinois Tech’s new Center for Corporate Performance (CCP) will undertake a “big data” approach to find out.

Located within Stuart School of Business, the CCP will create a large-scale, integrated database that will include organizational, financial, and economic variables for a large sample of public firms in the S&P 1500 Index. Using this information, CCP researchers will study the relationships between corporate governance and organizational practices and the long-term economic and financial performance of a firm.

The CCP is chaired by retired attorney and Harvard M.B.A. Mitchell Saranow and managed by Joel Goldhar, former dean (1983–88) and professor of operations and technology management.

“The hot topics of director tenure and the ‘missing COO’ phenomenon occurring as companies ‘flatten’ their traditional hierarchies illustrate the type of research we plan to perform in the CCP,” says Goldhar.

Carl Stern, chairman at Carl W. Stern Associates and former vice chairman of the Investment Banking Division at Goldman Sachs, serves as a CCP participating executive. As an advisor to chief executive officers, he envisions how companies can benefit from access to CCP data.

“One of my clients, a Fortune 50 CEO, wrestles with his board over whether or not a COO makes sense for the organization,” Stern explains. “Everyone has an opinion, but not the data they need to back them up.” He adds that CCP data also would be valuable in discovering the direct correlation between executive compensation and performance. “Rigorous testing through the CCP could

help determine the way in which to reward people,” says Stern. “We could call on a data set to prove it.”

Currently, management decisions, policymaking, and even academic research rely on primarily anecdotal evidence and simplistic statistical analyses. Goldhar explains that research conducted at the CCP will move beyond the anecdotal and focus on the comprehensive information collected in its one-of-a-kind database.

The CCP will aid firms as they make decisions about the allocation of roles and resources and the setting of compensation levels, for example. Not only will the CCP enhance corporate decision making, but it also will prove to be an invaluable resource for academic research.

“We are trying to build a bridge between finance and economics, management and organizational structure, and theory and practice,” Goldhar says.

Creating a database involves more than purchasing and combining information from sources like Bloomberg, ExecuComp, and BoardEx. The data from each of the 1,500 U.S. firms has to be “cleaned and coded” in order to standardize terminology for reporting organizational variables such as executive job titles. Aiding in this intensive process is Stuart Ph.D. student Joe Cursio, a former programmer on Wall Street who shares Goldhar’s vision of using big data. He will continue to merge data from different sources and define the measures needed.

Saranow, who provided the seed capital for the project, says the CCP will rigorously test organizational and corporate governance structures and empower companies “to concentrate efforts on implementing ideas that have a high probability of positive results.”

CCP Participating Executive Howard Smith, managing director at First Analysis in Chicago, says the while there is ample and increasing data to inform tactical and operational decisions in business, data regarding the influence of organizational structure is lacking. “With the CCP, we are hoping we can bring some real discipline to this area—real data,” Smith says. ●

Into the

Titan-Sized

WORLD OF SUPERCOMPUTING

PHOTO: JASON RICHARDS, ORNL

The fastest computer in the United States fills a room the size of a basketball court and generates an electricity bill estimated at \$9 million per year. Behind this titan-sized technology is the combined brainpower of a scientific team at the largest U.S. Department of Energy laboratory—Oak Ridge National Laboratory (ORNL)—which includes Jack Dongarra (M.S. CS '73).

In his ORNL role, Dongarra helps develop methods for solving common problems that occur in scientific computing by designing algorithms and software that can solve numerical linear algebra problems for the next generation of supercomputers. In addition to his research position, he also serves as Distinguished Professor of Computer Science in the College of Engineering at the University of Tennessee.

“Today computational science has become a critical part of the modeling of many natural systems in physics, astrophysics, climatology, chemistry and biology, human systems in economics, psychology, social science, and engineering,” Dongarra says. “In order for it to be more realistic and accurate, we need larger computers that store a tremendous amount of data to help us better approximate the real world.”

Dongarra and his fellow researchers work with Titan, the second-fastest computer in the world. The most power-

ful computer is China's Tianhe-2, built by the National University of Defense Technology.

“Normal laptop or desktop computers usually have a couple of processors,” says Dongarra. “Now think about programming something like Titan, with half a million processors.”

The performance of a computer is measured by the number of operations (addition or multiplication) that can be completed per second. Titan, the first supercomputer to utilize a hybrid CPU/GPU computing system, performs 17.6×10^{15} operations/second, measured in peta “flops” (floating-point operations per second). But those quadrillions of operations per second are nothing compared to the technology on the supercomputer horizon.

Dongarra says that by 2017–18 the hybrid CPU/GPU supercomputer Summit will be operational at ORNL and is expected to be 5 to 10 times as powerful as Titan. By 2023, he says, they anticipate computers operating at “exascale” (1,000 petaflops) with an exaflop goal of 10^{18} flops and parallelism around 1 billion. Dongarra explains that rather than using half a million threads of execution, problems will be solved using 1 billion threads of execution on the exascale computer system.

Dongarra says about half of the most powerful supercomputers are used in industries such as banking, and



by companies that utilize the technology to design better products and services.

While this level of technology might not be at the forefront of people's minds, the weather forecast usually is.

"Today supercomputers are used to simulate what the weather will be tomorrow," he says, noting that computers operating at exascale will more efficiently and accurately estimate weather events such as hurricanes, increasing the potential for saving lives as well as reducing evacuation costs.

Supercomputers are not only forecasting the weather—they are also reaching for the stars. Dongarra was recently named to the Scientific and Engineering Advisory Committee for the international Square Kilometre Array radio telescope project. Information gathered from more than 130,000 antennas (an array) and 200 "dishes" at sites in Australia and South Africa, respectively, will be fed to exascale-level supercomputers that will analyze and process the data to help answer questions about the evolution of the universe and other cosmological topics.

Dongarra hadn't yet envisioned extreme computing when he first discovered his love of computers. He was completing his bachelor's degree in mathematics at Chicago State University with the intent to one day teach but says that "something happened that changed my life."

During a final semester internship west of Chicago in the

Applied Mathematics Research Group of Argonne National Laboratory, Dongarra realized how much he enjoyed working with computers. He then chose to pursue a master's degree in computer science at Illinois Tech; the university offered him an assistantship that enabled him to work one day a week at Argonne. Following graduation in 1973, Dongarra was hired full time and earned his Ph.D. in applied mathematics from the University of New Mexico, while also conducting research at Los Alamos National Laboratory. By the time he left Argonne in 1989, Dongarra had risen in the ranks to senior scientist and is currently a member of the distinguished research staff at ORNL.

Dongarra, who received the Professional Achievement Award from Illinois Tech in 2013, is a member of the National Academy of Engineering and a fellow of several organizations including the American Association for the Advancement of Science, the Association for Computing Machinery, and IEEE. In his first year at the University of Tennessee he established the Innovative Computing Laboratory and has since served as its director. The laboratory has grown into an internationally recognized research facility and compiles the TOP500, a biannual list of the world's 500 most powerful computer systems. ●

MORE ONLINE
"Inside Titan": www.ornl.gov/news/inside-titan-0

Room with a View

By Chelsea Kalberloh Jackson



PHOTO: COURTESY OF ADNAN BALEH (M.S. EE '15)

The view of Earth from the 2015 Illinois Tech student payload

When two students representing the Illinois Tech American Institute of Aeronautics and Astronautics team arrived at 3 a.m. at Fort Sumner in the New Mexico desert, the only thing standing between them and the launch of their team's payload was Mother Nature. Fortunately, on September 7, 2015, the wind was calm, the temperature mild, and the visibility good—and the space balloon carrying a payload of the team's own design was launched 36 kilometers high into Earth's stratosphere.

The Illinois Tech AIAA team was among 12 university teams nationally chosen to participate in the NASA Balloon Program Office's 2015 High Altitude Student Platform. The student-made payload, fabricated in part in the university's Idea Shop™ and Machine Shop and dubbed Scarlet Hawk III, marked the third-consecutive year that an Illinois Tech team was selected for the flight program project.

Weighing 2.41 kilograms and roughly the size of a loaf of bread, perched vertically, the Illinois Tech

payload consisted of an aluminum interior frame encased in a white FRP box. Inside were a camera, fault resistor, temperature sensor, frequency communicator, antenna, and Arduino microprocessor that transmitted a simple signal to Illinois Tech's team ground station. In addition to building all the individual parts, the students created the code that sent information to and received commands from NASA's station at Fort Sumner airport.

Illinois Tech's payload, along with those of the other university teams, was attached to a NASA-designed platform carried by an 11-million-cubic-foot, helium-filled, thin-polyethylene film balloon. Prior to launch, the student team tested its payload at NASA's Columbia Scientific Balloon Facility in Palestine, Texas, where they were able to observe the payload's performance under simulated launch conditions.

"The visit to the NASA facility was awesome," says Caterina Lazaro (M.S. ECE '15, Ph.D. candidate), Illinois Tech's team leader. "It was a great experience and we got to

learn a lot working under NASA engineers' supervision—to see the facility and how they work, what the protocols of their work are, and to hear about their experiences working on different projects."

Student payload projects are intended to be a stepping-stone to satellite projects. The focus of the team's 2015 launch was to test the payload's temperature control and pressure systems, light sensor, and a preliminary communications system between the payload and ground station in preparation for the team's 2016 payload, which will house a more advanced, complete communications system.

The 2015 payload zigzagged westward over New Mexico and parts of Arizona along an unguided path of its own choosing; at the end of the balloon's 23-hour flight NASA directed the balloon to slowly deflate, ensuring a safe landing outside Albuquerque. ●

MORE ONLINE

Time-lapse Footage from Illinois Tech's 2015 Student Payload: www.youtube.com/watch?v=tIzuxmi5b5k



PARTNERS IN PREVENTION

In its quest to cure the causes of foodborne illness outbreaks, the United States is doubling down on prevention.

In 2011 the United States passed the Food and Drug Administration's Food Safety Modernization Act, a set of regulations and guidance aimed at curtailing the estimated 48 million incidents of individual illness annually before they happen. The act's platform includes preventive controls, inspection and compliance, new tools regarding imported foods, FDA mandatory recall authority, and enhanced partnerships in the form of collaborative training programs.

Illinois Tech's Institute for Food Safety and Health will be the FDA's lead partner on the collaboration and training component, partnering to create the Food Safety Preventive Controls Alliance. The FSPCA will provide an international training program that includes a core curriculum, technical assistance, and outreach for the domestic and foreign manufacturers of human and animal foods.

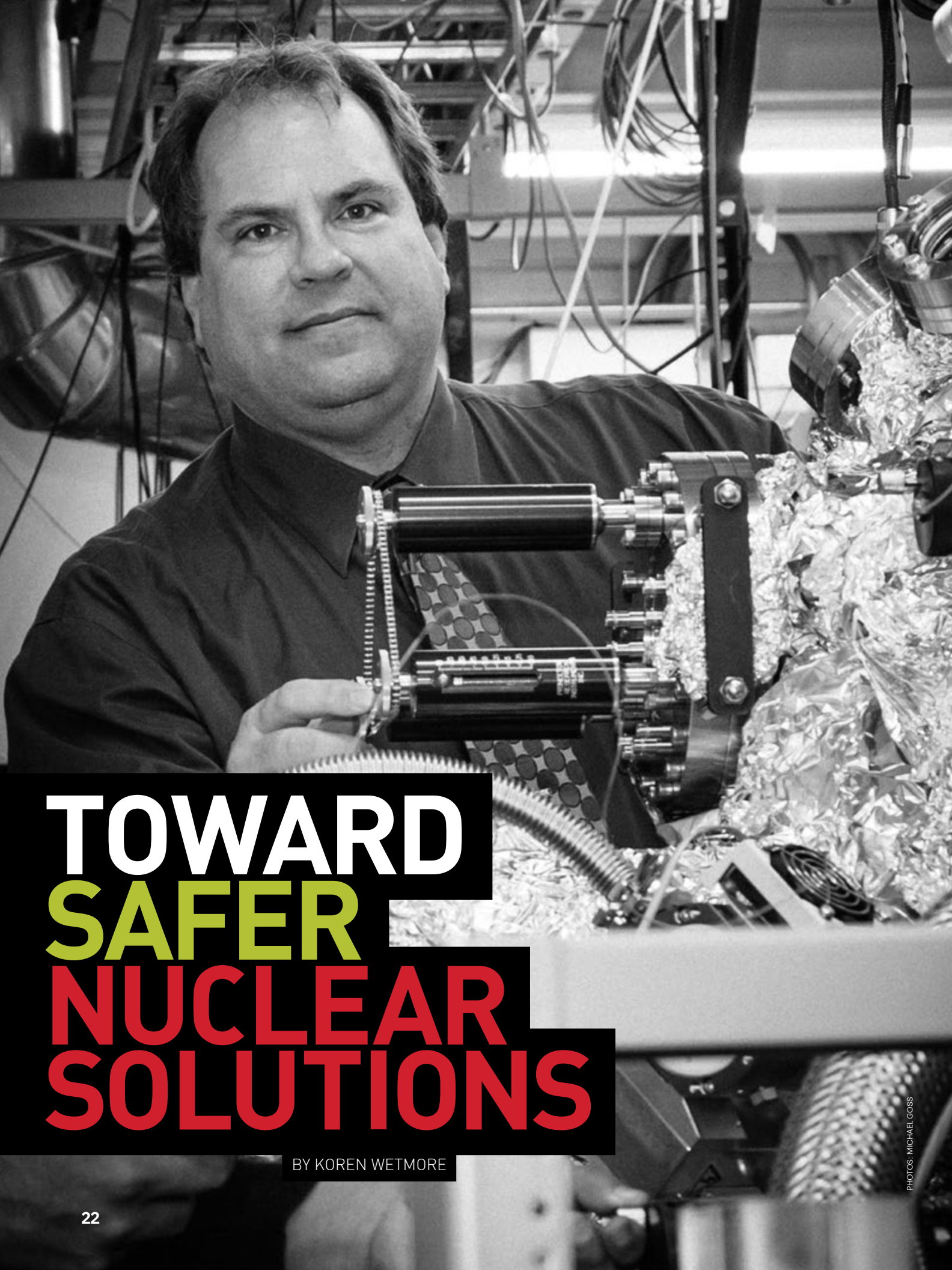
Headquartered at IFSH's Moffett Campus in Bedford Park, Illinois, the FSPCA program will train manufacturers in standard controls and practices of more than a dozen topics ranging

from biological food safety hazards to record keeping to verification and validation procedures.

Robert Brackett, director of IFSH, says the new training program will affect more than 80,000 domestic and 200,000 international firms that produce food products for sale in the U.S. He adds that the new FSPCA regulations are superior to past government efforts to improve the safety of the food supply, which required companies to prove only that specified controls were in place—not that they were fully understood or verifiable.

"These FSPCA regulations use similar prevention mechanisms but also require companies to show additional ways that they are demonstrably decreasing risk. This includes employee education, better product sourcing, and the elimination of environmental risks," Brackett says. "A standard framework will mean fewer mistakes." ●

MORE ONLINE
FDA Food Safety Modernization Act:
www.fda.gov/Food/GuidanceRegulation/FSMA



TOWARD SAFER NUCLEAR SOLUTIONS

BY KOREN WETMORE

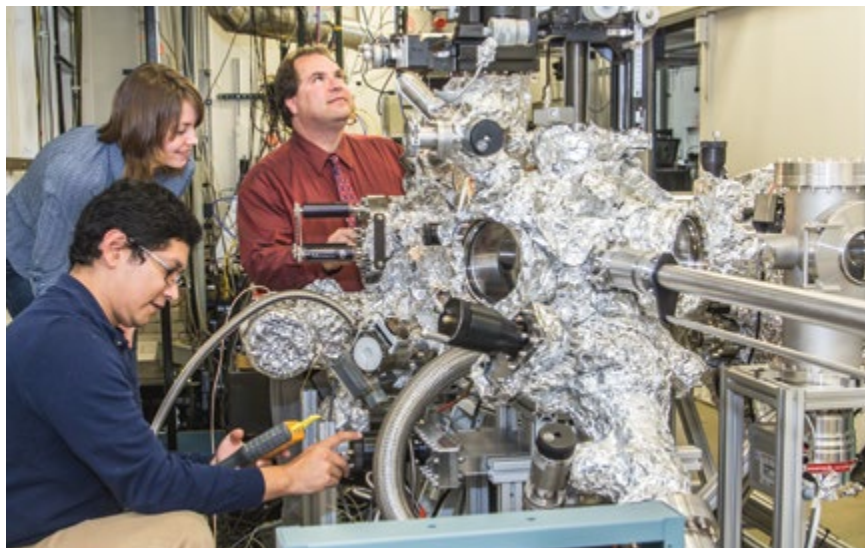
As a second-grader, Jeff Terry hoped to one day be a nuclear chemist. But as a young adult he fought against the Bailly Nuclear Power Plant, a failed project (construction began in 1974 and was canceled in 1981) planned for the Indiana Dunes National Lakeshore, because he feared it would kill the fish in Lake Michigan. During graduate school, however, he again had a change of heart.

“I started looking at the growing population and realized the only thing that could bring most of the world out of energy poverty, without cooking us through climate change, was nuclear energy,” says Terry, now an Illinois Tech physics professor and nuclear proponent.

Today he’s helping to make the resource as safe as possible.

Trained as a physical chemist, Terry spent his early career working in the United States Department of Energy Stockpile Stewardship and Management Program at Los Alamos National Laboratory. Today, along with his faculty duties, he is the technical lead for synchrotron radiation experiments that the Nuclear Science User Facility (NSUF) conducts at Illinois Tech’s Materials Research Collaborative Access Team at the Advanced Photon Source in Argonne, Illinois. Terry is an expert in synchrotron radiation techniques that utilize photons to help determine the chemical properties of irradiated materials, which he’s using for his latest project: an effort to develop safer nuclear fuels.

He and his students are studying whether silicon carbide might be a safer choice than zirconium when used as a nuclear fuel cladding, the layers of material used to keep radioactive fission products from escaping during reactor operations. Cladding failure came into the spotlight in 2011 following the 9.0 earthquake and subsequent tsunami that caused a loss-of-coolant accident (LOCA) at Japan’s Fukushima Daiichi Nuclear Power Station. Zirconium alloy



Jeff Terry and his students at Argonne National Laboratory’s Advanced Photon Source

cladding at Fukushima reacted with steam to create hydrogen, which built up and exploded.

Since silicon carbide has been proposed as fuel cladding in more advanced reactors, Terry and his collaborative partners at Oak Ridge National Laboratory (ORNL) chose to test whether it could be used in light water reactors like that at Fukushima.

To answer that question, they have fabricated model silicon carbide films and are comparing the physical and chemical properties of those films with that of silicon carbide cladding that was irradiated in a test reactor. They compare the irradiated claddings with others that have been tested under extremes that mimic accident conditions. The data they collect will help refine current predictive models used to anticipate and prevent nuclear accidents and will inform the development of potential new cladding materials. So far, the silicon carbide cladding appears to work as well as the currently used zirconium alloy while greatly minimizing the risk of a hydrogen explosion.

“By understanding what’s going on, you can fine-tune your engineering solutions to limit transport and

release; you can also have very good predictive behavior about what might be the extent of release under a specific scenario,” says Kurt Terrani, staff scientist in ORNL’s Nuclear Fuel Materials Group. “The work is quite sophisticated, and Jeff and the students’ personal dedication level has been immense.”

Two NSUF project awards have allowed the team to complete its study of the material’s chemical properties; next they will use electron microscopy to study its physical properties, including the presence of any cracks that could allow radioactive materials to leak out. His group has also explored other potential cladding substitutes, including zirconium carbide and zirconium nitride.

When or if any of the potential substitutes will be placed in actual reactors, however, remains unknown because of the lack of clear guidelines from the Nuclear Regulatory Commission.

“The goal is to provide enough information to get the fuel qualified for use in light water reactors, but obtaining NRC approval is such an open-ended process that no one is actually sure when that might happen,” Terry says. ●

MORE ONLINE

Materials Research Collaborative Access Team: <http://mrcat.iit.edu>

Oak Ridge National Laboratory Nuclear Science Research: www.ornl.gov/science-area/nuclear-sciences

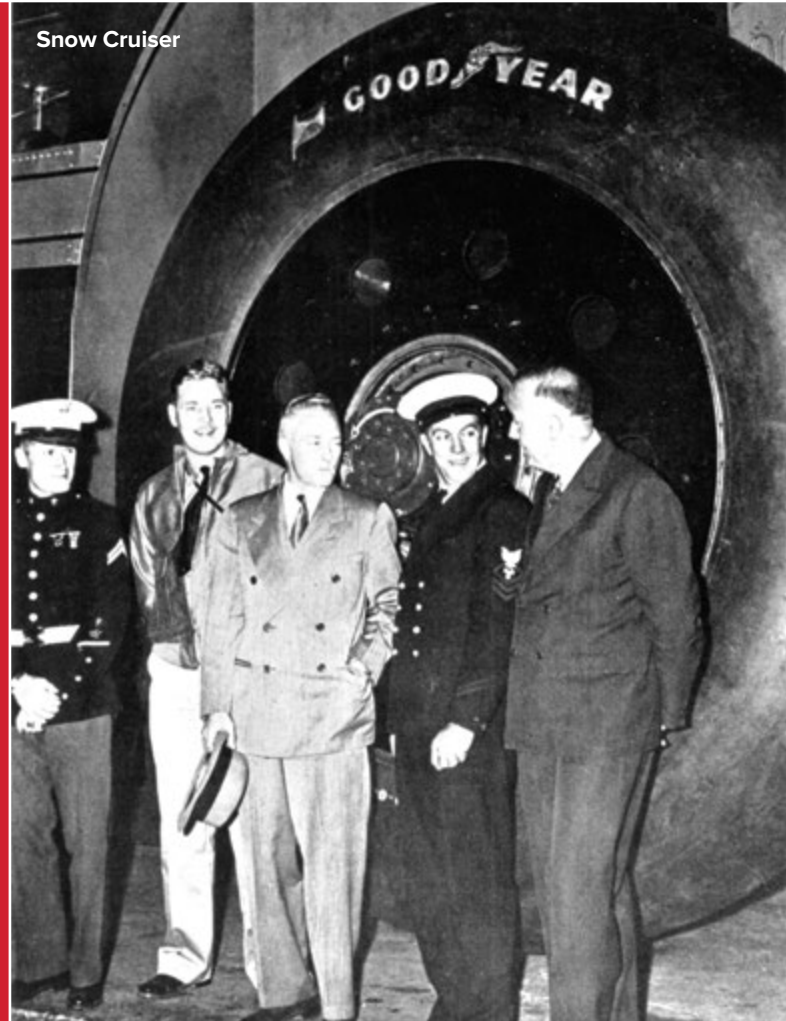


Visit iit.edu/magazine to read about

- The new Illinois Tech men's volleyball team
- The technology behind a futuristic wheelchair being developed by faculty members **Mahesh Krishnamurthy** and **Eun-Jeong Lee**
- Fire protection engineer **Thomas Gayle Pennel** (FPE '67)
- An IPRO team that drafted a drone rescue system inspired by the 1939 Snow Cruiser
- A special "Alumni Memories" contribution

Also check out Video Extras and Audio Extras with

- Cleversafe Founder **Chris Gladwin**
- **Manu Vora** (M.S. CHE '70, Ph.D. '75), on his Leadership Excellence program for students
- University Archivist **Ralph Pugh**, on unusual student organizations from Illinois Tech's past

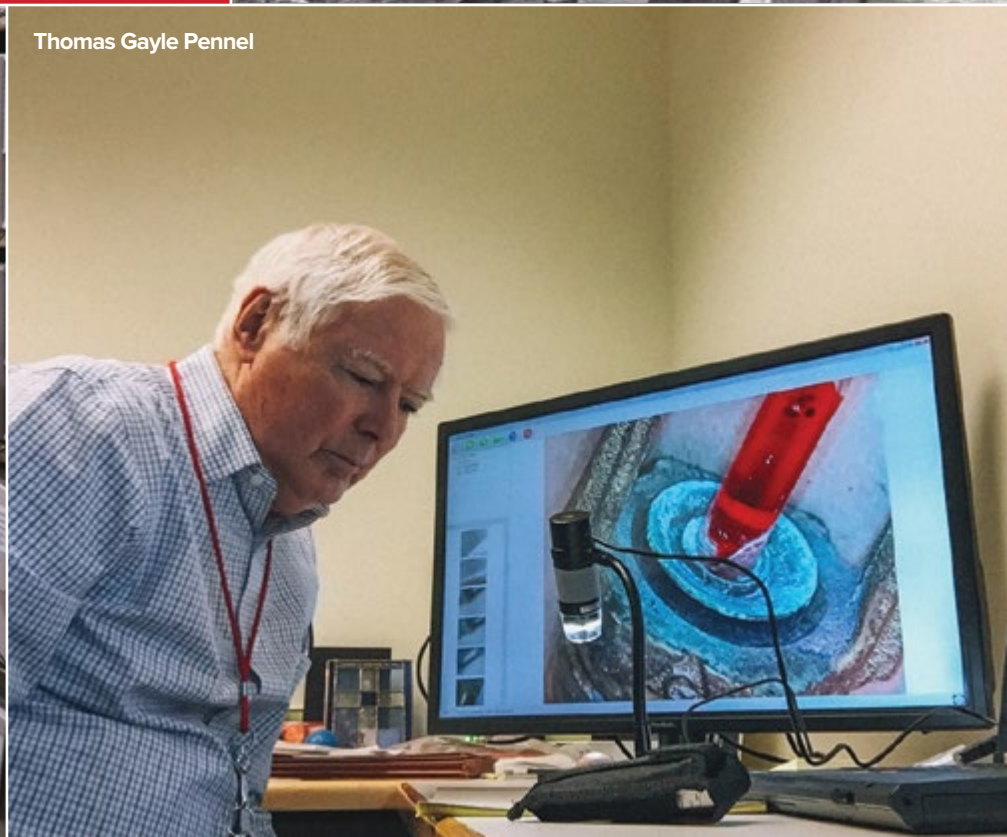


Snow Cruiser

Ralph Pugh



Thomas Gayle Pennel



1950s

Theodore “Ted” Brown (CHEM '50), Bonita Springs, Fla., is the founding director of the Beckman Institute for Advanced Science and Technology at the University of Illinois at Urbana-Champaign.

Boris Stern (CHEM '50), Tampa, Fla., is a former WWII infantry squad leader. Stern is now known as “The Cookie Man” or “The Ice Cream Guy” at the James A. Haley Veterans’ Hospital, where he volunteers.

Ted Erikson (CHE '52, M.S. CHEM '59), Chicago, presented at the Chicago Section of the American Association of Physics Teachers in fall 2015 at Roosevelt University.

Roy Grundy (IE '52), Naperville, Ill., recently attended the 100th Anniversary of the Founding of the British Machine Gun Corps in Grantham, England. Grundy’s father was a member of the corps during WWI, and Grundy is now an honorary member.

1960s

John King (EE '60, M.S. '65), Bloomfield Hills, Mich., celebrated his 50th reunion at Illinois Tech in 2010 and returned last fall for the 50th anniversary of receiving his master’s degree. He and his wife have nine children and 20 grandchildren.

Norbert Pointner (ARCH '61, M.S. CRP '62), Wheaton, Ill., presented planning workshops for the Village of

Bartlett and the Village of Clarendon Hills and made a presentation for the Village of Homer Glen. He has authored four published papers.

Frank Melchior (LAW '63), Allendale, N.J., is retired and serves as a volunteer mentor at SCORE, providing free professional business counseling.

Ronald Waller (PS '63), Richmond, Va., is a part-time tour guide at the Virginia State Capitol.

David Rogers (EE '64), Fargo, N.D., is a professor in the Department of Electrical and Computer Engineering at North Dakota State University. He and his wife have been married for more than 50 years and have one son.

Celso Aurelio (ARCH '65), Chicago, has spent most of his career as an architect in Chicago. One of his best experiences was attending a speech given by Ludwig Mies van der Rohe. Aurelio has two children and three grandchildren.

Raymond Barnett (CHEM '65, M.S. SE '69), Lisle, Ill., retired in 2002 after a long career as a high school chemistry teacher. He and his wife, Lois, will celebrate their 50th anniversary this year. They have two daughters and one granddaughter.

Andrew Bosma (CE '65), Orland Park, Ill., worked as an engineer at United States Steel Corporation, Sargent & Lundy, the Metropolitan Water Reclamation District, and the Village of Orland Park. He has been married to his wife,



Gordon Thomson (PHYS '65), Salt Lake City, received his Ph.D. in physics from Harvard University in 1972 and was a physics professor at Rutgers University for 29 years. He is now a professor in the Department of Physics and Astronomy at the University of Utah and holds an endowed chair. Thomson and his wife, Tricia, have one son, Alexander.

Judy, for 56 years. They have five children, 13 grandchildren, and two great-grandchildren expected this year.

George Bradburn (ARCH '65), Nimes, France, has spent most of his career outside of the United States, the last 26 years in Europe.

William Christiaanse (EE '65), Westport, Conn., began his career working on engineering computer applications before becoming a financial advisor. He and his wife, Carol, have two children.

Donald Finan (ME '65), Palos Park, Ill., worked for 37 years in the industrial gas industry. He and his wife of 50 years, Kathy, have three children and seven grandchildren. Finan still enjoys the annual Illinois Tech Pumpkin Launch. He also participates annually in the MS 150 Ride, where his 2015 team raised more than \$40,000 to fight muscular dystrophy.

Donald Franklin (ARCH '65), Chicago, is “mostly retired” from a career as a corporate management planner and consultant and now spends his time volunteering. An avid bicyclist, Franklin, and his wife, Joyce, have been married for 45 years.

Robert Hoekstra (CRP '65), Swansea, Ill., spent his early career as a city and regional planner, later becoming a real estate appraiser. He and his wife have two sons.

Richard Hogan (ME '65, M.S. MAE '69), Chicago, had a career in the electrical utility industry. He now enjoys traveling and visiting Adler Planetarium and other local museums.

Sheldon Marcus (Ph.D. CHEM '65), Chicago, spent 34 years as a research manager at Amoco (now BP), where he managed a diverse, international group of scientists, engineers, technicians, and administration staff members.

Thomas Michalek (CHE '65), Pittsburgh, attended law school and still maintains a civil law practice today. He is married and has three grandchildren.

Keith Miller (ME '65), Vero Beach, Fla., worked for 35 years in manufacturing management for Procter & Gamble, where he helped to design a \$60 million decaffeinated instant coffee plant and managed it for seven years.

Edward Minioka (IE '65), Chicago, was professor of information and decision sciences at the University of Illinois at Chicago for 26 years. He is a professional antiquarian, sourcing and selling European antiques for clients and collectors. Minioka received the Silver Circle Award for teaching in 1997.

William O'Brien (ME '65), Burr Ridge, Ill., held various jobs in manufacturing businesses and became an internal consultant in organizational and leadership development.



Don Finan (ME '65) [left] with his son-in-law Chris White, Illinois Tech’s vice provost for academic affairs and professor of physics [middle], and Finan’s son Don Finan Jr. [right] at the 2013 MS 150 Ride.

Walter Parduhn

(BE '65), Palos Heights, Ill., spent his career in the manufacturing industry and founded and led Ceramic Fiber Specialties for 34 years. He and his wife have been married for more than 50 years.

Suresh Pinjarkar

(CE '65, Ph.D. '69), Glencoe, Ill., worked at several local consulting firms as a structural engineer before starting his own firm in 2003. He performed dynamic load testing and evaluation of the CTA elevated train tracks that run through the Illinois Tech campus and other areas of the city.

Stevan Resan

(CHEM '65), Cross Junction, Va., spent the first half of his career in product development and then served as a primary patent examiner for the United States Patent and Trademark Office. The French and Indian War Foundation recognized Resan for outstanding contributions to the preservation of French and Indian War heritage.

Lee Sheridan

(CHE '65, M.S. '67), Kildeer, Ill., worked primarily in research and development at various companies, including the Amoco Chemicals Corporation, Rubbermaid, and Illinois Tool Works.

Carlo Testa

(M.Des. '65), Blandford, Nova Scotia, Canada, has designed environments for educational facilities and hospitals around the world, including Africa and Asia. He and his wife have one daughter.

John Vomastic

(CHE '65), Manitou Springs, Colo., served in the United States Navy for 24 years, later joining the Westinghouse Electric Corporation as a program manager. He has run in the Pike's Peak Ascent vertical race for the past nine years.

Henry West

(ME '65), Lake Forest, Ill., was an operations executive at various companies, serving as executive vice president at The Marmon Group for the past 22 years. West and his wife have been married for 53 years and have two children and four grandchildren.

Nick T. Thomopoulos

(Ph.D. IE '66), Burr Ridge, Ill., Professor Emeritus of Management Science at Stuart School of Business, recently had his 10th book published, *Elements of Manufacturing, Distribution, and Logistics* (Springer International

**David Wiatrowski**

(M.S. EE '93, CER COMM '04, M.A.S. ECE '08), Woodstock, Ill. [center], received the 2015 Motorola Solutions Business Patent of the Year from Motorola Solutions. He has been with the company since 1987 and is a distinguished member of the technical staff. Wiatrowski holds 163 patents in 14 countries, with another seven inventions pending patent grants.

Publishing 2016). Four of his five family members are Illinois Tech alumni: wife, **Elaine Thomopoulos** (Ph.D. PSYC '74), and daughters **Marie Sussman** (M.B.A. '93), **Melina Collins** (M.B.A. '95), and **Diana Patterson** (M.B.A. '05).

David C. McKinney (ARCH '67, M.S. CRP '68, Ph.D. '76), Fallbrook, Calif., is president of Westcliff University.

John O'Connor (LAW '67), Oak Forest, Ill., retired from his firm, John J. O'Connor & Associates.

Joanne Gucwa (CRP '68), Des Plaines, Ill., published three of the *BioFables* series of children's tech-based stories.



Frank Madsen (DSGN '68), Delavan, Wis., recently closed his exhibition

planning and design company after 28 years and plans to run an antique toy business.

1970s

Fred Michaels (M.S. SOC '70), Scottsdale, Ariz., is executive consultant at Michaels & Associates, assisting companies in creating custom online training. After attending a Phoenix-area luncheon with Lewis College of Human Sciences Dean Christine Himes, Michaels reconnected by email with **Walter Davis** (M.S. SOC '70), professor of sociology at Tougaloo College. Among other memories from their time as students, Michaels and Davis recall a dinner in 1968 at Michaels's parents' home in Chicago when they all received the news of Martin Luther King Jr.'s assassination. Michaels and Davis are looking forward to reconnecting in person in the near future.

Edward Resner (CE '71), Spring Grove, Ill., launched the 10th volume of the Schaumburg Scribe Group's chapbook, *Celebrations*.

Tsuyoshi Okuyama (MAE '74), Warren, Mich., worked at White Cap following graduation, then moved to Japan to work for Nissan

Motor Company, for which he held various positions in both Japan and the United States throughout his career. Okuyama now teaches Japanese martial arts and is a Grand Master in both Aikido and Iaido. He works as a technical translator in the automobile industry.

Christine Stypka (BIO '77), Chicago, has taught at St. Paul of the Cross school in Park Ridge, Ill., since 2002. She has promoted engineering by sponsoring a team of seventh- and eighth-grade students in the Future City Competition for the past nine years.

David Brezina (LAW '78), Chicago, has been fighting lymphoma for the past year and competed in the 2015 Leukemia Cup Regatta. He and his shipmates including **Chris Novak** (LAW '03) won the Tartan 10 class.

Deborah Korell (MGT '78), Bradenton, Fla., is a trustee for the Bayshore Gardens Parks and Recreation District.

Richard Shreve (Ph.D. BE '78), Boynton Beach, Fla., has been selected as the Chemistry Cluster Chair for the current academic year at Palm Beach State College.



Michael Slifka (ARCH '78), Geneva, Ill., retired in 2010 as president of PFS Corporation and now focuses on consulting as a fire protection engineer, fire forensics investigator, and expert witness.

Jonathan Jaffe (MGT '79, M.S. OTM '97), Gallatin, Tenn., was awarded his eighth patent in July 2015, has another patent in its third year of review, and has three more in development.

1980s

Lawrence Jordan (EE '89), Bolingbrook, Ill., and **Michael Heilmann** (M.B.A. '04) received the 2015 *Daily Herald Business Ledger* Entrepreneurial Excellence Award in the Innovation category. In 2004 Jordan and Heilmann co-founded Wi-Tronix, a leading provider of remote monitoring solutions for high-value mobile assets.

Richard Jozefiak (ME '82), Madison, Ala., received the Earl Pearce Professional of the Year Award from the

American Institute of Aeronautics and Astronautics Greater Huntsville Section last May for extraordinary dedication, creativity, and leadership over his 33-year career.

Peter M. Koliopoulos (ARCH '86), Paradise Valley, Ariz., has expanded Circle West Architects, the planning and design firm he founded in 1992, into the Denver market.

1990s

Joy Robinson (M.A.S. METM '91, M.S. TCID '09, Ph.D. TCOM '14), Huntsville, Ala., is an assistant professor in technical writing and new media at the University of Alabama.

John Sennett (M.S. CS '92), Schaumburg, Ill., is co-authoring the book *The 5th Evangelist*. Sennett is also raising his son, Elias, 6.

Elie Merheb (CHE '94), Broadview Heights, Ohio, is president of Kent Adhesive Products Company.

Louis Storino (CHE '94, M.S. ENVE '96), Chicago, was elected president of the Illinois Water Environment Association for 2015–16.

Jennifer Burke (LAW '95), Chicago, was reappointed to the Illinois Pollution Control Board in 2015. Her husband, **James Murphy** (LAW '95), is a judge in the Domestic Violence Division of the Circuit Court of Cook County. The couple has four sons.

Mark Kopiec (CE '96), Lansing, Ill., has retired from his job as a civil engineer at the Illinois Department of Transportation, where he worked for 30 years.

Santosh Vijay (M.A.S. TSEC '99), Bangalore, India, recently joined Beckman Coulter. He was previously with Philips Healthcare for five years and GE Healthcare for eight years.

2000s

Maribeth Whitfield (LAW '04), Chicago, continues to serve as general counsel for the Suzlon Group. She and her husband, Jason, have two children, Helena and Jude.

Jacqueline Anderson (PSYC '05, M.B.A. '14), Chicago, wrote the feature article "Change Is Constant So Embrace It: Four Misconceptions Challenging Change in Higher Ed," in *The EvoLLLution*, discussing the importance of introducing change in university culture.

Yared Akalou (M.Des. '06) Houston, was granted a patent for co-inventing a software service he developed while employed at CareFusion. The service tracks data usage of infusions administered to patients.

Lauren Joyce Hensel (PTC '06), Chicago, began her graduate program at Stuart School of Business and became associate director of admissions at Morgan Park Academy last October.

Ravi Panchumarthy (M.A.S. ITM '09), Tampa, Fla., is a doctoral candidate in computer science and engineering at the University of South Florida.

Karthik Sudhir (M.A.S. TSEE '09), Chicago, is an engineer at Apple and has invented a touch protocol that improves iPhone security. Apple has since applied for a patent for his invention.

Anne Szkatulski (LAW '09), Chicago, is counsel and director of government affairs at the online eye-examination company Opternative.

Omer Onar (Ph.D. EE '10), Knoxville, Tenn., has been working at the United

States Department of Energy's Oak Ridge National Laboratory since 2010.



Julia Rybakova (BAAS '10), Northbrook, Ill., was recently promoted to associate at Much Shelist, P.C. in the business and finance practice group. She is also a registered patent attorney.

Kathryn Weissman (CE '10), Chicago, is a project manager at ComEd in the transmission project management department.

Keenan Gottschall (PS '11), Wixom, Mich., was elected to a four-year term with the Wixom City Council.

Angela Ng (CE '11), Chicago, officiated at the wedding ceremony of **Jessica Fong** (ARCH '12) and **Robert Veitch** (CS '12) on September 5, 2015.

Amanda Zhang (TCID '11), North Bergen, N.J., is a digital asset librarian in the Global Technology Services Division of Craft/McCann Worldwide in New York City.

Carey Lee (ITMF '13), Chicago, works at Illinois Tech as an information technology coordinator.

Nazanin Tondravi (LAW '13), Naperville, Ill., is associate director of the Regulatory Compliance Division at the University of Miami Miller School of Medicine.

Katherine (Peters) Johnson (PTC '15), Chicago, married **Zephan Johnson** (CS 5th year) in Colorado on August 2, 2015.

Mehal Shah (BME '15), Naperville, Ill., is in his first year of medical school at Marian University College of Osteopathic Medicine in Indianapolis.



Lisa Mueller (ME '87) [center], Kihei, Hawaii, and her uncle, [right] **Richard Misiorowski** (CHE '56), will both be in attendance at her son [left] **Tyler Seppala's** graduation from Illinois Tech this May. Mueller's stepbrother **Jeffery Szekely** (CPE '03) rounds out three generations of Mueller family members to have IIT as their alma mater.

Share Your News!

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

Submissions may be edited for style and brevity.



Morton Nemiroff (CHE '50)

Engaging with Illinois Tech, Near and Far

Staying connected to your alma mater after graduation can be tough. The “real world” beckons—you begin your career, maybe start a family, and priorities constantly shift. While it may be hard to find the time to come back to campus, there are ways to remain a part of Illinois Institute of Technology long after graduation that don't even involve leaving your hometown.

Morton Nemiroff (CHE '50) lives in Hawaii and hasn't let a little thing like distance get in the way of staying connected. He has participated in recruitment activities for Illinois Tech for the last 40 years, making it his priority since 1990. Although he is more than 4,000 miles away, he is the university's chief contact in Honolulu and has made a habit of spreading the word about Illinois Tech across the Pacific. Nemiroff is an Admission Ambassador, visiting high schools throughout the island of Oahu, coordinating alumni representation at college fairs, and ensuring that high school guidance counselors have plenty of Illinois Tech materials to share with their students.

“I had an excellent education at IIT,” Nemiroff says. “I want to make sure that these kids don't miss out on a great

opportunity just because we're so far away.”

Illinois Tech needs alumni representatives on the mainland, too. Admission Ambassadors share their IIT experiences and knowledge of the university with prospective students and their parents, providing a first-hand look at life as a Scarlet Hawk. They help recruit future alumni who will continue Illinois Tech's traditions.

“I like to tell students about IIT's educational opportunities in addition to their basic training, like the IPRO Program. IIT helps enrich their minds, expand their views, and prepare them for postgraduate experiences,” says Nemiroff.

The Admission Ambassadors program is based on Nemiroff's efforts and needs your help to keep the success going. We would love to have “a Mort in every port”!

To get involved with the Office of Undergraduate Admission, contact Al Nunez, alumni engagement consultant, at nunez@iit.edu or 312.567.3154. Visit admissions.iit.edu/undergraduate/alumni for more information.

IIT Chicagoland Alumni Chapter

Chapter Officers

Chair: **Steve Nargang** (ME '96)—
snargang@hawk.iit.edu

Vice Chair: **Robert Meder** (M.Arch. '10)
Chapter Secretary: **Natalie Hammer**

(EE '09, M.A.S. PWR '14)
Communication Chair: **Lauren Joyce Hensel** (PTC '06)

City of Chicago Branch

Director: Vacant—Please email **Zach Rus** at zrus@iit.edu to get involved.

North Suburban Branch

Director: Vacant—Please email **Zach Rus** at zrus@iit.edu to get involved.

Assistant Directors: **Brett Champlin** (M.B.A. '90), **Thomas Hutch** (M.S. BIOL '00)

Northwest Suburban Branch

Director: **Bruce Meier** (MATH '76)—
brucemeier5540@gmail.com

Assistant Directors: **Luke Dykstra** (CPE '00, M.S. CS '01), **Dave Kamath** (M.S. IE '73)

West Suburban Branch

Director: **Joe Koblich** (BA '88)
joe@koblich.com

South Suburban Branch

Director: **Jerry Wilks** (MET '72, M.A.S. MET '82, M.A.S. CHE '05)
gwilks@citgo.com

Assistant Directors: **Rob Besecker** (BA, MM '96), **Marlene Lojas** (CHE '91)

Stuart Alumni Committee

Chair: **Patrick Bourbon** (M.S. FIN '00)
patrick.bourbon@gmail.com

You Can Contribute to Illinois Tech's Recruitment Efforts by:

- Referring qualified students: go.iit.edu/ras
- Communicating with admitted students by phone, mail, or email
- Attending regional college fairs and visiting high schools
- Attending events for admitted students and their families
- Staying up-to-date on what's happening at Illinois Tech
- Becoming part of the formal organization that recruits future alumni by joining the Admission Ambassadors program: admissions.iit.edu/undergraduate/alumni

U.S. Chapters

Volunteers who enjoy connecting IIT graduates to their alma mater manage each chapter. Domestic chapters and their leaders are:

Austin: **Arun Prakash**
(AE '99) prakaru@gmail.com

Bay Area: **Shailvi** (CPE '07)
and **Govind** (EE '08) **Wakhl**
shailvi@gmail.com

Dallas: **Lisa Marszalek Wright** (AE
'01) lisa.a.marszalek@gmail.com

Detroit/Ann Arbor: **Alex Rasmussen**
(EE '00) aprasmussen@gmail.com

Houston: **Victoria Meyer**
(CHE '90) vkmeyer@sbcglobal.net

Minneapolis: **Harley Feldman**
(CHEM '69) harleyfeldman@gmail.com

New York City: **Hector Guillen**
(M.Arch. '91) hguillen@jankorasic.com

Philadelphia: **Heather Weaver**
(PPPS '00) hlweaver035@gmail.com

Phoenix: **Peter Koliopoulos**
(ARCH '86) peter@circwest.net

San Diego: **Crystal Sargent**
(M.S. MCOM '02)
csargent@torreypinesbank.com

Seattle: **Mike Wayte**
(ME '61) mikejwsr@hotmail.com

Southern California: **Benny Jones**
(MATH '94) bennyjones.iit@gmail.com

Washington, D.C.: Vacant—
Please email **Zach Rus** at
zrus@iit.edu to get involved.

Global Chapters

China: General Secretary **Jennifer Meng Xia** (M.P.A. '07)
gyxiameng@hotmail.com

Hong Kong: **Victor Lo** (DSGN '73)
victor_lo@goldpeak.com

India: **Thiruvengadam Ashok**
(M.S. CS '01) ash@stagsoftware.com

Japan: **Tetsuyuki Hirano** (ARCH '79)
tetsu-hirano@hd-group.co.jp

Korea: **Jongsub Moon**
(Ph.D. CS '91) jsmoon@korea.ac.kr

Taiwan: **Steve Chun Pan** (M.S. IE '77,
Ph.D. MSC '88) chun@uch.edu.tw

Thailand: **Paiboon Pongchairerks**
(M.S. IE '75) paiboopo@gmail.com

If you live in any of these areas and want to get involved, contact the chapter chair or email the Office of Alumni Relations at alumni@iit.edu.



Are You a Loyal Hawk?

Loyal Hawks is Illinois Institute of Technology's monthly giving program. Monthly giving makes supporting Illinois Tech easy and affordable for our most loyal alumni and friends.

Illinois Tech owes its very existence to generations of generous donors. Your monthly support—whether it's \$5, \$25, or \$50—adds up and will have a lasting impact.

Give to scholarships, your college, or any other university priority. Your monthly gift will continue to make a difference for Illinois Tech students.

Show your Hawk pride! Make a gift at give.iit.edu/loyal and become a Loyal Hawk today!

2-FOR-200—A SPECIAL OFFER FOR ILLINOIS TECH CLASSES OF 2005 AND LATER

JAY FISHER (CHE '63) wants to encourage young alumni from the past 10 years to give back to Illinois Tech. If you are among the first 200 alumni to sign up, he will generously match your first year as a Loyal Hawk \$2 to your \$1. Make your gift at give.iit.edu/2-for-200 and triple the impact of your donation.

**LOYAL
HAWKS**
ILLINOIS TECH

“Too often we forget to perform actions that really make a difference, yet I never forget to pay my bills! Loyal Hawks makes it easy to make giving a habit.”

—Elizabeth Bilitz (MSE '07, M.S. '09), member of the Illinois Institute of Technology Alumni Association Board of Directors

Create a Legacy To Support Students



JULIA ANDERSON (Ph.D. BIOL '75) gave generously to Illinois Institute of Technology throughout her lifetime. She supported scholarships, fellowships, and numerous College of Science initiatives.

Anderson received a bachelor's degree from Purdue University and a master's from the University of Washington before earning her doctorate in biology from Illinois Tech. She went on to make a name for herself in the science community. Anderson was a research scientist at the University of Iowa, where she published more than 10 major papers on the human pathogen *Candida albicans* and made several seminal discoveries that remain the basis of research in laboratories worldwide.

Although Anderson passed away in March 2015, her impact is still being felt at Illinois Tech. Through a generous unrestricted bequest, she made certain that her passion for academia would become her legacy. During the first-ever IIT Giving Day on November 17, 2015, 632 alumni donors received \$250 matching gifts for their college's scholarship funds through Anderson's bequest, totaling \$157,750. Her generosity will ensure that future students have the support necessary to receive an Illinois Tech education.

Benefits of a Bequest:

- Help ensure Illinois Tech's future.
- Leave a legacy of giving back.
- Give without affecting your current cash flow.
- Retain control of your assets during your lifetime.
- Direct your gift to a particular purpose; check with us to make sure the gift can be used as intended.

If you have named Illinois Tech as a beneficiary in your estate plan through your will, trust, IRA, or retirement plan, please let us know so that we may acknowledge your generosity and include you as a member of our esteemed Gunsaulus Society.

Visit iit.edu/giftplanning to begin learning how you can benefit from these giving methods and more. Contact Stuart Gold, director of gift planning, at sgold@iit.edu or 312.567.5020.

Gunsaulus | SOCIETY

ALUMNI EVENTS

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

Connect Today!

Are you connected to the IIT Alumni Association? When you update your mailing address, phone number, and email you ensure that you receive up-to-date information from your alma mater, including event invitations, networking opportunities, and university news. Visit alumni.iit.edu/information-update to update your contact information today! Members of the alumni online community enjoy extra perks such as access to the alumni directory—perfect for networking!

Visit alumni.iit.edu/sign-up to join today.



Inauguration Tour of President Alan W. Cramb

As newly inaugurated President Alan W. Cramb continues his first year leading Illinois Tech, he will travel the country to share his vision for moving the university forward. Join the Office of Alumni Relations at an upcoming regional event to meet and visit with President Cramb.

Boston
Thursday, April 7, 2016

Seattle
Monday, May 2, 2016

Chicago
Thursday, May 5, 2016

Illinois Tech Deans Are Headed Your Way

Join us for a series of unique events across the country featuring Rowe Family College of Architecture Dean Endowed Chair Wiel Arets, College of Science Dean Russell Betts, and Lewis College of Human Sciences Dean Christine Himes. Mark your calendars and join us for one of these upcoming exclusive events to hear the deans share updates from their colleges. Please visit alumni.iit.edu for more information.

New York City
Tuesday, March 29, 2016
Dean Wiel Arets

Washington, D.C.
Wednesday, March 30, 2016
Dean Christine Himes

Phoenix
Tuesday, April 5, 2016
Dean Russell Betts

Southern California
Wednesday, April 6, 2016
Dean Russell Betts

Bay Area
Thursday, April 7, 2016
Dean Russell Betts



Mies Birthday Party Modern Material, featuring The Second City

Thursday, March 31, 2016
Mies Campus

Join the Mies van der Rohe Society for the annual Mies Birthday Party in S. R. Crown Hall! This year's event will feature an evening of architecturally inspired sketch and improvisational comedy presented by Chicago's preeminent designers of satire, *The Second City*, to celebrate Ludwig Mies van der Rohe's 130th birthday.

Visit alumni.iit.edu/mies-birthday-party for more information and to register.

Alumni Awards Luncheon Friday, April 29, 2016 Mies Campus

Join us for the 2016 Alumni Awards luncheon in Hermann Hall and help celebrate Illinois Tech's innovative and exceptional alumni.

Visit alumni.iit.edu/awards for a list of winners and event details, and to register.

Grad Send-Off Thursday, May 12, 2016 Chicago

Join the Illinois Tech Alumni Association as we congratulate the Class of 2016 and welcome our newest members into the Alumni Association.

SAVE THE DATE!

Illinois Tech Homecoming
and Reunion Weekend
Friday, September 16 and
Saturday, September 17, 2016







1. PHOENIX ALUMNI GATHERING: President Alan W. Cramb's third stop on his inauguration tour took him to Arizona, where he mingled and spoke with alumni at the Tempe Center for the Arts last December.

2. SCHOLARS MEET BENEFACTORS: Alan and Suzanne Wendorf Endowed Scholarship Fund recipients Adam Lilliebridge (ARCH 4th year) [left] and Eribertha Gomez (BA 2nd year) [right] enjoy time with their scholarship benefactor IIT Board of Trustees Chairman Bud Wendorf (ME '71). *Photo: Bonnie Robinson*

3. DUCHOSSOIS INVESTITURE: Craig Duchossois [center right], Duchossois Leadership Professor Carlo Segre [center left], and the Duchossois Leadership Scholars surround Eric M. Brey [seated] following his Duchossois Leadership Professor investiture. *Photo: Michael Goss*

4. STUART INVESTITURE: IIT Board of Trustees Chairman Bud Wendorf (ME '71), Provost Frances Bronet, John and Mae Calamos Stuart School of Business Dean Harvey Kahalas, Trustee Rosemarie Mitchell, and President Alan W. Cramb stand behind Siva K. Balasubramanian, the newly invested Harold L. Stuart Endowed Chair in Business. *Photo: Bonnie Robinson*

5. FERMILAB LECTURE: Russell Betts, dean of Illinois Tech's College of Science, and Bryce Littlejohn, assistant professor of physics, spoke to alumni about the first 125 years of science at the university and about the future of Fermilab as America's premier particle physics laboratory last October in west suburban Batavia. *Photo: Bonnie Robinson*

6. D.C. ALUMNI GATHERING: Illinois Tech President Alan W. Cramb presented the Alumni Association Professional Achievement Award to Bhakta Rath (Ph.D. MET '63) at an alumni gathering last October in Washington, D.C. *Photo: John Harrington Photography*



7. FINKL INVESTITURE: Philip Nash [bottom right] joins his fellow chairs for a photo following his investiture as the Charles and Lee Finkl Endowed Chair in Metallurgical and Materials Engineering. *Photo: Bonnie Robinson*

8. GUNSAULUS SOCIETY AND LEWIS COLLEGE LUNCHEON: Lewis College of Human Sciences Dean Christine Himes [center] joins alumni at the Gunsaulus Society Luncheon in Orlando, Florida. *Photo: Jennifer Werneth Photography*

9. NEW YORK ALUMNI GATHERING: Alumni in New York heard Illinois Tech President Alan W. Cramb discuss the future of the university and enjoyed a question and answer session last November. *Photo: Char Smullyan Photography*

10. DONOR AND SCHOLAR DINNER: Scholars anticipate the arrival of scholarship benefactors at the Illinois Tech annual Board of Trustees Donor and Scholar Dinner. *Photo: Bonnie Robinson*

Visit bit.ly/alumni-event-photos to see more event photos from the IIT Alumni Association.

OBITUARIES

Paul F. Schutt

PHYS '55

Amelia Island, Florida

Paul Schutt lived his life according to a simple statement: “I believe in God, family, and country.” After graduating with a physics degree from Illinois Tech, Schutt married his wife, Suzi, and then served in the United States Army for three years before joining The Babcock & Wilcox Company (B&W), an engineering firm. Schutt went on to work for Union Carbide before becoming president and founding director of the Nuclear Assurance Corporation (now NAC International), a consulting firm that specializes in energy consulting, information services, and spent nuclear fuel management technologies. He started a number of other businesses and ultimately retired from the nuclear fuel manufacturing company Nuclear Fuel Services, where he served as chief executive officer and chairman.

A member of Illinois Tech’s Philip Danforth Armour Society, Schutt was presented with the Collens Merit Award in 2012, given to alumni who have shown exemplary commitment to the future of Illinois Tech through philanthropic contributions and involvement with the university. He and his wife provided a gift to establish the Paul and Suzi Schutt Endowed Chair in Science to the university’s College of Science.

Regnal “Reggie” John Jones

CAHMCP Executive Director

Chicago

In 1986, when the health care professions had relatively few minority members among their ranks, Regnal “Reggie” John Jones helped to lead an organization formed to ensure that more underrepresented minority students would have the opportunity to become physicians, dentists, and other health care professionals.

Jones, who worked as a research biologist at IIT Research Institute in 1963, returned to campus 23 years later to become executive director of the State of Illinois-sponsored Chicago Area Health and Medical Careers Program (CAHMCP), which made its home on the Illinois Tech campus. Pronounced “champs,” the program continues its mission to identify and recruit qualified underrepresented minority students to medical, dental, and other health professions’ schools. Participants are provided with successive years of structured academics as well as counseling, motivational, and financial support until they reach their long-range careers goals. The CAHMCP pipeline extends from 6th grade through the final year of health professional school.

Before his CAHMCP role, Jones served as director of Prevention Programs for the City of Chicago Department of Public Health, where he developed several nationally recognized community-based intervention programs in nutrition and communicable disease control.

Nicholas Grecz

M.S. BACT '55, Ph.D. '60

Gainesville, Florida

After retiring from a 20-year teaching career that he began at Illinois Tech in 1961, Nicholas Grecz took a position at the King Faisal Specialist Hospital & Research Centre in Riyadh, Saudi Arabia, conducting cancer research. Through his research, Grecz made many discoveries in the field of microbiology, including the antibiotic properties of Limburger cheese and botulinum toxin in canned foods. Additionally, his research extended to the irradiation of foods for safe storage and shipping.

Grecz emigrated from the Soviet Union through Germany in 1949 and became a naturalized citizen in 1956. After obtaining his bachelor’s degree from Bradley University, Grecz worked for the Quartermaster Food and Container Institute for the Armed Forces (U.S).

INMEMORIAM

Gustav Kvapil
ARCH '35
Scottsdale, Ariz.

Henry Bittner
ME '42
Littleton, Colo.

George Bixby
ME '42
Carefree, Ariz.

David Johnson Jr.
ME '43
Oak Ridge, Tenn.

Julian Bowers
FPE '44
Sanford, N.C.

Jack Eulitt
CHE '44
Charlotte, N.C.

Henry Koci
ME '45
Downers Grove, Ill.

Robert Thurston
ME '45
Colts Neck, N.J.

Patrick Sweeney
ME '46
Pasadena, Calif.

Carl Weber
ME '47
Indianapolis

Robert Brown
ME '48
West Columbia, S.C.

Ludwig Tritsch
CHEM '48
Arlington Heights, Ill.

Clifford Doubek
CHE '49
Anaheim, Calif.

Thomas Kuehl
ME '49
Broomfield, Colo.

Robert Stearns
LAW '49
Roscoe, Ill.

Stephen Vargo
LAW '49
Joliet, Ill.

Gerald Ajemian
IE '50
Dover, Mass.

Bernard Baranski
ME '51
New Castle, Ind.

Warren Larson
ME '51
Poughkeepsie, N.Y.

Ralph Silvis
PHYS '51
Sardinia, Ohio

Morley Blankstein
M.S. ARCH '52
Winnipeg (Manitoba), Canada

Frank MacKay
EE '52
Palm Desert, Calif.

Martin Quinn
CHE '52
Johnsburg, Ill.

Michael Morris
CE '53
Chicago Heights, Ill.

Matt Merfeld
FPE '54
Belfast, Maine

Paul Raabe
ME '54, M.S. UNK '56
Kennewick, Wash.

Edward Scherer
DSGN '55
Austin, Minn.

Robert Sargeant
ME '56
Rio Vista, Calif.

Harold Sawyer
LAW '56
Chicago

Edward Riley
ME '57
Niles, Ill.

John Doyle
LL.B. LAW '58
Naperville, Ill.

Kenneth Gillis
CE '58, LL.M. LAW '90
Chicago

John Eisenbies
EE '59
Raleigh, N.C.

Jerre Frautschy
BE '59
Durango, Colo.

Ralph Kuklinski
EE '59
Bremerton, Wash.

Yolanda Hall
M.S. HE '62
Oak Park, Ill.

Robert Tracey
EE '63
San Jose, Calif.

Bernard Arendt
DSGN '64
Glen Ellyn, Ill.

Philip Franklin
EE '64
Westlake, Ohio

Richard Erickson
MET '65
Westminster, Calif.

George Jirgal Jr.
M.S. PHYS '65, Ph.D. '65
Springfield, Ill.

Alan Kardas
M.S. MECH '65
San Francisco

John Krembs
FPE '65
Chicago

Dennis Aldred
M.B.A. '66
Elmhurst, Ill.

James Serkland
LL.B. LAW '66
Sister Bay, Wis.

Patrick Fowler
M.S. MATH '67, M.S. CST '86
Evergreen Park, Ill.

Sabitino Nardecchia
BE '67
Spring, Texas

Richard Gantt
M.S. EE '68
Chadds Ford, Penn.

Hilda Lo
M.S. MBIO '68, Ph.D. BIOL '74
Plantation, Fla.

Carol Brinkman
MATH '69
Wheaton, Ill.

Florestee Buss
M.Des. '69
Calumet City, Ill.

William Wright Jr.
M.Des. '69
Superior, Wis.

Harry Burroughs
ARCH '70
Barrington, Ill.

Robert Michaelson
CHEM '70
Kinnelon, N.J.

Gerald Brown
BE '72
Chicago

Thomas Knepper
LAW '72
Georgetown, Ill.

Michael Wicnienski
EE '72
Lake Villa, Ill.

Gladys Ornelas
M.S. COUN '73
Austin, Texas

Tipton Patton Jr.
Ph.D. EE '74
Beavercreek, Ohio

John Fratus III
CHEM '76
Geneva, Ill.

David Johnson
LAW '76
Guilford, Conn.

Robert Moss
LAW '78
Atlanta

Richard Prusa
CHE '79
Pensacola, Fla.

Claudia Sanders
LAW '79
Cross Plains, Wis.

Paul Brauer
M.S. CHE '81
Tulsa, Okla.

Paul Chase
LAW '81
Nashville, Ind.

Joseph Reister
ME '82
Minneapolis

John Wagner
PSYC '82
Chicago

Mary Hamilton
LAW '84
Phoenix

Cynthia Kovacevic
LAW '90
Wilmette, Ill.

Milton Walp
LAW '93
Chicago

Jay Sanders
LAW '94
Fishers, Ind.

Alice Lawson
M.B.A. '96
Libertyville, Ill.

Harold McCarron
Ph.D. CHEM '03
Valparaiso, Ind.

Attendee/Non-Degreed

George Guderley
Inverness, Ill.

Robert Howard
Morton Grove, Ill.

Paul Johnson
Menasha, Wis.

Edward McCabe
Palos Hills, Ill.

Thomas Sedwick
Laredo, Texas

Gerald Wasik
Kalamazoo, Mich.



Fun As a Timeless Commodity

By Marcia Faye

Melanie Standish (PSYC 3rd year), president of the Illinois Tech Union Board, may be a member of Generation Web; but since history is one of her strong interests, she relished the opportunity to spend hours in the IIT Archives digging up facts the old-school way for a recent project. She prepared an exhibit on the history of the Union Board that was on display at the inauguration reception for President Alan W. Cramb and during Homecoming weekend last fall. Standish says that one of the first clamshell file boxes she sifted through in the archives yielded a wonderful surprise: the cover of the first Student Union Handbook.

“Someone made that,” she says, her voice carrying a note of wonder. “It’s really neat that it was hand drawn because everything is electronically done today. The drawing was done in 1953 by John S. Inman, then chair of the Student Union Commission. It’s of Main Building because it housed the student union then, which is really cool.”

The purpose of the Union Board—then as now—is to provide a wide variety of fun extracurricular activities for students, and Standish included a number of items in the

exhibit that reflected this. Besides the handbook cover, she had selected an article from *TechNews* about a November 23, 1938, planning meeting to discuss the first student union; part of a report on the cultural purpose of the Union Board presented to Illinois Tech President John T. Rettaliata in 1965; and the first Union Board newsletter, *Spoken Here*, featuring a photo of Chicago’s *The Second City* comedy troupe. Her archival research led her to have her own conversation with university leadership.

“I wrote my own mission statement this year and sat down with President Cramb to discuss it. I think that his goals for the university are similar to my goals for my organization,” says Standish. “The inspiration for my meeting was an article in an archival newspaper I found about how the gentleman who wrote the first *Student Union Handbook* presented it to the president,” she explains. “I felt that was a really good idea.”

MORE ONLINE

IIT Magazine Audio Extra: Listen to University Archivist Ralph Pugh discuss unique student clubs from Illinois Tech’s past at iit.edu/magazine.

Generosity

Illinois Institute of Technology is fortunate to have extraordinarily generous alumni and friends. Your support as we head into the final year of *Fueling Innovation: The Campaign for IIT* has been inspiring—whether it was through a group effort or individual generosity. Your commitment is helping to propel Illinois Tech into the future, and we cannot thank you enough for your enthusiasm and pride in our university.

IIT Giving Day

On November 17, 2015, we raised \$685,874 from 863 donors on the first-ever IIT Giving Day. Illinois Tech community members came together for a cause, and we exceeded every goal we set for ourselves.

IIT GIVING DAY BY THE NUMBERS

863
TOTAL
DONORS

632
ALUMNI
DONORS

\$685,874
TOTAL
DOLLARS RAISED



CHALLENGE GIFT RESULTS:

\$267,750 TOTAL
CHALLENGE DOLLARS

LIST OF CHALLENGES:

- Mike Galvin (LAW '78) Challenge
\$50K for 300 Donors
- Additional \$50K from Mike Galvin
and Ed Kaplan (ME '65) for 200 Donors
- Julia Anderson (Ph.D. BIOL '75)
Bequest Scholarship Match | \$157,750
- Perkins + Will Challenge for
the College of Architecture | \$10K

#hawksgive



Computer Science Initiative

A \$7.6 million gift from Chris Gladwin, Illinois Institute of Technology Board of Trustees member and founder of Cleversafe, is leading the charge for a major expansion of Illinois Tech's computer science department. Gladwin is confident that if others join him and make a commitment to strengthen the computer science department, together we can grow its undergraduate enrollment and become known nationwide as a top-ranked computer science program, vaulting Chicago's tech ecosystem to the top tier.

Give to *Fueling Innovation: The Campaign for IIT*.
Visit fuelinginnovation.iit.edu or call 312.567.5000.

fuelinginnovation
THE CAMPAIGN FOR IIT

Save the Date: Homecoming and Reunions

September 16–17, 2016



Golden Society Reunion: Calling the Class of 1966 and all prior years! Come celebrate 50 (or more) years since your graduation. Connect with old friends, receive your Golden Society medallion, and see what's happening on campus today. Visit alumni.iit.edu/golden for details.

Class of 1991 | 25th Reunion: Yes, it has been a quarter of a century since you graduated—time to celebrate! Visit alumni.iit.edu/25th for details.

Homecoming: Join us to celebrate your Illinois Tech spirit. A variety of activities will be offered. Watch alumni.iit.edu/homecoming in the coming months for details.

