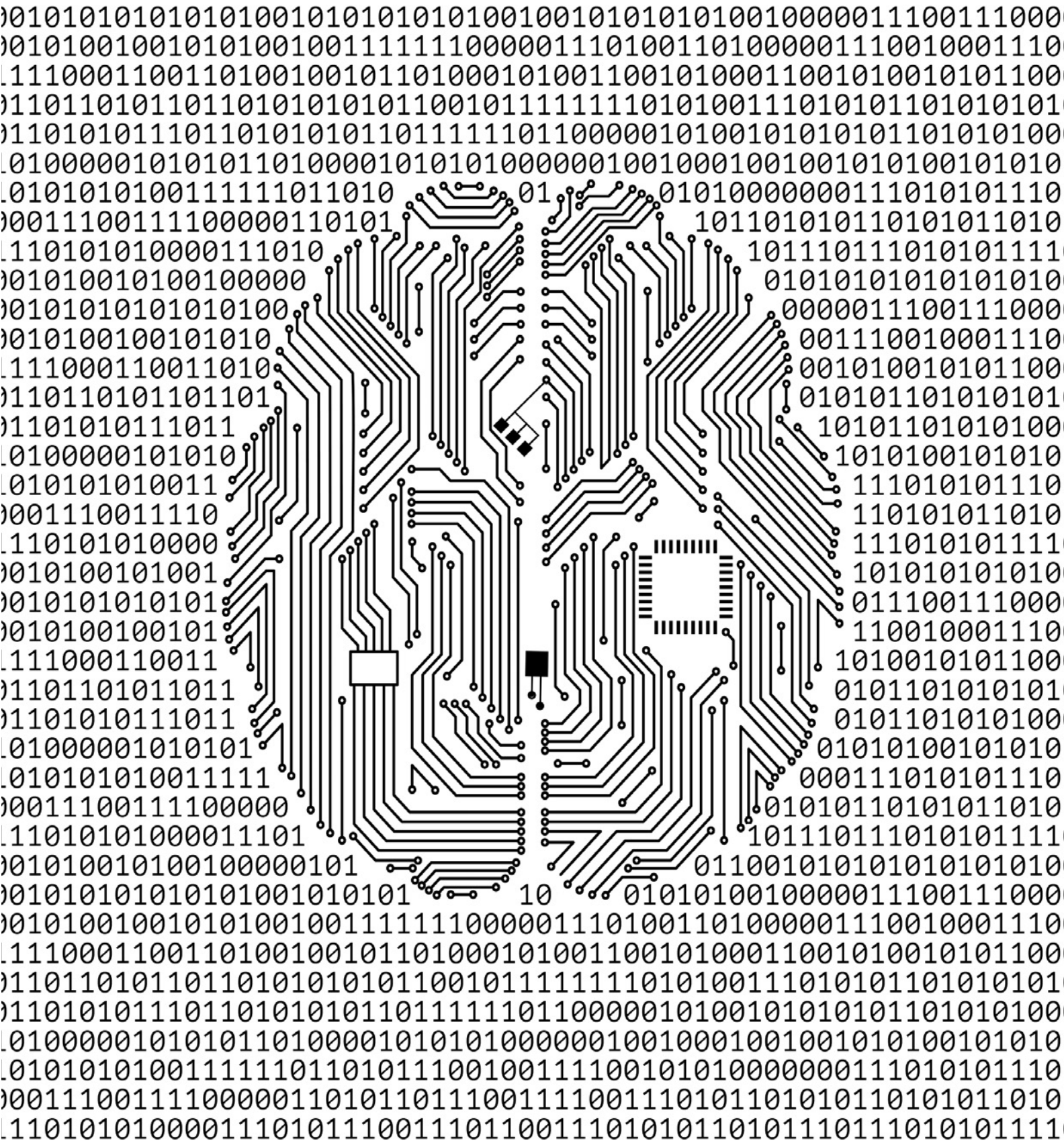


# IIT Magazine

ILLINOIS INSTITUTE OF TECHNOLOGY





## Letter from the President

The beginning of the fall semester is always an exciting time on our campus, and I am especially honored and proud this year as it marks my first anniversary as president of Illinois Tech. For the start of the 2016–17 academic year, the number of new degree-seeking undergraduates and graduate students has already exceeded last year's numbers.

I am also pleased that in just one year we as a community—faculty, staff, students, alumni, and friends—are well on our way toward achieving the goals for the university that I introduced at my inauguration last September. In this final *IIT Magazine* for the current calendar year, I would like to report several wonderful accomplishments pursuant to the first three of those goals. We wish to become:

*A university where there is a strong focus on both education and the development of new knowledge, where excellence is expected and not an aspiration*

- Our Board of Trustees approved several new degree programs—a co-terminal B.S. in applied mathematics/M.S. in data science, a co-terminal degree in social and economic development policy/public administration, a dual-degree path in biology and psychology, and an M.S. in management science.

- The Institute of Design launched a new executive education program in India.
- The School of Applied Technology's Bachelor of Information Technology and Management Program was accredited.
- The John T. Rettaliata Engineering Center and the Robert A. Pritzker Science Center were both renovated and opened to support education in the twenty-first century.

*A university where outstanding faculty scholarship combined with an ability to inspire our student body to high achievement is also expected and valued*

- Five junior faculty were recognized with 2016 National Science Foundation CAREER Awards, the highest number of CAREER awards for Illinois Tech in any one academic year.
- The Faculty Council, headed by Associate Professor Joseph Orgel, began new dialogue with Student Government Association representatives as well as initiatives with the Career Services team to both establish and strengthen relationships among faculty, students, and industry.
- Thanks to Trustee Madhavan Nayar (M.S. IE '68) and his wife, Teresa, on behalf of the Nayar Family Foundation, a second round of faculty teams are on their way to developing more breakthrough projects with a societal impact through the \$1 million-plus Nayar Prize II.

*A university that values creativity, innovation, and the entrepreneurial endeavors of its faculty, staff, and alumni*

- Trustee Chris Gladwin gave \$7.6 million to our university to help advance our Department of Computer Science.
- Chicago-Kent College of Law initiated a program to enable new inventors to gain pro bono patent advice from veteran patent attorneys.
- Our inaugural Staff Advisory Council and Student Advisory Council were established.
- We broke ground for our Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, which will be the physical manifestation of a transformed curriculum driven by applied creativity.

To cap our first year of accomplishments, I would like to highlight the successful close of *Fueling Innovation: The Campaign for IIT*. A summary of the campaign and thank you letter from Joel Krauss (MATH '71), John Rowe, and Bud Wendorf (ME '71) are found on page 3 of this issue.

With such a year of achievement, I am confident that we will maintain our momentum and, working together as a community, continue on our positive course.

Sincerely,

Alan W. Cramb

# IIT Magazine

**MANAGING EDITOR**  
Marcia Faye

**DIRECTOR OF EDITORIAL SERVICES**  
Chelsea Kalberloh Jackson

**CONTRIBUTORS**  
Jim Daley  
Amanda Cleary Easteop

**ART DIRECTOR/DESIGN**  
Scott Benbrook

**WEB EDITION**  
Brian Bailey  
Abbey Vargas

**VIDEO PRODUCTION**  
Jaime Bañuelos  
IIT Online

**IIT MAGAZINE IS PUBLISHED  
THREE TIMES A YEAR  
BY THE IIT OFFICE OF MARKETING  
AND COMMUNICATIONS.**

*IIT Magazine* is a recipient of a  
2016 Golden Trumpet Award from  
the Publicity Club of Chicago.

© 2016

*IIT Magazine* is printed on  
SFI certified recycled paper.  
Read it, share it, recycle it.

**SEND LETTERS TO**  
*IIT Magazine*  
Office of Marketing  
and Communications  
10 West 35th Street, Suite 4D7-1  
Chicago, IL 60616

**OR EMAIL** [iitmagazine@iit.edu](mailto:iitmagazine@iit.edu)

**SEND ALUMNI NEWS TO**  
[alumni@iit.edu](mailto:alumni@iit.edu)

Illinois Institute of Technology, also known as Illinois Tech, is a private, technology-focused research university offering undergraduate and graduate degrees in engineering, science, architecture, business, design, human sciences, applied technology, and law.

One of 21 institutions that comprise the Association of Independent Technological Universities (AITU), Illinois Tech offers exceptional preparation for professions that require technological sophistication, an innovative mindset, and an entrepreneurial spirit.

**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**

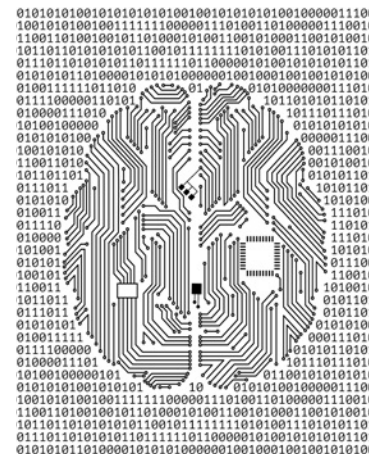
Illinois Institute of Technology provides qualified individuals with disabilities reasonable accommodations to participate in university activities, programs, and services. Such individuals with disabilities requiring an accommodation should call the activity, program, or service director. For further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



- 13 Predict It:** The Algorithm Is the Common Denominator Behind Professor Miles Wernick's Data-Driven Projects
- 16 Energize It:** UFarmIIT Grows Tomatoes and Goes Off the Grid
- 18 Manage It:** AIA Fellow Robert Theel (ARCH '83) Helps to Keep Government Buildings Viable
- 20 Applaud It:** UTP at IIT Celebrates a Decade of Nurturing Startups

**DEPARTMENTS**

- 02 Letters**
- 02 News Briefs**
- 04 Research Briefs**
- 08 On Campus**
- 12 Athletics**
- 22 Alumni News**
- 32 Rewind**



**ON THE COVER:** Binary code is the language of algorithms, such as those at the core of Miles Wernick's research [see story on pages 13-15].



**IIT Magazine**  
**Online-Only Content!**

Read extended coverage of stories featured in the print edition as well as special online-only content at [magazine.iit.edu](http://magazine.iit.edu)

**Autopia? Nawtopia.**

I read the article [“Autopian Algorithms,” summer 2016] about Professor Lili Du’s vision of the very near future, in which most of us will be in driverless cars, with some concern. I find it fascinating and appalling in equal measure, and it raises a lot of questions for me.

I have a sports car that I love to drive. I love to drive, period. I find it fun and refreshing, and I have no intention of giving it up. What does this integrated network of self-driving cars mean for people like me? Do I throw my little convertible into a landfill and buy some ugly electronic box? Will I be banned from driving entirely unless I switch? Will I be forced to spend money I don’t have on a “kit” to convert my car so it obeys orders from some electronic brain buried

under the street? Will there be a whole other highway system for Luddites like me?

Technology is rapidly disengaging us from our own lives, and this is another step down the wrong road. There’s an app for almost everything now, with more coming into being every day—from an app that does our shopping to an app that programs our televisions—not to mention all the texting, tweeting, tumbling, and other electronic anarchy that is destroying social interaction and leaving humans with no idea how to deal with one another in real life.

Thanks, but no thanks. I’ll drive myself, if you don’t mind.

**Karla Von Huben (ENGL ’76)**

**Memories of Main**

*A number of alumni responded to the Editor’s Note on the Rewind page of the summer*

*2016 issue of IIT Magazine to share their memories of Main Building, which is slated to be restored and converted into apartments. Read more letters on the web at [magazine.iit.edu](http://magazine.iit.edu).*

My mechanical drafting course was held on one of the upper floors. The windows were open to get some cooling air into the space. Every time the coal-burning Broadway Limited, New York Central, or Pennsylvania Railroad trains went by, smoke and dust coated every drafting board, so it was impossible to grade on cleanliness. This problem got corrected before I graduated, so we all cheered the General Motors EMD [E]7 diesel-electric locomotives when they went by!

**Roy Sahlstrom (ME ’45)**

**Errata**

*Christopher T. Hill (CHE ’64) was mistakenly listed as Christopher T. Jones in the Letters section of the summer 2016 issue of IIT Magazine. He was also misquoted. In his recollection about Armour Mission, Hill’s words are as follows: “... the apartments, which were called Chapin Hall when I was there...” IIT Magazine apologizes for the errors.*

**Write Back!**

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

**IIT Magazine  
c/o Letters**

10 West 35th Street  
Suite 4D7-1  
Chicago, IL 60616  
Email: [iitmagazine@iit.edu](mailto:iitmagazine@iit.edu)

**News Briefs**



**Groundbreaking. Innovative. Meaningful.**  
Nayar Prize I and Nayar Prize II Are Moving the Innovation Needle Forward

In 2015 Illinois Tech Trustee Madhavan Nayar (M.S. IE ’68) and his wife, Teresa, on behalf of the Nayar Family Foundation, established a \$1 million gift at the university to fund the Nayar Prize to encourage and challenge faculty, staff, and students to develop breakthrough, innovative projects that will, within three years, produce meaningful results with a societal impact. Three projects were selected with each team receiving \$100,000 to jumpstart its efforts during the first year of the prize cycle. At press date, the decision was made regarding the next phase of the prize cycle. Visit [web.iit.edu/nayar-prize](http://web.iit.edu/nayar-prize) for this update on the Nayar Prize I.

The Nayar Family Foundation gave the Illinois Tech community a second opportunity this year to collaborate and problem-solve by announcing the Nayar Prize II, a \$1 million-plus prize package to benefit three more teams of researchers. Those teams and their projects are **A Data-Driven Crime Prevention Program** (members include Miles Wernick, Armour College of Engineering; Lori Andrews, Chicago-Kent College of Law; and Yongyi Yang, Armour College of Engineering); **Cyberbullying Early Warning and Response System** (members include Libby Hemphill, Lewis College of Human Sciences, and Aron Culotta, College of Science); and **Microfluidic Drug-Microbiota Interaction Platform** (members include Abhinav Bhushan, Armour College of Engineering; Genoveva Murillo, College of Science/IITRI; and Rajendra Mehta, College of Science/IITRI). Visit [web.iit.edu/nayar-prize](http://web.iit.edu/nayar-prize) to learn more about the Nayar Prize II projects.



Joel Krauss (MATH '71)



John Rowe



Bud Wendorf (ME '71)

Dear Alumni and Friends,

It is with great excitement that we announce the successful completion of *Fueling Innovation: The Campaign for IIT!* The campaign officially ended on August 31, 2016, exceeding our goal with a grand total of \$250,242,380.

For a campaign to be successful, a small number of philanthropists must lead the way, and this campaign was no exception. We are grateful for the vision and generosity of six extraordinary philanthropists who contributed \$10 million or more. In fact, half of the campaign came from our most generous benefactors, who contributed \$5 million or more. But it is the giving of the alumni that makes us most proud. Alumni from every college and every decade stepped forward to support the campaign. Many stretched to make the largest gifts of their lifetimes; others told us of their plans to remember Illinois Tech in their estates. Many, indeed thousands gave \$100 or \$1,000 to show their support and pride. We are grateful for each and every one of our more than 15,000 donors.

This campaign has already begun to have an indelible impact on the university and the futures of our graduates. It will be known for the creation of 15 endowed chairs, the renovations of two core academic buildings, the promise of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, the new tradition of the Student Gift Program, and the launch of the Loyal Hawks monthly giving program.

We need to celebrate our achievements, but we understand that our work is far from over. On behalf of the entire Board of Trustees, we ask that all donors continue giving to the university and supporting great students and faculty, world-changing research, facility improvements, and more. Our continued support is what will keep Illinois Tech moving toward the future.

We are proud to have been part of a movement that will leave such a tremendous mark on this university. Thank you for your partnership, support, and enthusiasm over the six years of this campaign.

Joel Krauss (MATH '71)     ⋮     John Rowe     ⋮     Bud Wendorf (ME '71)

Visit [alumni.iit.edu/give](http://alumni.iit.edu/give) to make a gift online, or contact the Office of Institutional Advancement at 800.IIT.ALUM (800.448.2583).

**fuelinginnovation**  
THE CAMPAIGN FOR IIT

**WE DID IT!**  
**\$250,242,380**  
**Raised**

**Total campaign donors:**  
**More than 15,000**

- 15 Endowed Chairs
- Capital Projects:
  - Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship: \$34,692,977
  - Robert A. Pritzker Science Center: \$5,016,867
  - John T. Rettaliata Engineering Center: \$10,352,436
- \$45,148,147 raised for scholarships and fellowships
- Six families have made gifts of \$10 million or more

[fuelinginnovation.iit.edu](http://fuelinginnovation.iit.edu)



PHOTO: SCOTT BENBROOK

# Creating Climate Connections

In the spring, air pollution in Seoul, Korea, often exceeds the World Health Organization's recommended levels—a problem that is regularly attributed to pollution that originates in China and blows across international boundaries. Matthew Shapiro, an associate professor of political science at Illinois Tech's Lewis College of Human Sciences and research affiliate at Argonne National Laboratory's Joint Center for Energy Storage Research (JCESR), doesn't think the phenomenon is explained quite so easily. ¶ Shapiro's research is primarily focused on science and technology policies and environmental politics in the Northeast Asia region. "These dovetail given that if you have science and technology policy that focuses on green research and development you get outcomes that are desirable," he says. "I'm also studying the politics of those same issues, because they're very controversial. We're all aware of the divisive nature of climate-change science, especially in this country. What I am also doing is looking at the politicization of science and the way that it's portrayed in the media and online." ¶ His study of environmental politics in Asia focuses on transboundary pollution and pollution havens. Transboundary pollution describes pollution produced in one country that crosses borders into a neighboring country, for example, yellow dust originating in the deserts of Mongolia and northern China that's carried south and east by prevailing winds throughout Asia, and even as far as the West Coast of the United States. Pollution havens are countries with lax environmental laws that attract foreign manufacturing but produce a higher proportion of pollution than their regional neighbors as a result. ¶ "China is everyone's manufacturing center these days. So if the pollution is blowing out of China, it can't strictly be Chinese firms," says Shapiro. "There has to be some relation to Korea, Japan, and the United States. These countries represent about half of all foreign direct investment in China." ¶ "That problem is also politicized," he says. "The previous president of Korea was really on board with green research and development but the current president is not. I'm researching the international political economy of the region to determine how Korea is contributing to its own pollution by exporting its manufacturing to China." ¶ Shapiro was named a 2015–16 U.S.-Korea NextGen Scholar for the Center for Strategic and International Studies and received an Asiatic Research Institute Research Fellowship from Korea University in 2014. He recently received an EHWA (Ewha Women's University)-Korean American Communication Association Research Award for his work on yellow dust pollution in Korea. ¶ At JCESR, he is involved in next-generation battery-storage research. At the end of the five-year project JCESR will have generated batteries that are ready to be commercialized. Shapiro is analyzing the collaboration in research and development between government, private companies, and research institutions. He presented a paper on this subject at the 2016 Triple Helix Conference in September. ¶ "Science and technology isn't just science and technology anymore," he says. "It used to be. The current focus brings in politics and environmental issues more centrally." —*Jim Daley*

**MORE ONLINE**  
"Combating Yellow Dust and Air Pollution": [keia.org/podcast/combating-yellow-dust-and-air-pollution](http://keia.org/podcast/combating-yellow-dust-and-air-pollution)  
JCESR: [www.jcesr.org](http://www.jcesr.org)

# INNER ALLY

The use of the body's own immune system to fight the disease may be the future of safer and more precise cancer therapies.

**T**argeted immunotherapy allows oncologists to design a new class of hunter-killer cells that can seek out and destroy cancer while leaving normal cells alone. The result is reduced toxicity compared to the currently available treatment such as chemotherapy and radiation therapy, and the potential for the highly effective cancer therapeutic method has been explored. ¶ One area of immunotherapy that offers promise is the application of conjugated monoclonal antibodies. Antibodies are proteins that the immune system produces to identify and kill harmful pathogens by recognizing the unique molecular signature of that pathogen, called an antigen. A monoclonal antibody has been cloned from a parent cell and is expected to target and bind to the specific antigen expressed on cancer cells, thereby leading to death of the cancers. ¶ Hyun-Sun Chong, a professor of chemistry at Illinois Tech, is developing antibody drug conjugates (ADCs) for targeted cancer therapy in her lab. “The idea is to use a specific-tumor seeking antibody to load cytotoxic drugs or radiation to the targeted tumor site” she says. “This selective targeting allows a therapeutic drug or radiation to be safely delivered to cancer cells, while minimizing damage to normal healthy cells.” ¶ Chong’s interdisciplinary research laboratory is currently focused on the development of anti-cancer drugs and utilization of radiation and antibody combinations in preclinical studies. The process starts by designing and producing drug candidates, and then screening them against human cancer cell lines in her lab. Promising drugs can then be conjugated to a tumor-specific antibody for generation of ADCs for detailed preclinical studies. In collaboration with other researchers in medical schools, the best antibody-drug conjugates will be investigated for their effectiveness in removing tumors in animal models. ¶ She says that this therapeutic approach has improved the efficacy and

safety of traditional therapies such as chemotherapy and radiation therapy and has been utilized for development of personalized cancer drugs, particularly in the area of ADC pharmaceuticals and radioimmunotherapy (RIT), in which the conjugated antibody is attached to a radioactive isotope designed to kill cancer cells. ¶ “The RIT technology is a safer and more potent way to deliver radiation to cancer cells but has been limitedly applied to the clinic,” Chong says. “To develop clinically viable RIT drugs, it is essential to use optimal chelation chemistry to sequester a therapeutic radioactive metal rapidly and tightly. A radioactive metal has a limited half-life, ranging from hours to days, and efficient generation of RIT drugs is critical. A premature release of a radioactive metal from less stable RIT drugs will lead to a long-term toxicity, including bone marrow toxicity. We design and study chelation chemistry by controlling a combination of parameters for the generation of stable RIT drugs with high in vivo stability and blood clearance.” ¶ Chong is also investigating the application of the chelation chemistry to generate antibody conjugates for detecting cancers using positron emission topography (PET) imaging technology. In this technique, a radioactive imaging probe bound to an optimal chelate is attached to an antibody. The radiolabeled antibody conjugate targeting a specific tumor site is injected into the live animals. The radiolabeled antibody conjugates are localized to cancerous cells present in the patient that can be detected and imaged by the PET scan. The highly sensitive PET can detect cancer that other imaging techniques might miss and also monitor the effectiveness of ongoing treatments. ¶ Since 2004 Chong’s research on antibody-targeted cancer therapy and imaging has been continuously supported by more than \$2 million in grants from the National Institutes of Health. Her work has thus far led to two United States patents being issued and an additional two U.S. patent applications. Additionally, Chong’s lab is discussing transfer of ADC/RIT technology for clinical applications to realize safe and potent targeted cancer therapy and imaging. —*Jim Daley*

---

**Chelation chemistry** is the study of how molecules bind to one another in a chelate complex. The word chelate comes from the Greek *chēlē*, meaning “claw,” and refers to the strength of the bond. Chelation chemistry has applications ranging from microbiology and cancer therapy to geology and agriculture.





PHOTO: MICHAEL GOSS

## The Illinois Tech community welcomes to campus 22 new, full-time faculty members for the 2016–17 academic year.



**Sumanta Acharya**  
Professor and  
Department Chair  
of Mechanical,  
Materials, and  
Aerospace  
Engineering  
Armour College of  
Engineering

**Bernhard Adams**  
Research Professor  
of Physics  
College of Science

**Adarsh Arora**  
Industry Professor,  
Coleman  
Entrepreneur-In-  
Residence  
School of Applied  
Technology

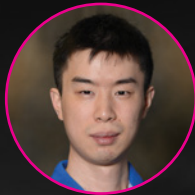
**Jean-Luc Aytou**  
Assistant Professor  
of Chemistry  
College of Science



**Abhinav Bhushan**  
Assistant Professor  
of Biomedical  
Engineering  
Armour College of  
Engineering



**Gregory Chasson**  
Associate Professor  
of Psychology  
Lewis College of  
Human Sciences



**Tao Chen**  
Visiting Assistant  
Professor of Applied  
Mathematics  
College of Science

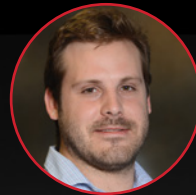
**Alexander Dill**  
Director,  
Financial Markets  
Compliance  
Program  
Chicago-Kent  
College of Law



**Yuhan Ding**  
Visiting Assistant  
Professor of Applied  
Mathematics  
College of Science

**Graeme Dinwoodie**  
University  
Professor of Law  
Chicago-Kent  
College of Law

**Eric Ellingsen**  
Visiting Assistant  
Professor of  
Architecture  
College of  
Architecture



**Yuri Mansury**  
Associate Professor  
of Social Sciences  
Lewis College of  
Human Sciences

**Kyle Hale**  
Assistant Professor  
of Computer  
Science  
College of Science

**Melina Healey**  
Visiting Assistant  
Professor of Law  
Chicago-Kent  
College of Law



**Dennis Hood**  
Senior Lecturer of  
Computer Science  
College of Science

**Anthony Kreis**  
Visiting Assistant  
Professor of Law  
Chicago-Kent  
College of Law



**Daniel Talesnik**  
Visiting Assistant  
Professor of  
Architecture  
College of  
Architecture

**Carlos Teixeira**  
Associate Professor  
of Design  
Institute of Design



**Nicholas Miller**  
Assistant Professor  
of Biology  
College of Science



**Yong Zheng**  
Senior Lecturer of  
Information  
Technology and  
Management  
School of Applied  
Technology



**Benjamin Reiniger**  
Visiting Assistant  
Professor of Applied  
Mathematics  
College of Science



**Suman Saha**  
Senior Lecturer of  
Computer Science  
College of Science

## Bright Ideas Abound at TEDxIIT

An audience eager to learn from thought leaders about topics ranging from particle physics and theatrical improv to human trafficking and interactive artificial intelligence filled IIT Tower Auditorium this past spring at the sixth annual TEDxIIT. An eclectic mix of 25 speakers and presenters, including Cleversafe founder Chris Gladwin, former Major League Baseball player Jim Mecer, designer/culturist Maya-Camille Broussard, and Illinois Tech Provost Frances Bronet shared their stories with the simple yet powerful goals of creating conversation and igniting ideas. Innovation leadership consultant Amy Segami (ME '79, M.S. '82), a former mechanical engineer who has applied her science acumen to revive the ancient art of *suminagashi* and establish her Action to Application training program Painting On Water™, noted that TEDxIIT has always been a sold-out event. Approximately 11,000 viewers from 85 countries watched the 2016 conference via the web.

“The TEDx event on campus is a win-win to engage the university worldwide,” says Segami. “The speakers, who range from students and faculty to alumni and community members, are featured on the TED global platform with evergreen digital footprints. The



San Lae Lae Cho (ARCH 4th year) shares her experiences growing up in Myanmar with the TEDxIIT audience.

audience members experience, share, and apply the collaborative innovation ideas.”

Inspired by the 2016 event’s theme, Illinois Tech Leadership Academy Scholar San Lae Lae Cho (ARCH 4th year) spoke about how taking the time to get to know others in our increasingly mobile and diverse society could potentially yield many positive Unexpected experiences. Cho, who served as a 2015 TEDxIIT vice president and made her speaking debut at the 2016 event, says that every moment at TED could be a potential opportunity.

“TEDxIIT offers the audience a unique opportunity during the breaks,

lunch, and reception to discuss and share their passions with the speakers. The attendees can network easily with professionals from a wide variety of fields,” she says. “When you’re a speaker, no matter if you are a student or a famous scientist, you come to the same platform to share your ideas. TEDxIIT encourages everyone to respect one another. The TED culture is special for its networking; it was amazing to meet many different people from different professions. It was a memorable day.”

The next TEDxIIT is slated for April 8, 2017. For more information visit [mypages.iit.edu/~tedxiit](http://mypages.iit.edu/~tedxiit). —*Marcia Faye*

## Transitions

Illinois Tech thanks the following individuals for their many years of service:

**David Baker**, *Vice President for External Affairs*

**Howard Chapman**, *Professor of Law*

**Maureen Flanagan**, *Professor of History*

**Jerry Goldman**, *Research Professor of Law*

**Sanford Greenberg**, *Professor of Legal Research and Writing*

**Philip Hablutzel**, *Professor of Law*

**Harvey Kahalas**, *John and Mae Calamos Stuart School of Business Dean Endowed Chair*

**John Kallend**, *Professor of Materials Engineering*

**Leroy Kennedy**, *Vice President for Community Affairs and Outreach Programs*

**Gary Laser**, *Associate Professor of Law*

**Rajendra Mehta**, *Professor of Biology*

**Dennis Roberson**, *Vice Provost for Research*

**Benjamin Stark**, *Professor of Biology*

Illinois Tech welcomes the following individuals, either as newcomers or in new roles at the university:

**John F. O. Bilson**, *John and Mae Calamos Stuart School of Business Dean Endowed Chair*

**Ronald S. Landis**, *Deputy Vice Provost for Research and Academic Affairs*

**Mayari Pritzker**, *Illinois Institute of Technology Trustee*

**Christopher White**, *Vice Provost for Research and Academic Affairs*

**Patrick Whitney**, *former Institute of Design Dean, now Distinguished Professor*

# WHERE RED MEANS GO

## Scarlet Pride Abounds at the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship Groundbreaking

By Marcia Faye

IN THE TECH COMMUNITY, CYCLING has trumped golfing as a social pastime conducive to swapping ideas, making deals, and pitching the next Big Thing. Several years ago an “on wheels” conversation on a northern Illinois road between avid cyclists and technophiles Ed Kaplan (ME '65) and Joel D. Krauss (MATH '71) became the vision for the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship. Nearly 775 people, many wearing scarlet ties, caps, shirts, dresses, or shoes, attended the Kaplan Institute groundbreaking on August 25 in the Hermann Hall Expo Center. Kaplan, Chicago Mayor Rahm Emanuel, Illinois Tech President Alan W. Cramb, Provost Frances Bronet, architect John Ronan, Student Government Association President Hamze Sukkar (CE 4th year), and other dignitaries spoke about the significance of the Kaplan Institute. After the speeches guests went outside to Morton Park, the future site of the new building, to turn over golden shovels of earth moistened by earlier rains. Construction is expected to begin in March 2017 with an anticipated completion by late 2018.

### MORE ONLINE

Kaplan Institute website: [web.iit.edu/provost/kaplan-institute/about](http://web.iit.edu/provost/kaplan-institute/about)

PHOTOS: BONNIE ROBINSON



Dignitaries and other guests officially broke ground for the Kaplan Institute.



Hamze Sukkar (CE 4th year), SGA president, with Chicago Mayor Rahm Emanuel



Members of the Illinois Institute of Technology Board of Trustees join President Alan W. Cram under the flags in Hermann Hall.



Distinguished Professor of Chemical Engineering and Former President John L. Anderson [left] with President Cram



Board Chairman Bud Wendorf (ME '71) presents a token of appreciation to Ed Kaplan (ME '65).



President Cram [left] with Ed Kaplan (ME '65) [in cap], his wife, Carol, and son Marty



## Upping the Game

After a career coaching student-athletes at both the high school and college levels from the former DuSable High School to North Central College, Todd Kelly became head coach of Illinois Tech's men's basketball team. He says that he developed his passion for basketball and academia through his parents.

"I have been playing basketball since my father took me to the YMCA at the age of three every Saturday morning," says Kelly. "Both my parents have master's degrees. My mother worked for Chicago Public Schools for more than 35 years, and they taught my brother and me the value of an education. We had to have good grades if we were going to be in sports."

Since arriving on campus in 2014 Kelly has helped to take his Scarlet Hawks far as a team, as varsity players, and as men who not only give back to their community but also form a more unified Illinois Tech community. The Scarlet Hawks regular season schedule begins November 15 with an away game against Anderson University.

**In what ways does the team connect with and serve the local community?** Every Wednesday, two to three players provide homework help in math, science, and other subjects to children from kindergarten

through high school at Mt. Carmel Missionary Baptist Church. They have also distributed clothing and food during Thanksgiving and Christmas drives to help those in need.

In addition, team members have served as judges for the Chicago Housing Authority's Easter Essay Contest and have conducted mock interviews at CHA youth job fairs to help prepare high school students to meet with employers looking to hire for summer jobs. It's important for our guys to give back to the community. The kids see them as big-time athletes.

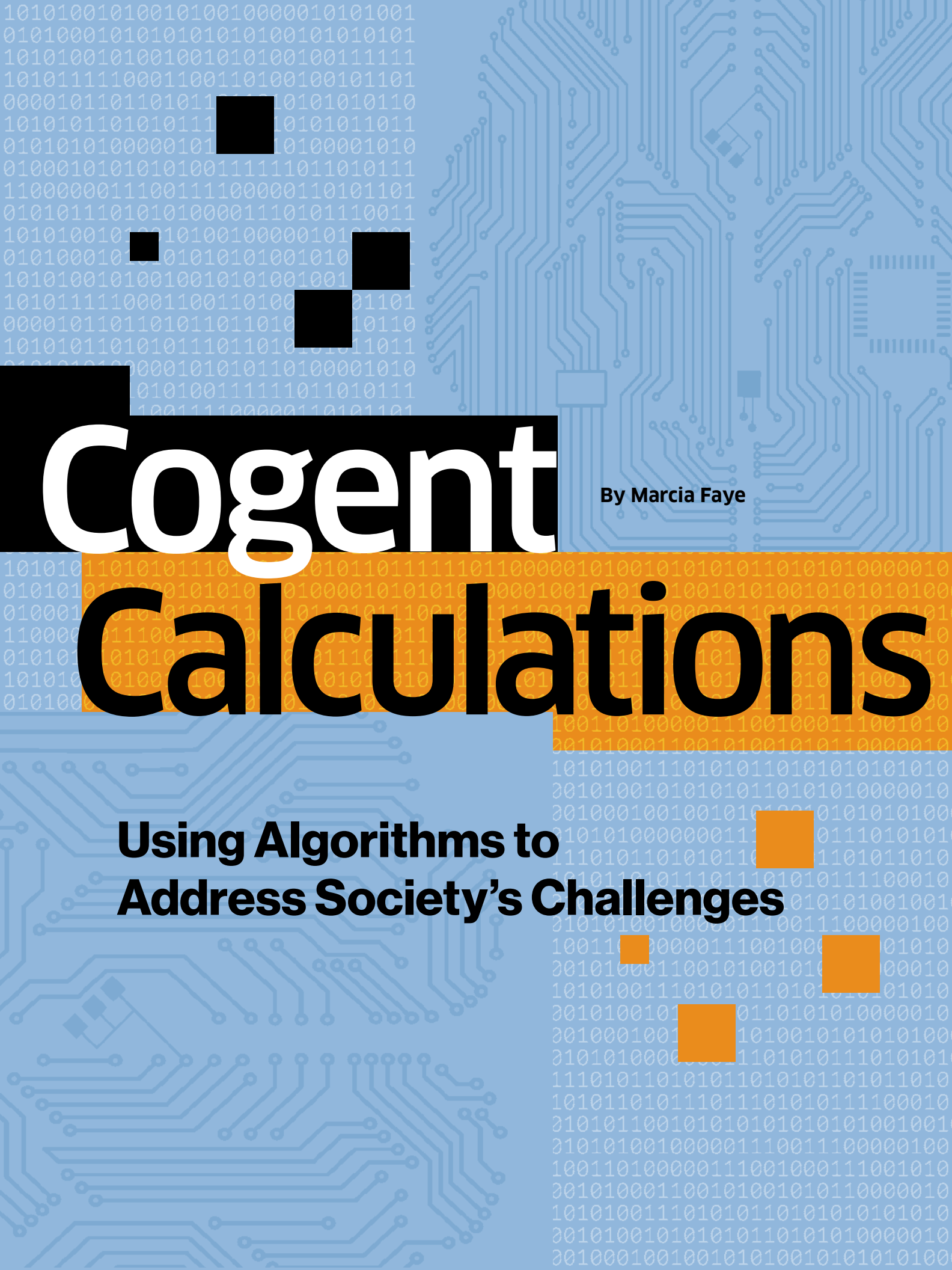
**How do sports add to the Illinois Tech experience not just for players but also for the student body? How do you encourage attendance?** Sports give students a sense of school pride. Illinois Tech students are serious about their studies and put in several hours a day to that commitment. Basketball games—and other athletic competitions—provide a reason for students to take a break, be with friends, be loud, and have fun.

To encourage attendance, I organized a contest through the university's Greek Council. Last year, each sorority and fraternity chose a certain home-game date, and then rallied their members to attend that game. The sorority or fraternity with the highest percentage of fans attending their designated game night won a \$100 gift card. Two games are designated as Res Hall nights, and staff encourages attendance. Thanks to these initiatives, as well as the developing talent of the team, attendance more than doubled.

**You often talk about training student athletes for the "next level," meaning employment after college. Describe some ways in which that happens.** Introducing alumni to team members at events such as alumni games can help students find employment after college. Networking with alumni helped a few students find internships this past summer.

Another way to prepare student athletes for that next level is through our mentorship program. Each junior player is responsible for meeting weekly with a few of the freshmen players to discuss academics, challenges, and successes. Also, being part of a diverse team prepares students for the work world where they must work with people from all backgrounds. They are learning not just to survive, but also to thrive. —Amanda Cleary Eastep

**MORE ONLINE**  
[illinoistechathletics.com](http://illinoistechathletics.com)



**Cogent**

By Marcia Faye

**Calculations**

**Using Algorithms to  
Address Society's Challenges**

In the modern setting of Illinois Tech's Medical Imaging Research Center (MIRC), Miles Wernick explains the concept of machine learning—the mathematical approach he is using to analyze violent crime and to diagnose Alzheimer's disease—not in the language of bits, but in the primary shapes of childhood.

"A young child learns what a square is by being shown little toy shapes. The child looks at them and figures out the differences between shapes in a very complex way that we don't really understand," says Wernick, MIRC director and Motorola Endowed Chair Professor of Electrical and Computer Engineering. "Machine learning tries to do the same thing, but our mathematical techniques are nowhere near as sophisticated as whatever the brain is doing. Therefore, computers are not yet as good as people in many tasks; but in certain kinds of tasks, they're better than people, generally, when the amount of information is too great for our brains to absorb."

That information can take the form of the millions of pixels in medical brain scans. In 2001 Wernick co-founded the startup company Predictek, Inc., in University Technology Park at IIT, to analyze brain scans for pharmaceutical companies, showing how drugs used to treat pain and depression affect the brain. The company has since grown, becoming ADM Diagnostics, LLC, and has shifted its focus to the use of machine learning algorithms to diagnose Alzheimer's disease, predict further disease progression, and differentiate Alzheimer's from other forms of dementia, so that drug companies can accurately recruit the appropriate individuals for clinical studies. These algorithms also determine whether a drug is effective during a clinical trial.

Another machine learning project conducted by Wernick and his team has gained national attention for its ability to recognize patterns in massive amounts of crime data. In 2013 he and Yongyi Yang, Harris Perlstein Professor of Electrical Engineering, were awarded \$3 million from the National Institute of Justice to partner with the Chicago Police Department (CPD) to institute a new predictive policing program.

As Wernick explains, one algorithm deduces which individuals with recent criminal records are at greatest risk for being involved in a shooting or homicide during the upcoming 18-month period based only on specific involvement in recent crime incidents. These risk evaluations are presented in a

webpage at CPD that provides police with the data needed to understand and verify the assessments. Using this information and many other factors, police identify individuals at the very greatest risk for involvement in violence. These individuals are visited at home by a team led by an academic crime intervention specialist, a police commander, and a member of the community, such as a pastor. Visited individuals are warned of the consequences of continued involvement in crime, and intervention support is offered in the form of social services.

"Changing the way an agency does business sounds like a cliché, but Dr. Wernick's partnership with the Chicago Police Department has led to a new way of looking at crime prediction—from traditional geographic hotspots to identifying risk for a specific subject most likely to be involved in violence," says Deputy Chief Jonathan H. Lewin of the CPD's Bureau of Support Services. "This approach has had impact not only in Chicago but

in the United States and beyond. Despite the challenges and frustrations, he has remained committed to helping us save lives."

Wernick's team has also developed two additional software tools for the CPD. The first predicts the number of violent crimes that will occur daily, and the other maps geographic areas where violent crime is likely to occur. Many law-enforcement agencies across the country have expressed interest in utilizing the team's algorithms. Wernick will be working with the Elgin (Illinois) Police

Department on the project A Data-Driven Crime Prevention Program, as the primary investigator of one of three teams selected to participate in the first phase of Illinois Tech's Nayar Prize II.

"It's not done with a crystal ball. It's experience. The computers are quantitative; they don't inject any opinions," explains Wernick. "The algorithms are very accurate. They support the police and help them to steer their activities in a way that is fair, objective, and based on facts." ■

**"The algorithms are very accurate. They support the police and help them to steer their activities in a way that is fair, objective, and based on facts."**

—Miles Wernick

**MORE ONLINE**

**"A New Lab Tool in Alzheimer's Diagnosis and Treatment":**

[bit.ly/2cp1Qb0](http://bit.ly/2cp1Qb0)

**"Image Is Everything":**

[magazine.iit.edu/spring-2010/image-everything](http://magazine.iit.edu/spring-2010/image-everything)

**Just the Facts, Ma'am.**

The violence risk assessment algorithm, now in its fifth iteration, uses seven pieces of crime data in evaluating risk.

"The algorithm only considers people who have a recent criminal record, not the public as a whole," explains Miles Wernick. "Our ground rules were that we would only allow the algorithm to look at specific crime information, not personal attributes like race, gender, ethnicity, neighborhoods, or last names. We don't use which gang a person belongs to because gangs tend to break down on ethnic lines. We only allowed the algorithm to access standard police records that specifically have to do with involvement in recent crimes."





ILLUSTRATION: SCOTT BENBROOK

**Solar Panels**

WISER coordinated installation of the solar panels, which collect enough energy to power the entire farm: the controller and other mechanics, plus an outlet for students to play music. The International Brotherhood of Electrical Workers #134 donated a charge controller, four 250W Sharp solar modules, other electrical equipment, and all labor required to complete the solar system installation. “We used to have to plug into nearby buildings, but now we’re completely independent,” Mededovic says.



**Hoop House**

Students have reported harvesting produce from the unheated hoop house as late as January.

**From Pipe to Plant**

Two separate pipes carrying water and wiring are buried in trenches spanning the length of the beds.

**Shed**

UFarmIIT students designed and built the shed, which houses a Raspberry Pi-based controller that communicates with the sensors and control panels, and turns water on and off. Students involved in the Center for Smart Grid Applications and Research (CSMART) coded the controller. “How much pressure do we need to take the water from the pump to the beds? What are the fluid dynamics involved? Students solved all of those problems,” says Mededovic, outgoing president of UFarmIIT.

# GREENER ACRES

By Chelsea Kalberloh Jackson

“These are the best tomatoes I’ve had since home,” says Merjem Mededovic (BME 3rd year), reaching for a cluster of tiny crimson spheres dangling from a blossom-studded tomato plant in UFarmIIT. Growing up in urban Sarajevo, Bosnia and Herzegovina, she looked forward to weekends when she could work in her grandfather’s garden on the outskirts of the city. “As a biomedical engineering student, I appreciate the importance of being active and eating right, and also helping Earth. Farming touches so many points that are part of a sustainable life.” ¶ For the past six years, Illinois Tech students have worked a 5,000-square-foot space comprising UFarmIIT, an urban farm located in The Quad on Mies Campus. UFarmIIT began as a project of a landscape architecture elective in 2012, led by Rodger Cooley, an adjunct assistant professor of architecture in the landscape architecture program who also works in urban food system planning and policy. The project grew into a collaboration with both the student group Engineers for a Sustainable World and a first-year architecture studio course, in which students designed and installed the multipurpose fence. In 2013 UFarmIIT became an Interprofessional Projects (IPRO) Program course, with spinoffs including an aquaponics research project on campus. Today UFarmIIT is an official student group, and the farm itself has evolved to become a test bed for sustainable urban farming with a tech edge. ¶ Beginning last year, Illinois Tech’s Wanger Institute for Sustainable Energy Research (WISER) began to invest in the technology infrastructure of UFarmIIT, aiding students in acquiring solar panels and controllers that have enabled the farm to operate completely off the grid. ¶ “The goal is to provide a valuable, practical experience for Illinois Tech students,” says Hamid Arastoopour, director of WISER. “The challenge is to develop a completely automated, remotely controlled farm that uses renewable energy, creates no waste, minimizes water consumption, and provides safe and reliable food products. In doing so, the farm will serve as an economically feasible carbon-removal process for urban areas.”



**Water Gauge**  
Water travels via hoses from a water pump with a gauge that receives messages from the control panel about the moisture level of the soil.



**Sensors and Control Panels**  
Every third bed has a control panel with sensors that are connected to a central box in the shed and operated remotely.



**Farm Wall**  
First-year architecture students designed and built the farm wall, which includes features that are at once decorative and functional, such as pockets for growing herbs.



**Compost and Vermi-Compost**  
UFarmIIT works with Sodexo and the on-campus coffee shop Global Grounds to collect compostable food items and coffee grounds, respectively. The food items are used in worm (vermi-compost) beds, and the coffee grounds are used to grow mushrooms indoors in the Facilities Building.



**Fruit and Vegetables**  
Some UFarmIIT participants sell their produce on campus, and any remaining harvest is donated to the nearby St. James Food Pantry or offered to faculty and staff on a first-come, first-picked basis.

**Research**  
A new team of Illinois Tech faculty from WISER, the Institute for Food Safety and Health, Armour College of Engineering, the College of Architecture, College of Science, and Stuart School of Business has developed large proposals to conduct research that includes both expansion of the current UFarmIIT and creation of indoor vertical farming at Illinois Tech.

**Community Outreach**  
Hamid Arastoopour says Illinois Tech plans to develop rigorous outreach activities to educate people from surrounding and outlying neighborhoods about urban farming and the potential to produce food sufficient to meet the needs of the people, and, in turn, bring jobs, economic growth, and safety to the community.

PHOTO: SCOTT BENBROOK

# Caring for Public Architecture

By Marcia Faye

**F**rom a think-tank on the 35th floor of the John C. Kluczynski Federal Building in Chicago's Loop, Robert Theel (ARCH '83) opens the Venetian blinds and points out a recognizable structure—IIT Tower—four miles south. It has served as both a physical and philosophic beacon in Theel's 34 years with the United States General Services Administration.

"I began working in this building the summer of my senior year in college and could see IITRI Tower, as we called it then, from my office, which was right about there," says Theel, pointing to the southeast corner of the room, currently used as a GSA collaboration space. "Now I still work here and live halfway between this building and campus, so I feel that I'm moving ever closer to IIT."

Theel, who designed his first buildings with LEGO bricks as a kid in his suburban-Milwaukee home and developed his architectural talents as a student in Ludwig Mies van der Rohe's S. R. Crown Hall, is now the guardian of the Chicago Federal Center, which Mies also designed and where Theel has worked for his entire career with the GSA. As regional chief architect and director of the Design & Construction Division of the GSA's Great Lakes Region, Theel provides architectural and design oversight for 137 other federally owned properties totaling 20 million square feet across a six-state area. Over the course of his GSA career, he has guided more than \$3 billion in design and construction projects that include five courthouses, five border stations, and eight federal buildings, and more than 30 major modernizations of existing federal facilities. Theel's design oversight also includes safeguarding the historic heritage and cultural character of 55 properties eligible for listing in the National Register of Historic Places.

Working with a GSA staff of 25 subject-matter experts in architecture, engineering, and design, Theel, much like a typical homeowner, decides if an aging building can be improved simply with a new roof, insulated windows, a fresh coat of paint—or if it requires a more radical transformation. In the case of Cleveland's Anthony J. Celebrezze Federal Building, that came in the form of a second-skin glass curtainwall cocoon constructed to protect the original 1966 façade and make the building more energy efficient and secure. The

architectural firm Theel selected to design the double-glass wall concept—the first constructed on an existing high-rise—was Interactive Design Architects (the firm recently selected to partner on the design of the Obama Presidential Center) with Charles Young (ARCH '79) as project architect.

"The double-wall development permitted what is essentially a thermos bottle effect insulating the existing building from the elements; light shades and glass coatings were added to boost performance yet maintain a simple system that would not require complex operations," Young explains about the federal building, which was completed last year. "The building is orientated 35 degrees off the N-S axis so that two façades were designed with a shading methodology that addressed direct sunlight. The other two façades receive oblique light during the workday so that alternate shading types were utilized on those façades. In this way the building reacts to the changes of light and protects the occupants and systems from excess environmental loads. A further benefit of the double-wall approach was that the work could essentially be done to the outside of a fully occupied building with minimal interference to the internal tenants," which, according to Theel, was the single most cost-effective element of the design contributing to project success.

Another of Theel's noteworthy projects is the multi-phase renovation of the Everett McKinley Dirksen U.S. Courthouse, also part of the Mies-designed Chicago Federal Center. Theel served as project manager on the building's restructuring and renovations on which he collaborated with several Chicago architects, including Dirk Lohan; Skidmore, Owings & Merrill; and Munin Choudrey (M.S. ARCH '66) to provide space for up to 23 more two-story federal district courtrooms within the building. The most recent phase of the award-winning \$158 million renovation was completed in late 2012. Theel recalls one of his first GSA projects right out of Illinois Tech was also in the Dirksen Courthouse, drafting detailed drawings of courtrooms for a smaller expansion that he oversaw in the 1980s. He says that in the act of designing that project, he knew then that his years on the campus that Mies built was the perfect complement to his job with the GSA.

"Not only did my education teach me discipline, but also appreciation for the subtlety, materiality, and proportions of Mies' progressive style of architecture," Theel explains. While his role as caretaker of federal buildings matters greatly to him, he never forgets the reason these buildings exist.

"Many of these buildings are symbols of our country; this federal complex we are in has historic status now," he says. "It's important for us to maintain, update, and keep viable these buildings not only as symbols, but also so they can continue to serve the American public for years to come." ■

#### MORE ONLINE

Great Lakes Region GSA: [www.gsa.gov/portal/content/104773](http://www.gsa.gov/portal/content/104773)  
"Beautiful Historic Courthouse Receives Green Renovation":  
<http://bit.ly/2bNocke>



PHOTO: MICHAEL GOSS

A man in a dark suit and red tie is leaning on a glass railing on a mezzanine level of a modern building. The background features a bright green wall and a glass ceiling with circular lights. An 'EXIT' sign is visible in the distance. The overall atmosphere is clean and professional.

# UTP Celebrates 10 Years as “Living Laboratory”

PHOTO: MICHAEL GROSS

**L**ike a teacher who gives his or her student the freedom to develop and grow with just the right amount of guidance and opportunity, University Technology Park at IIT—now Chicago’s premier tech park—has fostered and graduated innovative startups that have become successful companies, many drawing international acclaim. Illinois Tech President Lewis Collens (1990–2007) first proposed the idea of a tech park and selected David Baker, longtime vice president for external affairs, as UTP’s strategic architect.

“UTP is certainly the capstone of my work at Illinois Tech,” says Baker, who retired on September 30 after 23 years of service to the university. “When we started talking to the Illinois General Assembly and the governor about UTP, my mantra was high-quality jobs for Chicago’s South Side. And we’ve tried to live up to that. The idea that we would have a private sector job-generating entity located at 35th and State was beyond the level of comprehension of most people in 2000–01; it only happened because of the great support we received from the state and federal governments for the initiative.”

Now home to 19 companies with 383 employees, UTP is the “living laboratory” that Baker imagined when he first considered how the park would be integrated with the university’s academic programs and vision. Looking back on his tenure as UTP executive director, Baker lists his top 10 UTP milestones in chronological order:

**2001:** Illinois Tech receives a \$12 million commitment from the State of Illinois to develop a Biomedical Science and Engineering Center on Mies Campus in six re-purposed research buildings.

**2005:** Cleversafe moves in as the park’s first tenant. The data storage startup grows from three employees to 35 by 2008, when it moves to downtown

Chicago. With staff members including Illinois Tech computer science alumni, Cleversafe is sold to IBM for \$1.3 billion in late 2015.

**2005:** The second tenant, AllCell Technologies, a company based on Illinois Tech intellectual property for thermal management of lithium-ion batteries used in transportation, moves into newly constructed Incubator North. In 2011 AllCell expands and moves to its own manufacturing facility on Chicago’s South Side.

**2006:** UTP has its grand opening on November 29, made possible in large part through a partnership with private developer Wexford Science & Technology. Wexford purchases the

**2011:** Incubator South is completed and features 15 wet labs, nine dry labs, and six offices. This building is made possible through an additional \$2 million in funding from the State of Illinois and \$4 million in U.S. Economic Development Administration stimulus grants.

**2012:** More startups come to UTP, including Advanced Cooling Therapies, which has developed a system for rapid body cooling for stroke and heart attack victims, and SiNode Systems, a developer of a new material for improving the efficiency of lithium-ion batteries.

**2016:** Baker steps down as UTP’s executive director and is succeeded by Catherine Vorwald, former marketing and business development director for

## “The future of UTP is bright with the growing tenant base commercializing inventions from Illinois Tech.”

—Catherine Vorwald

former Chemistry Research Building and transforms it into a state-of-the-art, build-to-suit facility for life sciences companies and university research centers.

**2008:** Pritzker Institute of Biomedical Science and Engineering relocates to UTP, moving into the Technology Business Center (TBC) and the Incubator.

**2008:** Therapeutic Proteins International, a two-person startup commercializing new technology for the production of biosimilar pharmaceuticals, moves into the TBC. By 2016 the company grows to 160 employees and expects final United States Food and Drug Administration approval by early 2017.

**2010:** Illinois Tech’s Idea Shop opens in the TBC. With 13,000 square feet of creative space and a growing rapid-prototyping lab, it becomes the home of the Interprofessional Projects (IPRO) Program and enrichment initiatives such as the Illinois Tech Global Leaders Program.

Wexford Science & Technology.

“The future of UTP is bright with the growing tenant base commercializing inventions from Illinois Tech,” says Vorwald. “The tech park is becoming an effective link for the transfer of technology from Illinois Tech for public use and benefit.”

“Our dream has been for Illinois Tech to have an ‘innovation alley’ that starts with the new Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship at the center of Mies Campus [see pages 10–11] and ends with UTP,” says Baker. “Student and faculty companies can continually be born and nurtured on campus because Illinois Tech is not only a place for learning, but also a place for creating.” ■

### MORE ONLINE

UTP: [universitytechnologypark.com](http://universitytechnologypark.com)  
“Chicago’s Other Tech Incubator Is Here”:  
<http://bit.ly/2aXfQoA>

CLASS NOTES

1950s

**Theodore 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. The Arnold and Mabel Beckman Foundation presented the institute with a \$5 million gift to establish the Beckman-Brown Interdisciplinary Postdoctoral Fellowship and the Annual Beckman-Brown Lecture on Interdisciplinary Science.

**Gilbert Jensen** (ME '51), Athens, Ga., has been traveling and enjoying life.

**Edward Mochel** (CHE '51, M.S. EG '57), Charlottesville, Va., retired in 1993 as associate professor emeritus of mechanical engineering after 36 years of teaching at the University of Virginia and four previous years of teaching at Illinois Tech.

**Bennett Whiteson** (MET '51), Chesterfield, Mo., retired as director of McDonnell Douglas (now Boeing) Phantom Works in 1997. He joined Modern Technology Solutions, Inc. to provide engineering customer support services. Whiteson is now mostly retired and enjoying life with his wife, Jill.

**Roy Grundy** (IE '52), Seattle, and his wife are experiencing a new way of life in retirement at University House. They live close to their son Bill Noble, a faculty member in genome science at the University of Washington. This November Grundy will be presenting an Outstanding Alumni Award to a student in his first class (1970) at the College of DuPage in Glen Ellyn, Ill.

1960s

**Michael Wayne** (ME '61), Seattle, completed his eighth Seattle to Portland bicycle ride, finishing the 207-mile trip in two

days while promoting his alma mater with an Illinois Tech Cycling jersey. He retired 12 years ago after a career with Boeing that covered technology, systems engineering, and project management. He spent many years involved in competitive swimming with two of his four children, one of whom earned two gold, one silver, and one bronze Olympic medals. He and his wife, Jackie, have six grandchildren.

**Robert Gordon** (ARCH '63, M.S. CRP '67), Chicago, recently had his third book published (Fairchild Books/Bloomsbury): *Integrated Drawing Techniques*. His previous two books also were published by Fairchild: *Perspective Drawing and Residential Design Studio*.

**Kenneth Lundgren** (EE '63), Bloomingdale, Ill., is retired.

**Richard Erth** (ME '64), Palm City, Fla., retired in 2006 and was recently elected commodore of the Harbour Ridge Yacht Club for its 30th anniversary season. Erth is active in the community through the Rivers Coalition, the Florida Council of Yacht Clubs, and AARP, which he serves as a volunteer tax preparer. He has three grandchildren.

**Michael Jackowski** (EE '65, M.B.A. '70), Vienna, Va., is chief executive officer of Power Associates.

**Munin Choudrey** (M.S. ARCH '66), New Orleans, of Munin Design Inc., is working on a mixed-use building in Richmond, Virginia, and developing his book, *The Life and Times of Architect Munin*. The book will include his memories of mentor George Danforth and internship with Ludwig Mies van der Rohe. Choudrey notes that he became the first non-white designer at the former C. F. Murphy Associates in 1966. He worked on several international and domestic projects for Skidmore, Owings & Merrill LLP from 1975–1986 and Urban Design Group from 1986–2005 before opening his own firm.

SPOTLIGHT



**Darryll Schiff (DSGN '72) Chicago**

Fine art artist/photographer whose 24'x56' mural "Descending into Heaven" can be viewed through January 2017 at 710 South Wabash in Chicago, courtesy of the Wabash Arts Corridor.

**List three characteristics that identify a Darryll Schiff piece.**

There is boldness and richness in the colors and even in the pictures that are more black and white. A lot of movement is present. Numerous times my work has been described as painterly, which I have realized is a very apt description, both in the way I approach my work and in the final imagery.

**What is the most pivotal concept you learned at the New Bauhaus—the Institute of Design—that helped to form or add to your artistic foundation?**

There really were two things that stand out. First, is the classical Bauhaus training, and then, in the photography department, being encouraged to be creative and to experiment. With both there was a strong emphasis on and the expectation of showing high technical ability.

**Describe one of the digital techniques you regularly employ in your prints.**

The digital technique is really an ability to use, but not overuse, Photoshop, even though I spend many hours on a print. Generally, 90+ percent of what I do is done in the camera.

**How do you arrive at the themes for your print groupings?**

I immerse myself in a project and generally have two or three going on simultaneously, each varying from three to four and up to 18 different pictures. There is a central theme that may arise from something I see walking down the street to a deep feeling about our human existence. —*Marcia Faye*



**S. Frank Kiss** (EE '66), Saratoga, Calif., began his career in computers in 1971 in Silicon Valley with Ampex Data Systems Corporation. Kiss's last position was in field service and test lab management with Tandem Computers before he retired in 2000. He has four grandsons.

**Carl Herakovich** (Ph.D. MECH '68), Charlottesville, Va., recently had his book *Mechanics IUTAM USNC/TAM: A History of People, Events, and Communities* (Springer) published.

**Leon Hoffman** (M.S. PSYC '69, Ph.D. '70), Chicago, continues to enjoy his private practice of clinical psychology, counseling individuals, groups, and couples as well

as providing consulting and coaching services. He frequently contributes letters and commentaries to various lay and professional publications.

**Richard Laurent** (DSGN '69), Chicago, co-produced the human rights art exhibition *The Art of Influence: Breaking Criminal Traditions*. It opened in September at the Kean University Human Rights Institute Gallery, the sixth venue for this artwork. In February 2017 Laurent and others will be presenting a panel at the College Art Association Annual Conference in New York City. This follows a presentation they gave earlier this year to the United Nations Commission on the Status of Women on the subject of art for social justice.



1970s

**John Ronge**

(MET '70), Los Angeles, is an attorney and certified public accountant who specializes in probate, estate planning, and income tax preparation. He enjoys running and has completed more than 35 marathons. This year Ronge completed the Boston Marathon and plans to run the New York Marathon in November and the Honolulu Marathon in December.

**Manu Vora**

(M.S. CHE '70, Ph.D. '75), Naperville, Ill., was honored with the Simon Collier Quality Award at a ceremony in September. The award, from the Los Angeles Section of the American Society for Quality, is given to a person or group representing outstanding achievement in the field of quality.

**Kenneth Biagi**

(BE '71), Homewood, Ill., retired in January after 40+ years in the insurance industry. He and his wife, Joanne, celebrated by taking a Route 66 road trip from Illinois to California.

**Russell Martin**

(CHE '71), Worth, Ill., retired in 2011 after 40 years with the United States Environmental Protection Agency. He began his career as a field engineer then moved into the area of construction grants, providing funds for many Illinois projects, including the Chicago Tunnel and Reservoir Plan project. Martin then became a deputy branch chief for the National Pollutant Discharge Elimination System. He now designs web-based training programs and assists the Water Environment Federation.

**Martin Sadd**

(Ph.D. MECH '71), Narragansett, R.I., retired in 2014 from the University of Rhode Island, where he served as chair of the Department of Mechanical Engineering for nine years. For the past 43 years he taught mechanical engineering at two different universities and at five corporations and military bases. Sadd has conducted research in the modeling of static and dynamic

behavior for a broad class of materials, and continues to teach part-time. He is also writing a graduate mechanics book. He and his wife, Eve, have four children and eight grandchildren.

**Ross Vondrak**

(DSGN '72, M.B.A. '93), Countryside, Ill., retired from AT&T and now co-owns Triune Clinical Center with his wife, Roberta; he works as a licensed clinical massage therapist and she as a licensed clinical counselor. The couple recently celebrated their 40th anniversary and are proud grandparents of two new grandchildren this year (now five grandchildren in all).

**Robert Waninski**

(MAE '73), Carol Stream, Ill., retired after 35 years in the nuclear power industry. He was part of the team that brought the LaSalle County Generating Station online, and worked in the nuclear quality and engineering groups at both the site and corporate levels at Exelon Corporation. Waninski also served on the team that replaced pressurized water reactor steam generators at the Byron, Braidwood, Donald C. Cook, Calvert Cliffs, Callaway, Prairie Island, and Salem nuclear power stations.

**William Wilson**

(FPSE '73), Gallatin, Tenn., received the 2016 Jeff Yates Lifetime Achievement Award from the Independent Insurance Agents & Brokers of America, Inc., the highest honor the association bestows on a non-agent, for a lifetime of work in the independent agency system.

**Richard Lindsey**

(CHE '76), Boston, joined Windham Capital as co-head of the Windham Liquid Alternative Strategies, an investment management firm specializing in risk-based solutions. Prior to joining Windham he served as chief investment strategist of Liquid Alternatives for Janus Capital.

**James Berke**

(EE '79), Grand Rapids, Mich., received an M.S. in electrical engineering from the Air Force Institute of Technology and retired from the U.S. Air Force as a

lieutenant colonel in 1998. He served as director of program management for Lockheed Martin Space Company and retired from that role in 2011. Berke was also appointed as programs excellence director for the Navigation and Guidance Product Area of General Electric Aviation Systems.

**Charles Porter**

(ARCH '79), Chicago, co-founded Development Management Associates, LLC in 2007. Prior to forming DMA he worked at Urban Retail Properties for 27 years.

**Charles Young**

(ARCH '79), Oak Park, Ill., and **Robert Larsen** (ARCH '79), Park Ridge, Ill., are partners at Interactive Design Architects, which was awarded the position of associate architect in conjunction with Tod Williams and Billy Tsien Architects, for the Obama Presidential Center.

1980s

**Robert Schillerstrom**

(LAW '80), Naperville, Ill., is chair of the Illinois State Tollway Highway Authority.

**Mathai Varghese**

(MATH '81), Adelaide, Australia, delivered the

2016 Herbert Howe Lecture Series at the University of Denver in May.

**John Birazzi**

(ARCH '82), Burr Ridge, Ill., is an owner of Klein and Hoffman in Chicago and a director in the Architectural Engineering Group. Birazzi and his wife of 30 years are empty nesters. Their daughter, Olivia, is planning a February 2017 wedding.

**Dorotha Biernesser (née Edgeworth)**

(EE '83), Alexandria, Va., became a GS-15 employee with the U.S. Department of Defense in Florida. She has been married for 29 years and has two sons.

**Deborah G. Cole**

(LAW '83), Chicago, founder and principal of DGCole Law, was named to the International Association of Defense Counsel board of directors.

**Jayanth Chintamani**

(M.S. MET '83, Ph.D. '88), Munster, Ind., is director of auto product research at ArcelorMittal Global R&D.

**Kathleen Herrmann**

(LAW '83), Chicago, joined WSP/Parsons Brinckerhoff as a team member working on the Illinois High-Speed Rail project. She left the public

sector after 24 years as an attorney with the Chicago Transit Authority.

**Deborah Thorne**

(LAW '83), Evanston, Ill., was appointed to a 14-year term as a United States bankruptcy judge for the U.S. District Court for the Northern District of Illinois. A former partner at Barnes & Thornburg LLP, Thorne is also vice president for communications and information technology for the American Bankruptcy Institute and serves on its Executive Committee.

**Anne Alonzo**

(LAW '84), Washington, D.C., joined the American Egg Board as president and chief executive officer.

**Kurt Hoigard**

(CE '84, M.S. '85), La Grange, Ill., is president of Raths, Raths & Johnson, Inc., a national engineering, architecture, and forensics consulting firm, which opened its Chicago office in April.

**William Byrne**

(M.S. PSYC '85, Ph.D. '90), Chicago, is vice president of Inbound Sales at Hertz Global Holdings, Inc.

**Michael Millette**

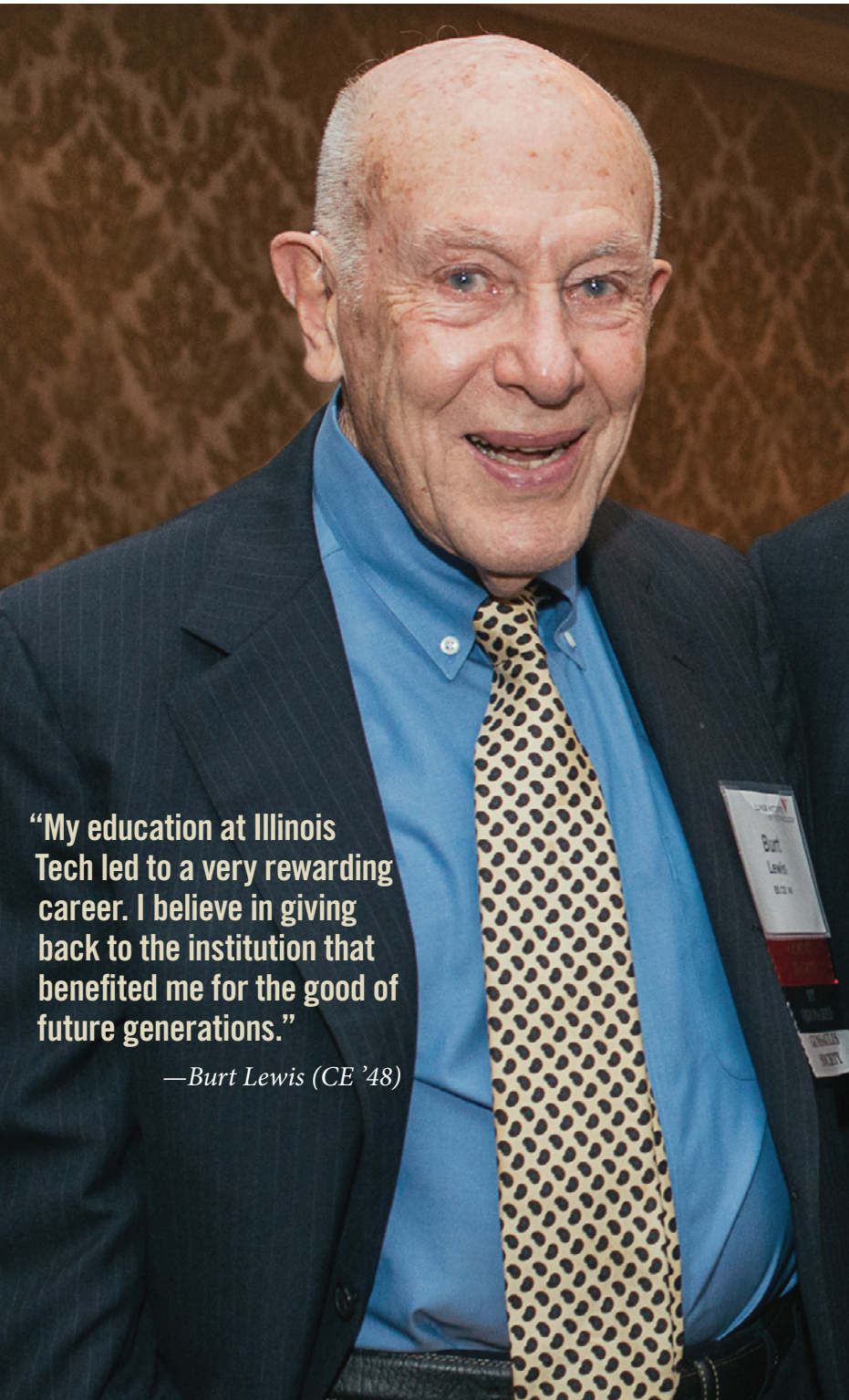
(CE '86), Elburn, Ill., is a trustee for the Village of Campton Hills. An alternate member of the Illinois



**Nathan Ballou**

(ME '96), Virginia Beach, Va., was relieved as commanding officer of Strike Fighter Squadron 83 in February during an airborne change of command ceremony while deployed on the USS *Harry S. Truman*. In recognition of the squadron's success with Ballou at the helm, the Rampagers were honored with the Blue "M" Award for medical readiness, the Retention Excellence Award, the Maintenance Excellence Award ("Golden Wrench"), and the Battle Effectiveness Award. Under his leadership the squadron extended its safety record to 22 years and 88,000 flight hours with zero Class A mishaps.

# Leader Builds a Future for Civil Engineers



**“My education at Illinois Tech led to a very rewarding career. I believe in giving back to the institution that benefited me for the good of future generations.”**

*—Burt Lewis (CE '48)*

Over the course of a successful 40-year career, **Burt Lewis (CE '48)** attained the position of vice president at the engineering and construction firm Parsons Corporation. Along the way he served as project manager and office manager for ambitious construction projects across the globe, including the second-level roadway at Los Angeles International Airport; the Port Access Highway in Anchorage, Alaska; expressway bridges in Sydney, Australia; and the planning study for the highway system of Kuwait. He was also a devoted volunteer with the Illinois Tech Alumni Association, supporting and advising scores of talented engineers over the decades.

As an extension of his years of volunteer service to Illinois Tech, Burt has made five-figure gifts supporting a scholarship and two different laboratories at the university. In 2015 he made a \$1 million gift to Illinois Tech in his will. The Burt Lewis Career Development Assistant Professorship will allow promising young professors to do critical research in the field of civil engineering.

## **Benefits of a Real Estate Gift in Your Will or Trust:**

- Help ensure Illinois Tech's future.
- Leave a legacy of giving back.
- Give without affecting your current cash flow.
- Reduce any potential estate tax.
- Retain control of your assets during your lifetime by directing your gift to a particular purpose.\*

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 in the Gunsaulus Society.

Visit [iit.edu/giftplanning](http://iit.edu/giftplanning) to learn how you can benefit from these giving methods and more. Contact Peter Briechle, associate vice president of Institutional Advancement, at [pbriechl@iit.edu](mailto:pbriechl@iit.edu) or 312.567.7149.

\*Please check with us to make sure the gift can be used as intended.

**Gunsaulus | SOCIETY**

Terrorism Task Force, he is past president of the Chicago Metro Chapter of the American Public Works Association.

**David Edwards** (Ph.D. CHE '87), Boston, Gordon McKay Professor of the Practice of Idea Translation in the School of Engineering and Applied Sciences at Harvard University, delivered the lecture "Sensory Delivery for Better Health" at the University of Kentucky College of Engineering's Ashland Lecture Series. Edwards is a scientist, inventor, and innovator working at the intersection of art, science, and design. As founder of Le Laboratoire, a cultural center in Paris, and now Cambridge, Massachusetts, Edwards has pioneered new food and sensorial innovations, such as edible packaging, breathable food, and digital scent.

## 1990s

**Stephen Lesavich** (Ph.D. CS '91), Kenosha, Wis., founder of Lesavich High-Tech Law Group, S.C., has joined The Expert Network, an invitation-only service for distinguished professionals. He was chosen as a Distinguished Lawyer based on peer reviews and ratings, dozens of recognitions, and accomplishments achieved throughout his career.

**Brent Lipschultz** (LAW '91), Rye Brook, N.Y., joined Pricewaterhouse-



**Vanita Misquita** (Ph.D. PSYC '98) [right], Paris, France, director of overseas programs for Illinois Tech, recently co-hosted a dinner reunion for the nearly 60 graduate students newly enrolled in one of the program's partner schools, Universidad Politecnica de Madrid. Also in attendance were 24 UPM alumni in the Chicago area, Illinois Tech's School of Applied Technology Dean C. Robert Carlson [left], and UPM U.S. delegate Jose Paez [center].

Coopers LLP as a partner in its private company/ Personal Financial Services practice group. He was also elected to his third term on the executive board of the New York branch of the Society of Trust and Estate Practitioners.

**James Egerton** (M.B.A. '92), Glen Ellyn, Ill., chief executive officer and founder of Business on the Board, wrote the book *Business on the Board: How the World's Greatest Game Can Build Better Leaders*, which was published in September. The book centers on business strategies and tactics derived from chess.

**Odin Jurkowski** (STH '92, M.S. TCID '97), Warrensburg, Mo., is associate dean for graduate education in the College of Education at the University of Central Missouri.

**John Sennett** (M.S. CS '92), Schaumburg, Ill., co-authored the murder mystery *The 5th Evangelist*, which will be published this fall.

**Nader Enayati** (M.S. CHE '93, Ph.D. '00), Chicago, co-authored the book *Energy: Sources, Utilization, Legislation, Sustainability, Illinois as Model State*. The 800-page work presents a number of topics, including various kinds of energy sources, ways to convert energy for end use, and better use of energy toward conservation.

**Tor Hoerman** (LAW '95), Edwardsville, Ill., the court appointed co-lead on two multidistrict litigations, recently negotiated the settlement of two major product-liability cases: a \$2.4 billion settlement with Takeda, the manufacturer of the diabetes drug Actos, and a \$650 million settlement with Boehringer Ingelheim, the manufacturer of the blood thinner Pradaxa.

**John P. Heil** (LAW '96), Peoria, Ill., a partner in Heyl, Royster, Voelker & Allen, P.C., was appointed to a one-year term on the Illinois Association of Defense Trial Counsel board of directors.

**Craig Preuss** (M.S. EE '96), Leawood, Kansas, is secretary of a new Institute of Electrical and Electronics Engineers Power and Energy Society committee focused on communications and cybersecurity. He has been highly involved in IEEE activities since 2004, most recently as a subcommittee chair responsible for numerous smart grid standards to more effectively advance the utility automation industry. Preuss has extensive experience in substation integration and automation, including system planning and design, communications, networking, cybersecurity, programming, testing, and installation.

**Francisco Villalta** (LAW '96), Woodside, Calif., joined Clarizen as general counsel and head of corporate development.

**Holly Gordon** (LAW '99), San Francisco, joined Bay Area Rapid Transit as sustainability group manager.

## 2000s

**Thomas Field** (LAW '01, M.B.A. '02), Chicago, is a partner at Beermann Pritikin Mirabelli Swerdlove LLP, where he heads the family law practice group.

**Victor Perez** (LAW '01), Tiffin, Ohio, a child protection attorney for the Seneca County



Alumni families enjoyed breakfast before building a LEGO landscape at the annual **Block City** event.



Chicago-area alumni took a tram ride through Morton Arboretum at Illinois Tech's annual **Family Day**.



Members of the **Class of 1966** celebrated their 50th reunion during Homecoming weekend.



Alumni in New York City celebrated Illinois Tech Spirit Day.



Illinois Tech spirit runs in the family of **Jerry** (ENVE '00, M.S. EM '01) and **Danette** (CHE '01) **Hantula**.



**Bay Area alumni** showed their spirit at a Spirit Day gathering in Menlo Park, California.



Alumni enjoyed the props at the **Homecoming** photo booth.

Department of Job and Family Services, was appointed as District 5 representative on the Ohio State Bar Association board of governors.

**Neel Patel** (M.S. EE '03), Glenview, Ill., celebrated 10 years with his employer, the Metropolitan Water Reclamation District of Greater Chicago. He and his wife, Daxa, welcomed son Deven into the world in June.

**Melissa Ventrone** (LAW '03), Chicago, joined Thompson Coburn LLP as partner and chair of the privacy/data use and security practice group.

**Charles Fortin** (ARCH '04), New South Wales, Australia, is managing director at Collard Maxwell Architects.

**Carson Block** (LAW '05), San Francisco, founder of the equity research firm Muddy Waters Research, began Muddy Waters Capital LLC, a hedge fund with \$110.8 million under management, and serves as the managing member.

**Yesenia Villasenor-Rodriguez** (LAW '05, M.S. EM '06), Chicago, joined Exelon Corporation as assistant general counsel in its environmental health and safety practice group. She was selected as a 2016 "Top Lawyers Under 40" by the Hispanic National Bar Association.

**Robin Chaurasiya** (PPPS '06, PSYC '06), Mumbai, India, was a top 10

finalist for the 2016 Global Teacher Prize, sponsored by the Varkey Foundation. She co-founded Kranti, a non-governmental organization that empowers girls from Mumbai's red-light areas to become agents of social change.

**Sandra McCurdy (née Dase)** (M.A.S. BIOL '06), Decatur, Ill., microbiology lab manager at Tate & Lyle, became certified as a Registered Microbiologist in Food Safety and Quality Microbiology in June, and is a part of the National Registry of Certified Microbiologists.

**Colleen Platt** (LAW '06, M.A.S. BIOL '06), Reno, Nev., opened her own law practice after a career with the Office of the Nevada Attorney. She specializes in administrative law and sits as general counsel to select Nevada licensing boards and state agencies. Platt has four children.

**Andrew Baker** (LAW '07), Oak Park, Ill., joined Janders Dean as the legal transformation practice group leader. He provides advisory services to private practice law firms and corporate legal departments centered on enhancing the delivery, receipt, and management of legal services.

**Naomi Calmatuianu (née Heler)** (CE '08), Chicago, was voted onto the 2016-17 board of directors for the Association of Subcontractors and Affiliates Chicago, a

nonprofit trade association representing the subcontracting industry in the Chicago area.

**Charles J. Carter** (Ph.D. '09), Downers Grove, Ill., has been named president of the American Institute of Steel Construction.

## 2010s

**Omer Onar** (Ph.D. EE '10), Knoxville, Tenn., is an Alvin M. Weinberg Fellow and member of the Power Electronics and Electric Machinery Group at the U.S. Department of Energy's Oak Ridge National Laboratory. He works on wireless power transfer systems and received the 2016 Distinguished Achievement Team Award from the Vehicle Technologies Office. Onar is also general chair of the IEEE Transportation Electrification Conference and Expo, which will be held in June 2017 in Chicago.



**Rebecca Vieyra** (M.A.S. SED '10), Washington, D.C., completed a year at NASA as an Albert Einstein Distinguished Educator Fellow, and now works at the American Association of Physics Teachers as the organization's first K-12 program manager. She and her

husband co-founded Vieyra Software, a smart-phone sensor app company.

**Kathryn Weissman** (CE '10), Chicago, is a project manager for the U.S. General Services Administration. She is also a member of Illinois Tech's Young Alumni Council.

**Teresa Clark** (LAW '11, M.P.A. '13), Baltimore, joined the U.S. Social Security Administration as an attorney advisor at its headquarters in Woodlawn, Maryland.

**Pawel Drapala** (Ph.D. CHE '11), Providence, R.I., develops and manufactures immunology therapeutics for improving the lives of patients with cancer.

**Joseph Morris** (LAW '12), Louisville, Ky., is a registered patent attorney in the Intellectual Property & Technology Service Group of Stites & Harbison, PLLC.

**Rami Asfahani** (M.A.S. STE '13), Chicago, has been working as a structural engineer for the past three years and developed the app Bridge Info. Found in the Apple Store, it provides information for any bridge in the United States and integrates with Google Maps and Apple Maps. The app can also prompt news related to the bridge engineering industry and is updated automatically.

**Misty I. Gamino** (LAW '13), Chicago, family law litigator with The Law Offices of Jeffery M. Leving, received the 2016 Attorney

of the Year award as voted by peers in the legal community.

**Kunoor Ojha** (PS, PSYC '13), Wheeling, Ill., served as national campus and student organizing director for the Hillary for America campaign. Previously she was national student organizing director for the Bernie 2016 campaign.

**Utsav Gandhi** (EMGT '14), Chicago, is program manager for the Illinois Science and Technology Coalition.

**Andrea Occhipinti** (ME '14), Lake in the Hills, Ill., recently graduated from flight school at Whiting Field Naval Air Station along with his twin, Matteo. Both are U.S. Marine Corps lieutenants.

**Scott Slone** (MSE '14), Champaign, Ill., is enrolled in the materials science and engineering Ph.D. program at the University of Illinois at Urbana-Champaign.

**Andrew Cohen** (M.A.S. MCHM '16), Neshanic Station, N.J., is employed in new product and process development at Roche Diagnostics. He worked on the first Zika Investigation Use Assay blood test screening for blood donations. For use with Roche's cobas 6800/8800 Systems, the test is a qualitative in vitro nucleic acid screening test for the direct detection of Zika virus RNA in plasma specimens from individual human blood donors.



Friends **Karin Turnquist** (BIOL '53) [left] and **Marilyn Kouba** (CHEM '50, M.S. '63) catch up during the Golden Society Reunion Luncheon, celebrating alumni who graduated 50 years ago and prior.



A group of young alumni reunited on Mies Campus at the **All-Alumni Party and Spirit Day** celebration.



The **2016 Class Gift**—solar-powered picnic tables on Mies Campus—was dedicated at Homecoming.



Attendees from the **25th reunion class** spent time visiting and catching up with old friends.

Visit [bit.ly/alumni-event-photos](http://bit.ly/alumni-event-photos) to see more event photos from the Alumni Association. PHOTOS: COURTESY OF THE OFFICE OF INSTITUTIONAL ADVANCEMENT

## ALUMNI EVENTS

For information about the upcoming events listed here and other alumni activities, please visit [alumni.iit.edu/events](http://alumni.iit.edu/events) or contact the Office of Alumni Relations at [alumni@iit.edu](mailto:alumni@iit.edu) or 800.IIT.ALUM.

### ILLINOIS TECH IS COMING YOUR WAY

Illinois Tech is hitting the road to bring you a series of events featuring groundbreaking research by our innovative and exceptional faculty. We will be bringing these unique events to the following cities:

- |                         |                         |
|-------------------------|-------------------------|
| <b>Bay Area</b>         | <b>New York City</b>    |
| <b>Boston</b>           | <b>Phoenix</b>          |
| <b>Chicago</b>          | <b>San Diego</b>        |
| <b>Houston</b>          | <b>Seattle</b>          |
| <b>Los Angeles Area</b> | <b>Washington, D.C.</b> |

Visit [alumni.iit.edu/events](http://alumni.iit.edu/events) for dates—and be sure to mark your calendar!

## SAVE THE DATE!



## Mies Birthday Party

**Thursday, March 30, 2017**

S. R. Crown Hall, Mies Campus  
Chicago

Mark your calendars and join us at the annual birthday party for Ludwig Mies van der Rohe, hosted by the Mies Society.

**SAVE  
THE  
DATE!**

**Alumni Awards Luncheon**  
Friday, April 21,  
2017

Hermann Hall,  
Mies Campus  
Chicago

Plan to be on Mies Campus to help us celebrate our outstanding alumni.



### CONNECT TODAY

Are you connected to the 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](http://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](http://alumni.iit.edu/sign-up) to join today.

## Hawk Talks: Making Professional Development Easy



Brian Ippolito (AE '92)

Have you ever wondered how the president of your company came to be in that position? Exactly how the chief executive officer climbed the company ladder? The steps senior executives took along their career paths?

Through the Alumni Association Career and Professional Development Committee, chaired by Bob Hoel (BE '70), now alumni can interact directly with company presidents, CEOs, and senior executives through the Professional Development Series. The committee strives to present different themes, topics, and speakers to alumni looking for career advice and professional development. These Hawk Talks range from business etiquette and the two-hour job search to information security and project management. And best of all, they're free.

In February committee member Brian Ippolito (AE '92) spoke about big data and starting a big data company, a topic he's familiar with as president and CEO of Orbis Technologies.

"These presentations provide an opportunity for our alumni to hear from people who are senior-level professionals and to relate to them in a personal way," he says. "They're experts in their fields, and they want to help."

Ippolito says it can be hard for professionals early in their careers to ask for help, so the committee understands the value of providing Hawk Talks to people who want to take that step. "I'll consider this series a success if we can convince our audience that there's a way for them to engage people who are more senior in their career," he says.

The benefits of the professional development series aren't only for attendees; committee members are learning their fair share, too.

"This series has challenged us to stay relevant to a whole new generation of alumni," Ippolito says. "We're forced to look at what's important to them. Many of us are at senior levels in our careers, and it's not always easy to remember the needs and concerns of entry-level or intermediate roles."

**Hawk Talks are just one way Illinois Tech is helping alumni in their careers. The series is archived at [alumni.iit.edu/professional-development-series](http://alumni.iit.edu/professional-development-series); additional career resources are available at [web.iit.edu/career-services/alumni](http://web.iit.edu/career-services/alumni). Email [alumni@iit.edu](mailto:alumni@iit.edu) to learn more.**

## Congratulations, European Alumni

We are happy to announce our newest international alumni effort—the European Alumni Association. Volunteers are still needed to lead chapters in various countries. Contact Charlotte Leroy (LL.M. LAW '11) at [contact@alumni-iit.edu](mailto:contact@alumni-iit.edu) to get involved.

Mark your calendars and celebrate in Paris from June 30–July 2, 2017, at the Global Alumni Gathering, hosted by the European Alumni Association. The event will focus on global challenges of the twenty-first century and will include panel presentations by alumni and university leaders on the topics of water, health, energy, and security.

Visit [alumni.iit.edu/paris-2017](http://alumni.iit.edu/paris-2017) for more information.



Interested in starting your own affinity group or local chapter? Contact the Office of Alumni Relations at [alumni@iit.edu](mailto:alumni@iit.edu) or 800.IIT.ALUM (800.448.2586) to get started today.



# IIT Magazine

ONLINE-ONLY CONTENT

## Visit [magazine.iit.edu](http://magazine.iit.edu) to read Online Exclusives about

Inspirational memoirist **Rob Besecker** (BA '96), who hiked to the base camp of Mount Everest even with several health challenges



**FrankenToyMobile**, a mobile maker space that encourages kids from Chicago's underinvested neighborhoods to use their imaginations, and reuse donated and discarded toys

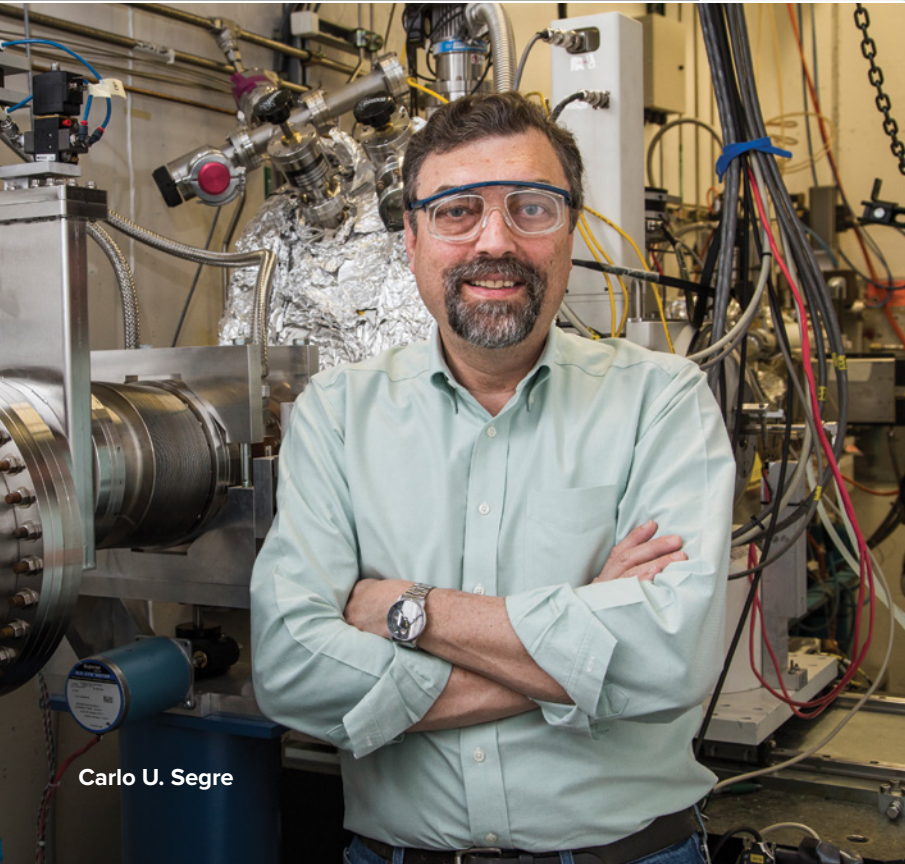


Faculty members **John F. O. Bilson**, John and Mae Calamos Stuart School of Business Dean Endowed Chair, and **Christopher White**, vice provost for research and academic affairs, on their new administrative roles at Illinois Tech



### Also check out *Video Extras* with

**Carlo U. Segre**, faculty member and director of the Center for Synchrotron Radiation Research and Instrumentation, on how Illinois Tech students have been involved in the Advanced Photon Source at Argonne National Laboratory



Carlo U. Segre



Rob Besecker

**PASSINGS**

**Alumni**

**Orville Klima**  
ME '34  
Whitewater, Wis.

**Bernard Wolfe**  
LAW '37  
Northbrook, Ill.

**Earl Sherman**  
ME '43  
Encino, Calif.

**Richard Vander Mey**  
ME '43  
Bolingbrook, Ill.

**Kenneth Sanders**  
ME '44  
Campbell, Calif.

**Carl Sundeen**  
ME '44  
Minnetonka, Minn.

**Charles Soderquist**  
ME '45  
Black Canyon City, Ariz.

**Arthur Uhler**  
CHE '45, M.S. CHE '48  
Weston, Mass.

**Lloyd Giegel**  
EE '47  
New Bern, N.C.

**Donald Billman**  
ARCH '48  
Chicago

**Harry Jennings**  
LAW '49  
Valparaiso, Ind.

**Wayne Johnson**  
ME '50  
Allentown, Penn.

**Robert Meckstroth**  
EE '50  
Kettering, Ohio

**Andrew Affrunti**  
ME '51  
Springfield, Ill.

**Edwin Alpaugh**  
CHE '51  
St. Louis

**Ted Colvin**  
ME '51  
Morton, Ill.

**John Crandall**  
FPE '51  
Dyer, Ind.

**Charles Goff**  
IE '51  
Clearwater, Fla.

**Roger Krafft**  
FPE '51  
Colorado Springs, Colo.

**Gerald Kroneberger**  
CHE '51  
Livermore, Calif.

**Robert Lunsford**  
LAW '51  
The Villages, Fla.

**Joseph Lutz**  
ME '51, IE '58  
Barrington, Ill.

**Marvin Mellbom**  
CE '51  
Sebring, Fla.

**Adrian Morrison**  
CE '51  
Tustin, Calif.

**Walter Zapfel**  
CE '51  
Scottsdale, Ariz.

**Charles Achinakian**  
ME '52, IE '54  
Waxahachie, Texas

**Robert Ames**  
ARCH '52  
Boston

**Paul Field**  
EE '52  
Albuquerque, N.M.

**Kenneth Fuglestad**  
EE '52  
Martinsville, Ind.

**Walter Weaver**  
CE '52  
Glenview, Ill.

**Miguel Xavier**  
M.S. EE '52, Ph.D. '58  
Denver

**Marvin Ackerman**  
EE '53  
Sunnyvale, Calif.

**George Cowan**  
CHE '53  
Bettendorf, Iowa

**Donald Drury**  
ENGL '53  
Columbus, Ohio

**Irving Gottesman**  
PSYC '53  
Edina, Minn.

**Fred Hardtke**  
CHEM '53  
Rolla, Mo.



*Photo: Courtesy of David Zeni*

**Donald Stoltenberg**  
(DSGN '53), Brewster, Mass., was internationally known for his marine oil and watercolor work done in quasi-cubist style. He also pioneered the printmaking technique known as collagraphy, teaching courses on the subject and writing two books. Stoltenberg's works are displayed in public collections at Harvard University, Massachusetts Institute of Technology, the Portland Museum of Art, and many other institutions.

**David Sullivan**  
FPE '53  
Albuquerque, N.M.

**Gerard Zichterman**  
EE '53  
Sunnyvale, Calif.

**Hugh Boland**  
ME '54  
Milwaukee



*Photo: Chris De Ford*

**Gertrude Kerbis (née Lempp)**  
(M.S. ARCH '54), Chicago, was a Modernist architect who established the firm Lempp Kerbis in 1967. Among the structures she designed was the rotunda building at O'Hare International Airport. In 2008 Kerbis, a fellow of the American Institute of Architects, received a Lifetime Achievement Award from the Chicago Chapter. She was the first woman and only the third individual to attain the honor. A memorial service was held for Kerbis at S. R. Crown Hall on August 23.

**Robert Kissinger**  
ARCH '54  
Clarksville, Ind.

**Frank Novak**  
CE '55  
Thornton, Colo.

**William Panko**  
ME '55  
Naples, Fla.

**Janet Sullivan**  
M.S. DSGN '55  
Valparaiso, Ind.

**Kenneth Weberg**  
EE '55  
Willmar, Minn.

**James Erickson**  
CHE '56  
Minneapolis

**Daniel Van Dorpe**  
CE '56  
Tustin, Calif.

**Edward Bell**  
BE '57  
Costa Mesa, Calif.

**William Torgerson**  
BE '57  
Valencia, Calif.

**Raymond Gold**  
Ph.D. PHYS '58  
Palo Alto, Calif.

**Albert Eski**  
FPE '59  
Ashtabula, Ohio

**Carl Jarsonbeck**  
BE '59  
Riverview, Fla.

**Alan Reinberg**  
M.S. PHYS '59, Ph.D. '61  
Washington, D.C.

**Don Brillhart**  
MET '60, Ph.D. '65  
Calumet, Mich.

**Phillip Brust**  
ME '60  
Cornelius, N.C.

**George Fries**  
LAW '60  
New Castle, N.H.

**Robert Hammond**  
EE '60  
Bristol, Va.

**Delphine Sullivan**  
M.S. DSGN '60  
Detroit

**Daniel Sheppell**  
ME '60  
La Grange, Ill.

**Natalie Linden (née Govedarica)**  
IE '61, M.S. CS '96  
Washington, D.C.

**Leonard Lundy**  
EE '61, M.B.A. '73  
Geneva, Ill.

**Olgerts Puris**  
EE '61  
Portland, Ore.

**William Kaulfuss**  
(M.S. DSGN 62), Two Rivers, Wis., taught Fundamentals of Design



at the Institute of Design and was selected as one of the "Chicago 27 Designers," a group dedicated to promoting the work of illustrators, typographers, photographers, and designers to design buyers (1936-1991). Kaulfuss lived and worked as a designer in Chicago for more than four decades. He and his twin brother, Rob, designed many innovative products, including packaging concepts for the former United States Information Agency.

**Vincent M. Story**  
Ph.D. CHEM '62  
Brevard, N.C.

**Henry Tobin**  
M.S. EE '62  
Sierra Madre, Calif.

**Robert Bernero**  
CE '63  
Gaithersburg, Md.

**Norman Breyer**  
Ph.D. MET '63  
Deerfield, Ill.

**Robert Glasing**  
EE '63  
Palm Coast, Fla.

**Philip Haag**  
FPE '63  
Mountain View, Calif.

**Warren Hamel**  
M.S. MT '63  
San Francisco

**Leonard Tokus**  
LAW '63  
Milwaukee

**William Benton**  
M.S. IE '64  
Longboat Key, Fla.

**Carl Springer**  
EE '64  
Rockton, Ill.

**Robert Buras**  
EE '66  
Austin, Texas

**James Fitzgerald**  
MATH '66, M.S. MT '68  
Crest Hill, Ill.

**John Fortunski**  
CE '66  
Hamilton, Ohio

**Richard Hanus**  
MATH '66  
Hoffman Estates, Ill.

**Leo Hietpas**  
M.S. MT '66  
Green Bay, Wis.

**Charles Kindregan**  
LAW '66  
Boston

**Wayne Leland**  
EE '66  
Venice, Fla.

**Robert Benkowski**  
ME '67  
Columbus, Ohio

**George Edwards**  
LAW '67  
Edwardsville, Ill.

**David Kaput**  
IE '67  
Chicago

**Arnold Merbitz**  
M.S. SOCT '67  
Eureka Springs, Ark.

**Carmin Scotti**  
M.S. IE '67  
Fairfield, Conn.

**Bradford Burke**  
LAW '68  
Portland, Ore.

**Carla Romeike**  
M.S. DSGN '68  
Bradenton, Fla.

**Jack Willer**  
DSGN '68  
Kansas City, Mo.

**Werner Koczian**  
M.B.A. '69  
Georgetown, Texas

**Masashi Matsushima**  
MAE '69  
Houston

**Danae Voutiritsas**  
M.S. DSGN '69  
Palatine, Ill.

**Martin Ginn**  
M.B.A. '71  
Stockton, Calif.

**Eric Norland**  
CHE '71  
Bridgewater, N.J.

**Alan Scarnavack**  
LAW '72  
Chicago

**Richard Hardy**  
CHEM '74  
Huntingdon Valley, Penn.

**Richard D'Ambrosia**  
CE '77, M.S. CE '81  
Marengo, Ill.

**William Schmidt**  
MAE '77  
Arlington Heights, Ill.

**Robert Moore**  
EE '78  
Southport, N.C.

**James Beard**  
LAW '80  
Chicago

**Richard Karr**  
LAW '80  
Northbrook, Ill.

**Thomas Puralewski**  
CE '83  
Elkhorn, Wis.

**Lawrence Becker**  
M.A.S. CHE '85, M.B.A. '93  
Friendswood, Texas

**Daniel Rieken**  
LAW '87  
Washington, D.C.

**Letitia Cook (née Mitchell)**  
BA '91, M.B.A. '99  
Irmo, S.C.

**Thomas Verachtert**  
M.A.S. CHE '98  
Palatine, Ill.

**Michael Purdy**  
JTSB '14  
Lansing, Mich.

**Trustee Emeritus**



**Theodore E. Hanson**  
Northbrook, Ill., had a successful career with KPMG LLP that spanned four decades. After retiring

in 1996 he established Ted Hanson Consulting. He was elected to the Illinois Institute of Technology Board of Trustees in 1981 and in 1989 became a member of the IITRI Board of Governors and Audit Committee. Hanson served as an Illinois Tech Life Trustee from 2001-2013 and was then named Trustee Emeritus. In 2005 he established the Theodore E. Hanson Stuart School of Business Fellowships Endowment.

**Attendee/Non-Degreed**

**Everett Anderson**  
Hanover Park, Ill.

**Vincent Beck**  
Edwardsville, Ill.

**Harry Cook**  
Sebastopol, Calif.

**Charles Dowd**  
San Diego

**Robert Enroth**  
Steger, Ill.

**Eustis Porter**  
Harrisonburg, Va.

**Joe Tafolla**  
San Jose, Calif.



Photo: Courtesy of IIT Archives

**Faculty**

**Kenneth Isaacs**  
Institute of Design Visiting Lecturer, Granger, Ind., was an innovative architect and designer who gained worldwide attention and celebrity in 1962 with his design of the "Knowledge Box," a multimedia immersion chamber he constructed in S. R. Crown Hall. Isaacs pioneered the "tiny house" movement with his radical design of the "Microhouse" and other unconventional structures.



PHOTO: COURTESY OF ARGONNE NATIONAL LABORATORY

## RING OF BRILLIANCE

By Marcia Faye

**ITS ROOTS LIE IN WHAT IS KNOWN TODAY AS RED GATE Woods** but in the early 1940s was Argonne Forest, part of the Cook County Forest Preserve District near Palos Hills, Illinois. Argonne Laboratory was created to provide a more remote location to continue Enrico Fermi's work on the Manhattan Project after the physicist and his team achieved the first man-made controlled nuclear reaction at the University of Chicago. In the late 1940s Argonne Laboratory relocated to a larger site in Lemont, Illinois, and was chartered by the United States Department of Energy as the nation's first national laboratory in 1946 to conduct "cooperative research in nucleonics," exploring the use of nuclear energy in peacetime efforts.

Over the next four decades Argonne National Laboratory achieved recognition for its work by staff researchers and visiting scientists in the fields of high-energy physics, chemistry, and metallurgy. In 1983 Carlo U. Segre, then a new physics faculty member at Illinois Tech, was selected to represent the university on an external committee working to establish a new synchrotron at Argonne.

"I realized there was an opportunity for the university to hire faculty to become involved at the ground floor in building this facility and have equipment available to do cutting-edge research," he explains. "It takes about 10 years to plan such a project, obtain initial design reports, and secure funding—about a half-billion dollars—from the DOE to begin construction."

The committee was persuasive and in 1996 Argonne's high-energy ring of particle accelerators—the Advanced Photon Source (APS)—opened its doors. Producing high-brightness and highly penetrating X-ray beams, the APS allows researchers to examine how molecules and atoms are arranged, learn more about biological proteins, and study chemical processes at nanoscale, for example.

Segre, now professor of physics, Duchossois Leadership Professor, and director of the Center for Synchrotron Radiation Research and Instrumentation, led efforts to build five beamlines at the APS, three of which are still operated by Illinois Tech: BioCAT (Biophysics Collaborative Access Team), headed by Professor Thomas Irving (*IIT Magazine* [magazine.iit.edu/summer-2016/titin-titan](http://magazine.iit.edu/summer-2016/titin-titan)) and two under MRCAT (Materials Research Collaborative Access Team), which Segre directs. Segre says that today, six to seven Illinois Tech faculty, various staff, and research scientists normally work at the APS.

In an *IIT Magazine* Video Extra ([magazine.iit.edu/media](http://magazine.iit.edu/media)), listen to Segre discuss how students participate in APS science and information on his own areas of research at Argonne.

### MORE ONLINE

**Argonne National Laboratory:** [www.anl.gov](http://www.anl.gov)  
**"Building the Advanced Photon Source 1991–1996" (Video Courtesy of Argonne National Laboratory):** <https://youtu.be/Ruu3gr5zEwQ>



**Is November 15 going to be a  
great day in Illinois Tech history?**

**TECH YEAH!**

Illinois Tech's second annual Giving Day on November 15 will  
be one for the books—with your help, of course!

**Here's how you can get involved:**

- Make a gift!**
- Volunteer to be an online ambassador.**
- Follow the Alumni Association on social media.**

**hawksgive.iit.edu**  
**#hawksgive #techyeah**

