

FALL 2018

ILLINOIS TECH

Magazine

Open for Business

Illinois Tech's New Ed Kaplan Family Institute
for Innovation and Tech Entrepreneurship



Letter from the President



WHILE EACH fall academic term brings with it an element of excitement and new opportunities, this year the feeling has reached a crescendo. By the time that you are reading this, our Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship will have opened its doors on Mies Campus.

As many of you may recall, the university announced an \$11 million gift and challenge grant from Illinois Tech Board of Trustees member Ed Kaplan (ME '65), along with his wife, Carol, in 2014; two years later we broke ground for the Kaplan Institute. As co-founder of Zebra Technologies, a global leader in barcode printing, Ed is passionate about channeling his entrepreneurial know-how to students through the Kaplan Institute. You can read about Ed's career rise and other stories on the Kaplan Institute beginning on page 9 of this issue of *Illinois Tech Magazine*.

In other outstanding news, Peter Kilpatrick joined Illinois Tech as provost and senior vice president for academic affairs, on August 1. Peter came to our institution from the University of Notre Dame, where he served as professor and McCloskey Dean of Engineering. He has been working closely with faculty and administrators already and is eager to advance Illinois Tech's commitment to innovation, entrepreneurship, and experiential learning through the Kaplan Institute. Read more about our new provost and why he came to Illinois Tech on pages 4–5.

Our university community also celebrates its ranking as #96 on the *U.S. News & World Report* 2019 Best Colleges list of national universities and that this term marks our largest class of first-year students in more than three decades, at 608 students. Members of the class hail from 34 countries and 38 states, with 127 students from Chicago; 14 percent are international students, 27 percent are underrepresented minority students, and 31 percent have declared that they are first-generation college students. I am also happy to report that this year's class is 31 percent female.

With robust programming, new leadership, and many fresh faces throughout our campuses, the future of Illinois Tech continues to look bright. If you are contemplating a visit to your alma mater, this fall may be the ideal time to do so. Be part of our continued celebration as Illinois Tech's reputation grows along with our pride in being part of such an exceptional academic institution.

Sincerely,

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Send alumni news to 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 Illinois Tech's resources, contact the Illinois Tech Center for Disability Resources at disabilities@iit.edu.



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On The Cover:
The dynamic ETFE façade of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship glows at twilight. Photo: Michael Goss

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



Illinois Tech Launches New Tagline

To better position Illinois Tech in the higher education marketplace, the university's Office of Marketing and Communications led a brand development process from spring 2017 through spring 2018, the outcomes of which were recently approved by university leaders.

Marketing and Communications worked with students, alumni, faculty, and other stakeholders to determine Illinois Tech's key differentiators. Potential messages were tested with prospective students, and the process settled on the following brand message summary, three brand pillars, and tagline:

Brand Message Summary

Based in the global metropolis of Chicago, Illinois Tech is the only tech-focused university in the city. It stands at the crossroads of exploration and invention, advancing the future of Chicago and the world. Its graduates lead the state and much of the nation in economic prosperity. Its faculty and alumni built the Chicago skyline. And every day in the living lab of the city, Illinois Tech fuels breakthroughs that change lives.

Brand Pillars

The brand message is supported by three pillars that uniquely define Illinois Tech:

- 1. Chicago's Tech University**—Illinois Tech is the only tech-focused university in the Chicago area. From skyscrapers to startups, Illinois Tech has fueled the city's rise as a global metropolis.
- 2. Opportunity and Value**—Illinois Tech is an engine of opportunity, providing the best ROI in the state and among the best in the nation.
- 3. Active Learning**—At Illinois Tech students learn by creating, inventing, and solving—not just in the classroom.

ILLINOIS TECH
Discover. Create. Solve.

New University Tagline

Discover. Create. Solve.

As it has since 2016, the name Illinois Tech will continue to be used in addition to the formal name Illinois Institute of Technology.

New Look for *Illinois Tech Magazine*, Plus More Ways to Stay Connected



As part of Illinois Tech's branding exercise, the university's alumni magazine now has a new look and a new name. Feedback from alumni, provided

via an alumni survey, helped to inform the redesign and will continue to guide decision making regarding the magazine's content and delivery. Readers will notice a new cover treatment and fonts, and a modified size.

The Office of Marketing and Communications also launched two new resources that allow alumni to hear more news from Illinois Tech. A new podcast, *Curiosity Unplugged*, joins faculty members to discuss relevant topics of the day. It is broadcast in Chicago on 88.9 FM on the first Wednesday of each month from noon to 1 p.m. and internationally via iTunes, Stitcher, and Google Play beginning the first Thursday of the month.

Illinois Tech University News, a news website, is now live and features important news from the university, videos, media coverage, events, and more. It is available at news.iit.edu.



Visit magazine.iit.edu to read an Online Exclusive about the Opt4STEM Energy Academy and more about the faculty members who joined Illinois Tech this 2018–19 academic term.



“We’re at a point of time in society...that privacy is almost an afterthought.”

Louis F. McHugh IV, director of information technology at the School of Applied Technology, in the *Chicago Tribune* on a privacy breach on Facebook

“Leveling it is not a question. That would be like taking a limb off your body.”

Professor Michelangelo Sabatino, dean of the College of Architecture, on CBS Chicago, discussing the importance of the historic water tower in Riverside, Illinois



“What if Pharrell and Robin Thicke had instead argued that they borrowed a small part of the ’70s groove from Marvin Gaye’s ‘Got to Give It Up,’ but gave it new meaning, a different character, and new expression?”

Professor Edward Lee, director of the Intellectual Property Law program at Chicago-Kent College of Law, in an op-ed in *Billboard* about fair use in the music industry

“Some of this happens with growers, such as sticks and stones and broken pieces of fencing.”

Professor Robert E. Brackett, Illinois Tech vice president and director of the Institute for Food Safety and Health, in *Bloomberg Law*, on the incidence of foreign objects in processed foods

Illinois Institute of Technology Welcomes New Faculty

New faculty joining Illinois Tech in 2018–19 include researchers and scholars in Armour College of Engineering, Chicago-Kent College of Law, the College of Architecture, the College of Science, Lewis College of Human Sciences, and the School of Applied Technology. Learn more about them at magazine.iit.edu/fall-2018/new-faculty. You can read about Armour College of Engineering Professor Peter Kilpatrick, provost and senior vice president for academic affairs, on pages 4–5, and University Professor Howard Tullman, executive director of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, on pages 18–19 of this issue.

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College of Science



Rujia Wang
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Jean M. Wenger
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Chicago-Kent College of Law

Yong Zheng
Assistant Professor
School of Applied Technology

Even Higher Education



When you learned how to feed yourself, you probably put the food in your ear or in your nose a few times before you started putting it in your mouth,” offers Peter Kilpatrick, Illinois Tech’s provost and senior vice president for academic affairs, in a tone both comforting and paternal. “So, don’t be afraid to fail because if you are afraid to fail and that prevents you from doing something, you’ll never do anything worthwhile in your life.”

Kilpatrick’s advice, equally fitting for students as well as for most any other human being, is one of his many personal and professional guideposts gleaned from life lessons. The son of a West Point graduate, he recalls some early lessons, valuable yet bittersweet. Kilpatrick says that his late father, a former commander in charge of a base housing intercontinental ballistic missiles, took the fall for a direct report over a maintenance issue.

“That hurt his career, but he showed us the importance of teamwork, responsibility, and accountability,” says Kilpatrick. “My father never talked about it, but I learned a lot from him by his actions.”

As his father was assigned to various duty destinations—in Turkey and Guam, on the East Coast and the West, and in many cities in between—Kilpatrick had a chance to see the world but felt uprooted when he had to start over making new pals everywhere he lived.

“The good things are that I developed an appreciation that the world is a pretty small place and that we’re all in this together—we’re all alike in so many different ways. I learned that we need to be more tolerant of each other and collaborate a little bit better,” says Kilpatrick, before adding wistfully, “but I missed the opportunity to have some dear old friends, the kind who would know me as well as I know myself.”

What Kilpatrick might have missed in friends he made up for in family. He and Nancy, his wife of 40 years and partner in watching British murder mysteries, raised four children and spend time with their three grandchildren. Son Charles, an astronomer, gained widespread recognition last year when, as a University of California at Santa Cruz postdoc, he was the first person on Earth to see optical photons (light particles) from a gravitational wave event, in this case, the collision of two neutron stars.

Kilpatrick’s extended family includes the many students whose lives he has influenced over his career in academia. After completing his education at Occidental College and the University of Minnesota, Kilpatrick served on the faculty of North Carolina State University before joining the University of Notre Dame, where he was professor and McCloskey Dean of Engineering. While he has a host of regional

teaching and research honors to his credit, Kilpatrick says the true goal of education is deeper.

“We all need to bring young people to completion by helping them become the best versions of themselves—and that’s more than just training their intellects and giving them their diplomas,” he explains, noting that what primarily drew him to Illinois Tech was the university’s founding story of the “Million Dollar Sermon,” given by Frank Wakely Gunsaulus.

“If we’re going to succeed in America in closing the equality gap, it’s going to be because universities are focused on helping the underserved and first-generation kids, like Illinois Tech does.”

No wonder then, that a favorite Kilpatrick maxim is “what’s best for the students.” It hearkens back to his own days as a globe-hopping youth, learning lessons about teamwork and collaboration.

“If we take care of our students, being sincere and authentic, and reach out to help them, the rest will take care of itself,” he says. “The greatest desire of the human heart is to be a part of something much bigger than ourselves. We all want to be a part of something meaningful and know that our lives have made an impact.”—*Marcia Faye*

MORE ONLINE
“The Purpose of Higher Education”:
<https://bit.ly/2wd8xWi>



PHOTO: BONNIE ROBINSON

Designing Innovation

The Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship is the crown jewel of Illinois Institute of Technology's recently completed *Fueling Innovation: The Campaign for IIT*. Before the Kaplan Institute opened in October 2018, furniture company Steelcase, Inc. and Chairman of the Board Robert C. Pew provided the finishing touch—a donation of \$1.7 million in new furniture.

Steelcase, based out of Grand Rapids, Michigan, is the largest supplier of office furniture in the world. In addition to being Steelcase board chair, Pew is also the founding chair of the Institute of Design Board of Advisors, a role he held twice between 1989 and 2016. This isn't the first time Pew and Steelcase have provided Illinois Tech with furniture. When the Institute of Design (ID) moved from Mies Campus to downtown Chicago in 1997, Steelcase gifted ID with \$1 million in office goods—along with a special tenant deal in the building it owned at 350 North LaSalle Street, amounting to \$6 million in free and discounted rent. This most recent gift brings the relationship full circle, as ID has moved back to Mies Campus and into its new home in the Kaplan Institute.

Pew is a member of the Philip Danforth Armour Society, which recognizes families who have made transformational gifts of \$1 million or more in support of the university's mission. In fact, Pew's family has given more than \$10 million to Illinois Tech, and Steelcase is ID's largest corporate donor.

"Steelcase has been a generous donor to ID, but Steelcase gets as much out of the relationship as ID does," Pew explains. "We've hired many talented ID graduates over the years, and our company's ability to stay ahead of competitors has benefited from the design leadership coming out of ID."

The Steelcase furniture in the Kaplan Institute solves problems posed by traditional classrooms. A portion of the desks come from the Steelcase Bivi line, popular in professional design firms and open-plan offices. Bivi desks can easily be clustered in modules of six to eight workspaces to foster collaboration and have integrated power and communications systems. Other desks and chairs Steelcase has provided can be quickly moved and reconfigured throughout the building for different purposes and stacked for high-density storage. Most important, this new furniture will provide the flexibility for students and faculty to engage in the collaborative, interdisciplinary

design work that embodies the mission of the Kaplan Institute.

Besides furniture and rental spaces, Pew and Steelcase have helped ID in other ways. The Steelcase/Robert C. Pew Endowed Chair in Design supports the work of Distinguished Professor Patrick Whitney, considered one of the most respected leaders in the human-centered design movement. Pew also established the Charles Owen Endowed Professorship, which has supported Professor Keiichi Sato, a well-known expert in systems design.

Institute of Design Dean Denis Weil (M.Des. '01) perhaps puts it best. "This is the third home of ID that has Steelcase furniture. We love it, as it lets our students and faculty live and learn in a space that embodies the practice we teach—human-centered and systemic design. For the Kaplan Institute, Steelcase has done an amazing job in turning the whole building into flexible, friendly learning spaces."—*Laura Fletcher*



Comfortable chair and footstool donated by Steelcase, Inc.



Illinois Tech Joins NCAA Division III

“If you look at some of the best small schools in the country—MIT, Caltech, the University of Chicago—they are NCAA Division III, so we’re in pretty good company,” says Joe Hakes, Illinois Tech’s director of athletics, from his desk at Keating Sports Center. Beginning this fall term, the university is officially a full member of the National Collegiate Athletic Association at the Division III level. Hakes began working on the membership process shortly after arriving on campus in 2014. Coupled with Illinois Tech’s acceptance into the Northern Athletics Collegiate Conference, Scarlet Hawks student-athletes will have ample opportunity to engage in postgraduate education, leadership development—and new sports challenges.

“Conferences provide our regular season schedule and access to NCAA tournaments,” explains Hakes. “Our goal from a performance standpoint is to win our conference so that we could go to the NCAA tournament. I think that we’ll surprise some people by getting there sooner than they think we will in some sports.”



PHOTOS: STEPHEN BATES, WCS PHOTOGRAPHY

Enabling Scarlet Hawks to Soar Again *Chapin Wehde Hired as Head Athletic Trainer*

This fall Chapin Wehde joined Illinois Tech as head athletic trainer, a role she has prepared for since she first discovered athletic training was a “perfect fit” as a high school student who sustained some significant injuries from playing soccer. As head AT, Wehde is part of a select group. In the most recent (2014) national longitudinal study that tracked women’s participation in intercollegiate sports, only 32.4 percent of women held head AT positions across all three divisions of the National Collegiate Athletic Association.

Read an Online Exclusive Q&A with Wehde at magazine.iit.edu, where she shares information about mentorship, career challenges, and the personal attributes that make for a strong sports leader.



Men’s Lacrosse Coach Readying New Team for Spring 2020

Women’s lacrosse debuted at Illinois Tech in 2014; in 2020 the men will also be dodging moves on Stuart Field. Head Coach Dan Sharbaugh has been assembling a passionate team of student-athletes. Formerly of Centre College, where he was head men’s coach since 2014, Sharbaugh has a reputation for bringing out the best in NCAA Division III student-athletes of all levels, both on the field and beyond the classroom. In an announcement to the university community, Director of Athletics Joe Hakes noted that “[Sharbaugh’s] grasp of the issues regarding a startup program is strong, and he gets the Illinois Tech difference.”

At Centre Sharbaugh brought the team to 32 wins, including a 2015 Southern Athletic Association regular season championship and a 2016 SAA Tournament runner-up slot. He was previously an assistant at Gettysburg College, York College of Pennsylvania, and Eastern University, the latter his alma mater.—*Marcia Faye*

Men’s Head Lacrosse Coach Dan Sharbaugh



PHOTO: OLIVIA DIMMER

Assistant Professor Abhinav Bhushan indicates a reading to graduate student Nida Tanataweethum.

Encouraging Fat Cells to Grow

A research team led by Armour College of Engineering's Abhinav Bhushan is pioneering a new way to grow fat cells outside of the body to aid in disease treatment. By extracting cells from a patient and placing them in a microfluidic chip—a device that simulates the conditions in which cells grow in the body—doctors and researchers can test new drugs to determine what works and what doesn't for that individual patient.

This kind of customized approach could drastically change the way doctors treat patients in the future, says Bhushan, assistant professor of biomedical engineering. His current research is geared toward recreating the microenvironments of fat tissue. By creating a discovery platform with this unique microenvironment to study these cells, Bhushan and colleagues in his lab hope to develop a new way for doctors and other researchers to test treatments for diseases such as obesity and diabetes.

"Microfluidic chips mimic the capillaries of the body," Bhushan says. "So when you place cells into this environment, they behave like normal fat cells for over three weeks. During this time, our platform allows us to study the differentiation of precursor cells into mature adipose, which is necessary to study the long-term effects of drug molecules on cellular signals and responses."

This model, developed by biomedical engineering

graduate student Nida Tanataweethum, was recently detailed in a paper published in the research journal *Biotechnology & Bioengineering*. The work was carried out in collaboration with researchers at the University of Chicago and the University of Texas at San Antonio.

Tanataweethum says this new model will open the door for faster, cheaper research.

"Previously, researchers would use an animal model," Tanataweethum says. "But with that you use a lot of money and also you use a lot of time. With microfluidic chips, it gives you relevant results while reducing the time and reducing the cost."

As part of the Microfluidic Drug Microbiota Interaction Platform project team, Bhushan and colleagues at IIT Research Institute are building a discovery platform to examine the interactions between approved drugs and microbiota in the digestive system using a more physiologically relevant model of the intestine. The team is a finalist for the \$1 million Nayar Prize II. —*Olivia Dimmer*

MORE ONLINE

Bhushan Research Group: mypages.iit.edu/~abhushan
 "Fighting Obesity by Growing More Fat Cells": [youtube.com/watch?v=E4ay9wufZkc](https://www.youtube.com/watch?v=E4ay9wufZkc)

START OF SOMETHING BIG

**AN INSIDE LOOK AT ILLINOIS TECH'S NEW
HOME OF BIG IDEAS—THE VISIONARIES,
THE ARCHITECTURE, AND THE PROGRAMS
THAT WILL EDUCATE AND INSPIRE
NEXT-GENERATION INNOVATORS**

Built by Barcode

By Marcia Faye

It's 90 degrees on a late June day as Edward L. "Ed" Kaplan (ME '65) bounds into IIT Tower dressed in navy walking shorts, a navy plaid polo shirt, and fluorescent yellow athletic shoes. While his chronological age may be 75, his spirit and enthusiasm appear to be no less diminished than when he was a 26-year-old entrepreneur who, along with the late Gerhard "Gary" Cless, began to fabricate the machines and processes that would eventually form Zebra Technologies Corporation, a pioneering asset-identification company that earned \$3.72 billion in revenue during fiscal year 2017.

Too hyped up to even take a seat inside the cool conference room where we meet, Kaplan stands and provides a quick object lesson on a 500-milliliter plastic bottle of purified drinking water. He turns the bottle on its side and points to the black-and-white strip of lines and numbers—the barcode—that, in a sense, comprises the cornerstone of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship.

"We had an entry product that was better, in some ways, than other printers that were in the marketplace," recalls Kaplan about the duo's first barcode printer, the MODUPRINT. "But we didn't stop there. We went into what was called thermal transfer and a revo-

lutionary printing technology that moved Zebra Technologies into the industry leader position. The MODUPRINT could print this," Kaplan says, gesturing to the bottle's barcode. "But it couldn't print it as well or as fast or for the same price as the Z-130," he adds, acknowledging the thermal transfer device that moved the company into the top tier.

Kaplan's gaze shifts out the window 17 floors up and over an unobstructed view of Mies Campus to the north.

"I'm just a lucky guy who made some money, and that money is now invested in that white building and in the people who are going to be in that white building," he says, nodding his head in the direction of the ethylene tetrafluoroethylene-paneled Kaplan Institute. "Universities could be about a lot of different

things, but to me, the reason we're building that institute is because we want to teach students to—by themselves or in collaboration with others—build a business, learning what it takes to go down that road."

"We had an entry product that was better, in some ways, than other printers that were in the marketplace"

—Ed Kaplan (ME '65)

A few years before he retired in 2007 from the company that he co-founded, Kaplan prepared a thick binder's worth of presentations that he wrote—what he calls "Zebra's vision and guiding principles"—for management and other interested groups. Equal parts historical overview and business wisdom, the binder emphasizes the importance of all of the people involved in the evolution of building a successful company—from the staff and the suppliers to the customers. With his attention now focused on Illinois Tech's students, Kaplan shares 10 pivotal moments—both high and low—in the history of Zebra Technologies (see pages 12–13) that may serve them as guideposts of innovation and tech entrepreneurship. **E**

MORE ONLINE

"A Hub for Generation Innovation," *IIT Magazine*:
magazine.iit.edu/summer-2014/hub-generation-innovation
"The Ultimate Go-To People," *IIT Magazine*:
magazine.iit.edu/winter-2009/ultimate-go-people



Ed Kaplan (ME '65) and his wife, Carol, in The Victor Morgenstern Pitch area of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship

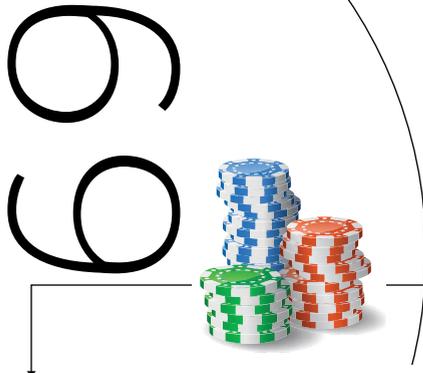
Zebra 1969–2014

1969

AN IDEA SPARKS: A 26-year-old Ed Kaplan [left, in photo below], along with Teletype Corporation colleague (the late) Gerhard “Gary” Cless, form a part-time business—Data Specialties (DSI)—to design electromechanical equipment and “have some fun,” says Kaplan.



PHOTO: COURTESY OF ED KAPLAN



1991

BET THE RANCH: The privately held Zebra Technologies makes an initial public offering in 1991 and raises \$40 million.

“The \$40 million was used to fund new product development and expand distribution channels, both domestic and international,” Kaplan explains.

1969–1970

UPS—AND WAY DOWNS: A client places an order for 500 data recorders. (A cash register sent transactions to the recorder, which encoded the data in the form of punched holes in a one-inch-wide paper tape.) Kaplan and Cless secure a one-time \$10,000 bank loan and then return to the bank to plead for a second \$10,000 loan to complete the job. After the duo purchases 200 sets of custom parts and delivers 25 data recorders, the client cancels the remaining job.

“We were left with 175 sets of unique parts—nobody else could really use them,” says Kaplan. “This was a big problem for two young kids. What do we do with the parts and what do we do when we can’t pay our bills?”

Their problems only increase. The duo places ads in trade publications to drum up business and receives an order from Florida for 1,000 teller terminal printers. After DSI delivers two prototypes, that client serves the company with a bogus lawsuit claiming that it showed drawings and prototypes to a competitor.

1971

SCRAPPY SMARTS: Kaplan and Cless, who left their full-time jobs in 1970, borrow money from family and friends to launch a full-throttle sales campaign. They create the PMR-820 paper-tape perforator from the scrapped parts, and this decision enables their first real success.

“I started to drive across the country (sleeping in my car at night) and demonstrated the PMR-820 to anyone who would let me in the door. A few months later, I received a call from one of the companies I visited asking if I could take an order for 100 units and ship 10 in a week. I just about fainted!” recalls Kaplan, with a laugh. “It was our first order for the PMR-820. I didn’t have to buy very much inventory because I had all of the old custom parts. How did we survive and ultimately prosper? This was when many of our values and principles started to emerge—commitment, focus, innovation, quality, and reliability.”

1998

KNOW YOUR GAME: Zebra Technologies merges with Eltron International, a provider of desktop and photo ID card printers for items such as driver’s licenses and access cards. Two years later, Comtec Information Systems, a leading provider of wireless mobile printers, joins Zebra.

“Learn to stay close to your customer, anticipating their changing needs,” says Kaplan.

The acquisitions enable Zebra Technologies to extend the barcode printer range and also add desktop printer competencies and products.

2007

LEAVING A LEGACY: Kaplan retires after 37 years as Zebra’s chairman and chief executive officer to head Nalpak, Inc., a private investment firm.



1973



BIG IDEA: The duo designs and constructs the MODUPERF modular paper-tape punch, an industry first. The device is billed as “The Ultimate in Design Simplicity.”

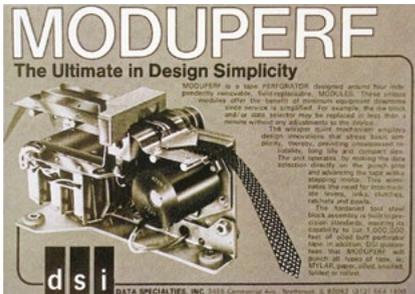


IMAGE: COURTESY OF ED KAPLAN

1982

REALLY BIG IDEA: DSI introduces a product new to the barcode world with the MODUPRINT, a matrix label printer that features eight different barcode symbologies in 37 sizes.



IMAGE: COURTESY OF ED KAPLAN

1985–86

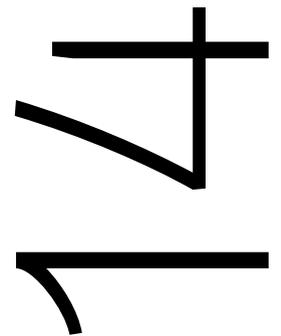
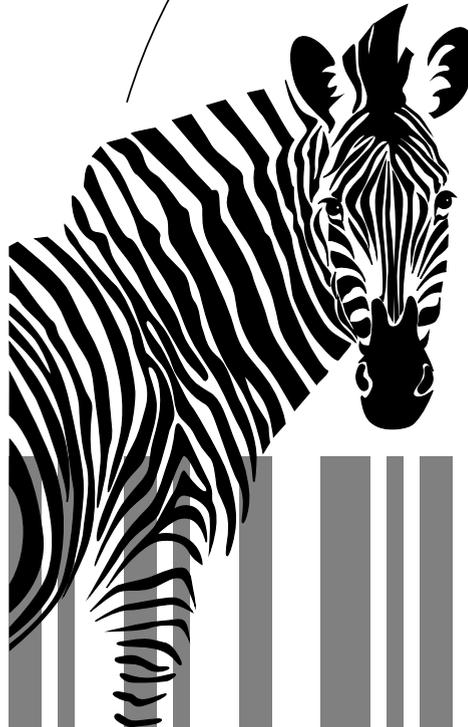
KA-CHING!: Kaplan and Cless earn their stripes and change the name of their company to Zebra Technologies Corporation. They enter the upper echelons of the barcode industry with their introduction of the Z-130, a thermal transfer printer for on-demand barcode labeling.

“Our thermal transfer printing of barcodes was a technological breakthrough at 200 dpi. We went from being a product to a labeling solution,” Kaplan explains. This thermal transfer technology no longer depends upon the use of temperature-sensitive paper for recording the impact dots that comprise the barcode lines and numbers. Now, barcodes can be printed on most any surface, from foil to wax paper to plastic bottles.

2014

GLOBAL LEADERS: Zebra Technologies acquires Motorola Solutions–Enterprise Business.

“Zebra took a giant step,” says Kaplan. “The acquired company was more than twice Zebra’s size. Zebra is a company that has been extremely successful for perhaps all of its existence. It’s quite amazing.”



The I's Have It

BY MARCIA FAYE

The Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship is the new home of the Institute of Design, the Janet & Craig Duchossois Idea Shop, and the Interprofessional Projects (IPRO) Program.



PHOTO: SCOTT BENBROOK

Apoorva Shenoy (M.Des. '18)

Through her design of a custom-fit athletic shoe, Apoorva Shenoy (M.Des. '18) says that she is “bringing back a more human way of running.” That Shenoy chooses to emphasize the human aspect of her startup idea is no surprise considering her educational pedigree: Illinois Tech’s Institute of Design (ID). Now housed in the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, ID—founded as the New Bauhaus in 1937 under visionary László Moholy-Nagy—is recognized as a leading institution for its methods-based, human-centered approach to global challenges, inspiring students to place people first, and sometimes even feet first, as in the example of Shenoy.

Dissatisfied with a pair of running shoes that she purchased in summer 2017 from a well-known manufacturer, Shenoy went into design mode. She researched anatomy and biomechanics along with the athletic products market, shoe materials, and the relationships between individual running style, shoe fit, comfort, performance, and athletic goals. Her efforts gave rise to the personalized running shoe Solei.

“This project has been important to me because it takes a seemingly simple object driven by traditional industrial design; pulls it apart; and infuses it with rich design-thinking methodology, data, and technology to address user pain-points and needs,” Shenoy explains. “It is also really exciting to work with the concept of ‘data as an object’ and how it can be applied to mass customization. There is so much novel work happening in this space.”

Solei begins with a personalized interview to understand a customer’s aspirations and athletic history before a 3-D form of the feet is obtained through digital methods. A specially made shoe sole and upper are then fashioned into a pair of running shoes. The Solei website, which debuted in late August, features a basic product that gives customers what they’re looking for while encouraging them to provide feedback for future development.

“Our launch strategy is to first approach people who absolutely need this product, such as runners who have anatomies that are not catered to. Once we have learned from this stage, we would like to launch via a crowdfunding platform. With this step, we hope to understand our users more, test the product on a smaller scale, and build brand value. We then hope to approach early-stage investors to take Solei to the next stage of growth,” says Shenoy, adding that friends and family provided funding for Solei’s early research and development.

Students using Illinois Tech’s Janet & Craig Duchossois Idea Shop, the Grainger Maker Space, and studios within the Kaplan Institute will be able to explore possibilities leading to new or improved products or services within shared and expanded work areas that lend themselves to collaboration.

“We heard from students that they want more open access to mock-ups and a way to do light prototyping, so there’s a whole second part of the

Idea Shop that's going to be open whenever the building is open that will allow students to do that," says ID faculty member Jeremy Alexis (ARCH '97, M.Des. '99), director of both the Idea Shop and the university's signature Interprofessional Projects (IPRO) Program, which will also be based out of the Kaplan Institute. "It's really been designed around how we've observed students working. We still have a very safe and highly moderated area for the advanced machines, but we also have a lot more open room for students to work on and store projects and to build things."

With its 3-D printers, CNC milling machines, laser cutters, and expansive setting, the Idea Shop, initially opened in 2010, has ignited the fire of creativity in students ranging from Dane Christianson (ME '15), who designed and constructed his popular X-Cube twisty puzzle in the Idea Shop, to hackers who have participated in popular events hosted there such as the Solar Hack; the MonkeyBars Spring Build Hackathon; the Microsoft-Multi University Hackathon; and Code for the Kids, the Hackathon. Alexis says that beginning with the fall 2018 semester, design thinking will be further expanded upon in IPRO courses on several levels.

"A curriculum designer has been working with us to roll out a revised version of our human-centered design approach coupled with agile project management to create a really

distinctive IPRO way of working on challenges," he says.

Tom Jacobius, IPRO director of operations, adds that other changes have been made from recommendations of the faculty committee.

"IPRO courses are now to be concentrated in two time slots during the week in order to best align student interests and majors with IPRO topics," he says. "The new format will accommodate more of our research faculty in serving as technical experts across multiple IPRO teams in one setting within the expanses of the Kaplan Institute."

One current IPRO course where this approach is continuing has the

"I love working on real-life problems. You don't get the chance too often in a classroom setting to help a nonprofit organization develop tools to reduce real fires affecting real people."

—Tayseer Mozaffar (EMGT 4th Year)

potential to provide an especially wide impact. Teams of students are working to improve preparedness and responsiveness to fire emergencies in Chicago through a collaboration with the American Red Cross (ARC) that provides access to its rich array of data through a grant from the Motorola Solutions Foundation. One of three instructors

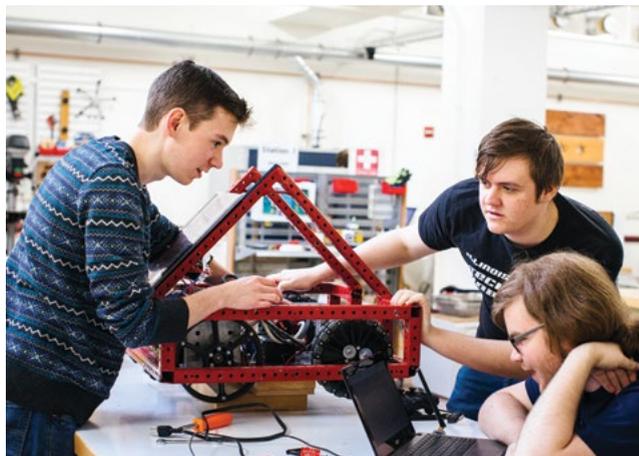
leading the ARC IPRO for the summer and fall sessions is predictive analytics expert Matt Robison.

"ARC gave us the data and encouraged our IPRO class to do what we wanted with it," says Robison. He noted that student teams decided to focus their efforts on three project areas: examining the data to learn what general factors in a community make it more at-risk for a fire, learning what socioeconomic factors specifically contribute to the incidents of fire, and developing low-cost, high-effectiveness solutions to educate individuals in hot-zone neighborhoods where fire incidence is especially noted.

"It's surprising how much work the students did and what they came up with. And the Kaplan Institute has been designed to inspire students to work on projects like this," says Robison of the summer IPRO course, adding that faculty basically only set deadlines and provided feedback.

Tayseer Mozaffar (EMGT 4th year), whose team designed a fire risk self-assessment tool in the ARC course, says that it was very satisfying to know that this project is helping ARC reduce fires and alleviate human suffering.

"I love working on real-life problems. You don't get the chance too often in a classroom setting to help a nonprofit organization develop tools to reduce real fires affecting real people," Mozaffar explains. "I'm impressed by how much we did and am happy with what we accomplished. In my opinion, there's no more valuable a class than an IPRO." 



Students utilize the resources of the Idea Shop to work on robotics projects.

PHOTO: ELENA ZHUKOVA

MORE ONLINE

"Endless Possibilities": magazine.iit.edu/fall-2010/endless-possibilities
 Motorola Solutions Foundation: bit.ly/2jWdWtL

If These Walls Could Talk...

With its striking façade of glossy, white ETFE (ethylene tetrafluoroethylene) panels, the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship is impossible to miss against the backdrop of blonde brick, steel, and glass of Illinois Tech’s Mies Campus.

Designed by John Ronan, Illinois Tech John and Jeanne Rowe Endowed Chair in the College of Architecture and founding principal of John Ronan Architects, the Kaplan Institute is a “hybrid of campus space and building,” says Ronan, whose firm has won architectural awards for Chicago’s Poetry Foundation and Gary Comer Youth Center, and was ranked #4 among the Top 50 in Design by *Architect Magazine* in 2017.

The two-story, 70,000-square-foot Kaplan Institute is the latest in a series of thoughtful concepts for Ronan, who describes the two courtyards around which the design is organized as the building’s “eyes’ and ‘lungs,’ bringing in natural light and ventilation to create a comfortable and healthy environment for collaboration.”

Ronan highlights other noteworthy details—some visible to visitors, some hidden—that make the Kaplan Institute one of a kind. 



PHOTO: MATT BIGELOW

“Water-filled tubing embedded in a concrete-filled metal deck converts the building’s floor structure into a radiant heating and cooling system.”

“Room colors correspond to Post-it® Note colors, which are instrumental in the Interprofessional Projects (IPRO) Program and Institute of Design teaching methods.”

“Rain chains direct water from the roof to stormwater detention below the courtyards.”



“The two-story glazed courtyards bring natural light deep into the floor plate, creating a spacious, airy, and light-filled interior and a continuous connection with nature.”

“Large, open, horizontal floor plates allow visual connection to multiple spaces at one time, while openings in the floor plate allow visual access from floor to floor to foster the feeling of a single collaborative community of users.”

“Electrical outlets in the face of the Tribune Stair spell out ‘IIT.’”

“Assigned project spaces and meeting spaces that require sound isolation are enclosed with demountable partitions that can be reconfigured over time, preserving the building’s future flexibility.”

“Full-height exterior glass panels at the ground-level perimeter and in both courtyards allow views through the entire width and length of the building.”



“The second floor of the building, which cantilevers over the ground floor to provide sun shading, is enclosed in a dynamic façade of ETFE foil cushions that can vary the amount of solar energy entering the building through sophisticated pneumatics. The ETFE foil is 1 percent the weight of glass and gives the building a light, cloud-like appearance.”

“Dry erase paint coating on interior walls transforms them into teaching surfaces.”

“Wood from ash trees that were removed from the site for construction are used to construct wood tabletops in the shop and community kitchen. The ash trees removed from the site were dead as they were stricken with the emerald ash borer beetle.”

“The 24-foot structural grid follows Ludwig Mies van der Rohe’s master plan for the Illinois Tech campus.”

The phrase “rock-star hire” seems tailor-made for Howard Tullman’s arrival at Illinois Tech, where he serves as University Professor and executive director of the university’s new Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship. Tullman, 73, has the credentials: he’s a veteran entrepreneur, investor, and academic administrator who spent the last five years leading Chicago tech hub 1871, which in February was named the world’s top business incubator. He also brings plenty of rock-star vibe, gliding around campus in a black Mercedes with a “Howie T” vanity plate and casting a bold vision for the Kaplan Institute’s future. We asked him what drew him to Illinois Tech and about his plans for the Kaplan Institute.

Illinois Tech Magazine:
Why did this opportunity appeal to you?

Howard Tullman: There were a couple of things that converged. One, I was constantly having conversations at 1871 with people saying, “If we could only get more diverse technical talent,” and I’m like, “Well, do you know that there’s a tech school 10 minutes south of here on the Red Line that has thousands of engineers and 30 percent of the incoming class are the first in their families to attend college?” Honestly, as a major tech school, it’s been largely invisible to the Chicago business community to a staggering extent.

Two, this particular learning environment is a lot different than 1871 in terms of the focus and the stakes. At 1871, I felt like, if you were a kid from a northern suburb and



your parents didn't have anything better to do with you, they'd send you down to fool around for a year trying to invent a pet-dating site. At Illinois Tech you're here to get a real set of skills that will turn into a real job. The idea behind the Kaplan Institute is to bolt entrepreneurship training and innovation-technology skills onto a set of technical skills, to really make you a more complete and valuable employee.

ITM: It's interesting that you stress employability, considering that the Kaplan Institute is focused on innovation and entrepreneurship.

HT: Well, you're starting to see more conversations about who is the real customer [of a university]. The truth is, we serve the students, but our customer to an increasing extent is also the employer. You best serve the students by preparing them and helping them get great jobs.

From day one, I said that the Kaplan Institute can't just be the student union for techies. There are plenty of those. And I think that's a risk; most universities that have incubators are not sufficiently focused on turning out talented and qualified students who can hit the ground running and immediately help their employers. We don't do [our students] much long-term good if we give them this wonderful education in a vacuum. If I can't give you the skills you need for tomorrow and if I can't get you a serious job upon graduation so that you can support yourself and repay your student debt, then we haven't prepared you and fully equipped you with the skills you're going to require not simply for graduation but to go on and build a successful future.

ITM: How does entrepreneurial training fit the needs of employers?

HT: The big companies just don't have a clue how to address innovation and rapid change. They just don't have the time, the resources, or the methodology to do six alternative versions of a project and see which one wins. They're scared to death because if they hire people and launch a bunch of new projects (most of which will fail), then 90 days from now their CFO is going to say, "How'd we do? Did we discover oil? No? Okay, well, fire those people."

When you're building a space and a program and an interdisciplinary environment like Kaplan, you're building it to turn out people for jobs that haven't been invented yet, to use technologies that we're just now working on, and to address problems that we don't yet know are going to be problems.

ITM: The Kaplan Institute isn't the first time you've been in charge of a sparkling, new, high-tech facility; you had a similar opportunity at 1871 and also when you were leading Kendall College and Tribeca Flashpoint College. How do you approach breaking in a new program in a new space?

HT: You have to build a culture and a rigorous discipline that you explain, promote, and enforce consistently. We know that you can explain things to people all day long, but you can't understand things for them. They have to see it and live it and adopt it and believe it. You can't talk a culture into changing. It only changes when you take the actions necessary to bring about those critical changes. If you aren't rigorous and aggressive, the necessary changes won't happen by themselves. Change isn't easy and it's always easier to keep doing things the same old way.

Over time, businesses become the behaviors they tolerate. If we start out at Kaplan and say, "Everybody can do whatever they please and you can have piles of scraps and material spread out everywhere," then you'll end up with a mess that sends the wrong message to everyone—students, faculty, supporters and donors, and especially employers. That's not going to be how it is at KI. Order, organization, control, and discipline are all components of being proud of what you're doing and paying attention to the details, and it's absolutely contagious. Our entire team will model the behaviors that drive success and lead by example.

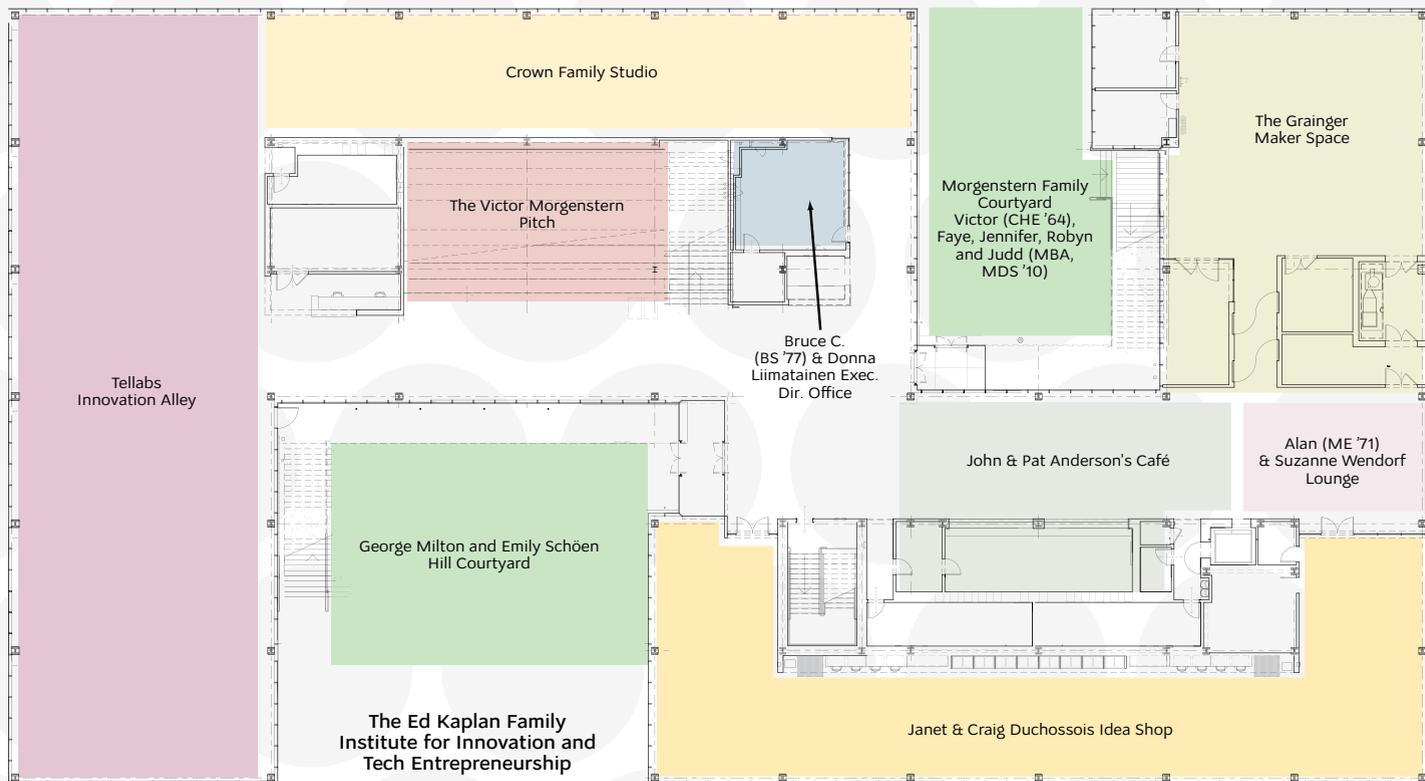
ITM: You're 73. Have you given any thought to the length of your tenure here?

HT: If I'm here three to five years, that's essentially the timeframe that I do almost everything in. That's enough time to point things in the right direction. 1871 went from zero to number one in the world in five years. I think the Kaplan Institute can be as powerful in its own way as what's going on at Carnegie Mellon or MIT. We have a window and a unique and special opportunity to really build our story and get on the map. ☺

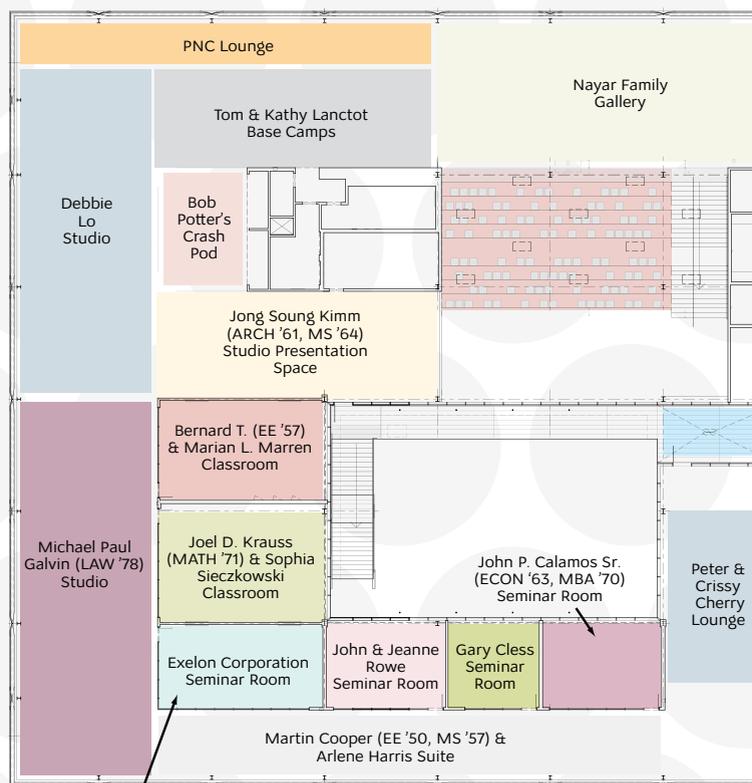
MORE ONLINE

Collection of Articles by Howard Tullman: inc.com/author/howard-tullman

"Former 1871 CEO Howard Tullman Named First Director of Illinois Tech Innovation Institute": chicagotribune.com/news/ct-met-tullman-kaplan-institute-20180416-story.html



First Floor



Home of the Knapp Center

The Spirit of a Building

At the 2016 groundbreaking for the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, many of the supporters wore red to show their pride in the university. A key group of alumni and friends went further, responding to an \$11 million challenge grant from Ed Kaplan (ME '65) to establish the Kaplan Institute.

Some of the donors who provided funding during the building's early stages share their thoughts on innovation and what the Kaplan Institute means to them.

Innovation is a product, process, or system that changes the way we think, the way we work, the way we play, and the way we communicate. It is an achievement, not just an idea; it changes the way people operate.

—President Emeritus John L. Anderson, John & Pat Anderson’s Café

The Kaplan Institute—Ed Kaplan’s vision—is a brilliant continuation of the fundamental philosophy of Illinois Institute of Technology.

—Martin “Marty” Cooper (EE ’50, M.S. ’57), Martin Cooper & Arlene Harris Suite

Innovation means to me the creation of something new or taking something that is old and turning it into something that is more relevant or more applicable to what goes on in our everyday lives. —A. Steven Crown, Crown Family Studio

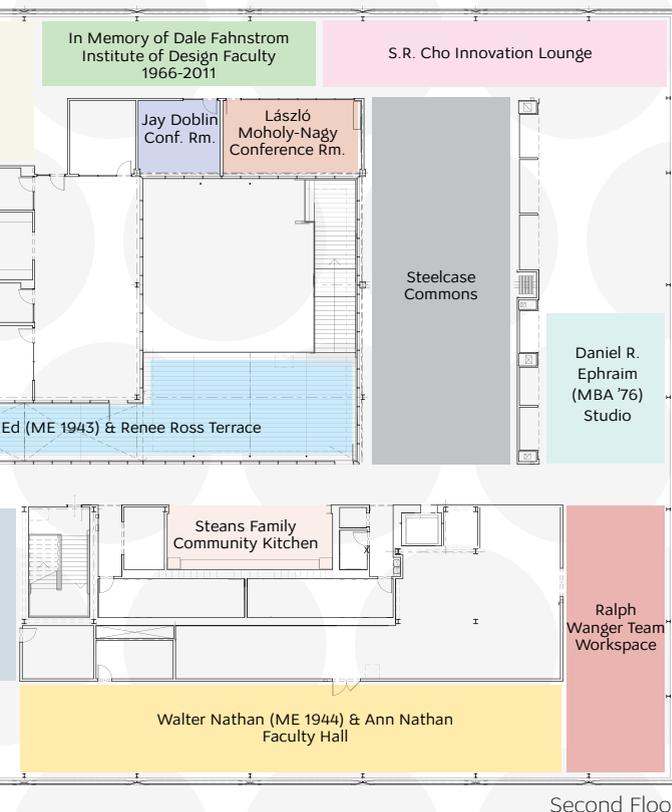
Innovation is the ability to see things that others can’t see and see opportunities that others have missed, and the ability to confirm that there might be a market need for a good or a service.

—Craig Duchossois, Janet & Craig Duchossois Idea Shop

Innovation is all about possibilities, all about taking people elsewhere, imagining and accomplishing things that people said could never be done. —Michael P. Galvin (LAW ’78), Michael Paul Galvin Studio

Innovation is thinking out of the box and going over and above what one would normally do, tying into ideas with other people from different vocations to make a better world for everybody.

—Arthur Hill (CHE ’71), George Milton and Emily Schöen Hill Courtyard



The Kaplan Institute was specifically formed to enable innovation that offers new solutions through reinvention and disruption as part of the unique Illinois Tech experience.

—Joel D. Krauss (MATH ’71), Joel D. Krauss & Sophia Sieczkowski Classroom

Innovation is more than making things. Hopefully, through the university’s resources and the focuses that we have, we can redefine innovation, especially innovation in technical education. —Victor A. Morgenstern (CHE ’64), The Victor Morgenstern Pitch and the Morgenstern Family Courtyard

Innovation is all about business today; business cannot exist without innovative people.

—Walter Nathan (ME 1944), Walter & Ann Nathan Faculty Hall

Innovation is about thinking outside the box and finding solutions that are not obvious. —Madhavan Nayar (M.S. IE ’68), Nayar Family Gallery

Innovation means improving things. Enough small improvements can end up being a big improvement. There’s a lot of room for doing small things that will eventually add up. —Ralph Wanger, Ralph Wanger Team Workspace

All great innovation comes from collaboration and teamwork.

—Alan “Bud” Wendorf (ME ’71), Alan & Suzanne Wendorf Lounge

Growing Entrep

How to tell stories. How to think. How to connect with people. When young alumni entrepreneurs look back at their time at Illinois Tech, these lessons are what they remember and value most about their time at the university. Certainly, the seeds of entrepreneurship were planted in their minds as students, but they were cultivated by professors who encouraged them to become lifelong learners who take risks. To become thinkers who not only trust their intuitions, but act on them. To become entrepreneurs who get out of their comfort zones to take a leap. ¶ “What really matters is trying to push your boundaries,” says Tiger Safarov (AE ’10), founder of ZenSupplies, who tells students to use their time at Illinois Tech as their “personal experience lab.” ¶ “Try to tell someone, ‘Let’s go have a beer, or let’s go for a run.’ See how much you can talk to people,” he says. “That’s the learning experience.” ¶ These four alumni entrepreneurs did just that, taking their experience in construction management, architecture, design, and computer science, and turning it into products, software, and services that not only have found their niche markets but have done so with a grounding in their founders’ life philosophies.

Kaiwei Tang (M.B.A. ’06, M.D.M. ’14)

Smart phones were developed to help us master our lives by becoming more connected, but often they do just the opposite when we are slaves to notifications and social media, becoming more disconnected from the physical world around us. ¶ That notion irked Kaiwei Tang when he joined a Google-run incubator not long after receiving his degree. While there he was encouraged to create new mobile phone apps, which he knew would only perpetuate the addiction cycle. ¶ After meeting fellow incubator resident Joe Hollier, the two decided to do the opposite: create technology that encouraged people to take a break. ¶ Together they created Light Phone, a white, credit-card-sized phone designed to only make and receive calls.

It is a secondary phone that users can take when they’re on a walk or spending time with family and friends. Tang calls it “going light.” After launching in 2016 the company sold 11,000 phones. Feedback was positive, but several users just wanted “one more feature.” The founders collected these suggestions and developed Light Phone 2, which includes more features, including messaging and an alarm clock—but still no social media or news. That phone will ship early next year. ¶ “When someone says, ‘Hey, I’m going light,’ it almost becomes a lifestyle,” Tang says. “I’m hoping Light Phone will encourage more people to live in the moment.” **Light Phone: thelightphone.com**



PHOTO COURTESY OF KAIWEI TANG

PHOTO: SCOTT BENBROOK



Alex Allen (CS ’13)

School fundraisers are no longer about selling cookies and wrapping paper. ¶ But while the digital era of school fundraising allows teachers to easily set up their own fundraising websites to raise money for supplies, events, and infrastructure, Alex Allen found that administrators wanted more oversight and control over these crowdfunding ventures. ¶ Enter Classmunity, fundraising management software for schools that allows districts to approve and track fundraisers, including both online donation campaigns and in-person events. Allen founded the company three years ago with several other Illinois Tech alumni and works as the company’s chief technology officer, developing the software and ensuring it can scale up as the company takes on more clients. ¶ “What I learned at IIT was how to integrate complex systems and think holistically,” he says. “Learning how to learn is the most important thing, because in a field like technology, there are always so many new frameworks and languages and practices.” ¶ The company has clients throughout Wisconsin and is looking to expand throughout the Midwest. It also continues to incorporate new features, including an online marketplace. Turns out people missed buying and selling those cookies, after all.

Classmunity: classmunity.com

Fariha Wajid (ARCH '15)

For Fariha Wajid, a design isn't just about creating something pleasing to the eye—it's about translating the story behind it. ¶ Wajid translates her memories, photographs, and sketches from her travels—the waves of a Wisconsin river, the geometric patterns of an Irani building—into woodblock-printed scarves and stationery, which she sells through her startup INKMADE. When customers order her handmade goods online or buy them in stores, they also receive a card that tells the story or experience that inspired the item's design. ¶ "I really enjoy selling at craft markets, because people ask how I came up with the patterns, and there is a conversation, and that makes the product unique," she says. ¶ The idea for the business began at Illinois Tech—she learned to woodblock print through a class, then developed a business plan through an entrepreneurship course—but it took a while before she was ready to make the leap to full-time entrepreneur. In fact, for most of her life she was set on becoming an architect. ¶ "Once I founded INKMADE, it just happened, and I put time and money into it, and I thought, am I actually going to earn it back or is this just a foggy dream?" she says. ¶ It wasn't: Wajid is now working on getting her designs into more craft markets and into larger boutiques and pop-up stores. **INKMADE: inkmade.co**



PHOTO: MUSHIRA ALI

Tiger Safarov (AE '10)

"I'm an immigrant, so to me it's easy, not because we think differently. Sometimes you don't have a choice." ¶ Tiger Safarov wasn't looking to start a business while studying engineering at Illinois Tech, but in 2007, two years after he emigrated to the United States from Russia, he couldn't persuade any construction companies to hire him. ¶ After taking a construction estimating course, he approached his former college and offered an estimate to turn a basement room into a classroom. He won the job, despite having no formal company or any contractors. He quickly organized a company, Siegel Construction, and convinced contractors to buy materials on their own dime. They finished the job on time. ¶ "I made \$3,000 on the job, and I thought, this is it. This is my way to becoming the richest person on the planet Earth," he says. ¶ He eventually won a job constructing a medical office in the suburbs of Chicago, where two women walking by stopped and said they were impressed by the cleanliness of the work site. That serendipitous connection led to a job constructing a dental office, which led to another, and another. Soon the company was only constructing dental offices. ¶ Safarov sold the company in 2014, but realized that, after talking with dentists, many offices had inventory problems. His next venture was developing software for dental practices to order supplies and keep track of inventory. ZenSupplies began in 2016 and already has more than 350 clients. ¶ "What I'm doing now is freedom," he says. "I get to the office, and nobody tells me what to do or how to do it, and I think, that's the ultimate dream." **ZenSupplies: zensupplies.com**



PHOTO: SCOTT BENBROOK

In Their Words



What Makes an Angel Investor's Wings Flap?

An ongoing explosion in entrepreneurial activity has been taking place on college campuses, especially related to tech startups. The recent study *How Technology-Based Start-Ups Support U.S. Economic Growth* (J. John Wu and Robert D. Atkinson, Information Technology & Innovation Foundation, 2017) calculates that the number of technology-based startups in the United States grew 47 percent in the last decade, and that these new firms have been making an outsized contribution to economic growth.

Angel investors are an early step in a tech venture's path to success. For the last 10 years as members of the Hyde Park Angels, we have been investing in commercializing tech startups founded by university students. Our investments focus on companies that distinguish themselves in both their innovation and entrepreneurship. Here are the three factors we look for in making an investment and how the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship—by specifically equipping Illinois Tech students with teachable skills in entrepreneurship and innovation—will be preparing students to chart a successful course for their futures:

A Transformational Idea that Reinvents and Disrupts—and Doesn't Simply Improve
Opportunities abound to establish tech startups that do no more than create a workaround to a problem by offering a faster, better, or cheaper

approach. The most successful tech startups are disruptors based on revolutionary ideas that are obsolescing and not simply evolutionary and/or incremental. They offer new solutions, not just workarounds.

The Kaplan Institute was specifically formed to create an environment for students to develop new solutions that promise radical change as part of their Illinois Tech experience. Our students will develop the essential skills, obtain the critical feedback, and engage in real-world projects that will enable them to achieve consequential business and social breakthroughs. In this way, our graduates can achieve impressive outcomes at a much faster pace and be more effective employees and contributors immediately upon graduation.

A Convincing Team

An authentically passionate team, whose creativity, determination, and value exceeds that of the individual team members, is what separates the best startups from the rest of the pack. The team's hard capabilities and soft capabilities, especially the intangible team-wide commitment to succeed, are critical to a startup's success. This balance is core to our angel investment decisions.

In Illinois Tech's Interprofessional Projects (IPRO) Program, now housed at the Kaplan Institute, diverse teams collaborate to solve challenging and important business and societal problems. The Kaplan Institute's leadership programs provide practical hands-on experience in collaboration, setting direction, and resolving conflicts.

Startups That Have Already Learned from Their Mistakes

We look for business teams that have already benefited from a learn-by-doing-and-screwing-up approach. They know how to adapt to unexpected situations while staying on course. We seek teams that can adjust, pivot, and overcome the insurmountable. Hitting the wall, adapting, and persevering must be core competencies. Tech-enabled innovations depend most on the team's ability to rapidly sense the unexpected, adapt, and prosper. We have seen this capability demonstrated in many startups, with products as diverse as a prenatal intubator, a virtual-reality surgical prep program, and a touchscreen optimized for all-weather conditions on gas pumps, to name just a few.

The Kaplan Institute's experiential learning methodology is founded on an iterative try-learn-improve approach. This prepares graduates for a world where the written plan is only good until the unanticipated happens. Graduates will know how to adapt and adjust rapidly to ever-changing realities around them. This is great life preparation, no matter what path graduates take after Illinois Tech. **E**

—By **Joel D. Krauss (MATH '71)**, Board Member and Investor, Hyde Park Angels, and **Douglas M. Monieson**, Chairman Emeritus, Hyde Park Angels

MORE ONLINE
Hyde Park Angels: hydeparkangels.com

Classnotes

1940s

Bud Mann

(ME '46), Shelby Township, Mich., recently published the third volume of *The Journal of Levi Broas*, a historical/fictional story of his family's journey from New York to Michigan in the 1830s and settlement of the town of Belding.

1950s

Theodore Brown

(CHEM '50), Bonita Springs, Fla., published the historical novel *The Beauty of Their Dreams*, a tale of the American Midwest during the first half of the twentieth century.

Edmond Zisook

(ARCH '50, M.S. '52), Highland Park, Ill., celebrated his 89th birthday with a small luncheon at the Standard Club of Chicago. Before retiring from his own practice in 1998, Zisook worked at Skidmore, Owings & Merrill.

Bennett Whiteson

(MET '51), Chesterfield, Mo., most recently worked at Modern Technology Solutions, Inc. until his retirement in 2017. Prior to that he was employed as a director at McDonnell

Douglas for 38 years and also worked for the Titanium Metals Corporation and Douglas Aircraft Company. Whiteson served as a staff sergeant in the United States Air Force.

Ted Erikson

(CHE '52, M.S. CHEM '59), Chicago, has been recovering from an injury he incurred in a 50-yard freestyle swim event.

James Albrecht

(FE '53, M.S. '55), Baltimore, continues to remain active on various boards, including the World Trade Center Institute, the Baltimore Council on Foreign Affairs, the Monell Chemical Senses International Advisory Council, and the Illinois Tech Institute for Food Safety and Health. He also is an adjunct lecturer at the University of Illinois.

1960s

John Harasciuk

(ARCH '61, M.S. CRP '63), San Diego, has re-ignited his architectural practice, volunteering his advice pro bono to San Diego community churches and memorial gardens.

Donald Neal

(FPE '61), Glendale, Ariz., recently retired from Johnson Controls (formerly with

SimplexGrinnell) after 20 years doing fire protection system design review. He maintains a fire protection engineering design company that primarily does fire sprinkler and alarm system design for architects, engineers, and sprinkler contractors.

James Soller

(ARCH '62), Sarasota, Fla., published design manuals for the City of Venice's historic and theme districts and the historic district of Boca Grande, Florida. He has had a private practice for more than 30 years. Soller's design experience includes multi- and single-family residences, fire stations, a county morgue, libraries, a youth club, and the Venice Art Center.

**Robert Gordon**

(ARCH '63, M.S. CRP '67), Chicago, is featured in the new book *High-Risers: Cabrini-Green and the Fate of American Public Housing*, for his bird's-eye perspective of the historic Cabrini-Green neighborhood. A Chinese language publication of Gordon's book *Perspective Drawing: A Designer's Method* is being distributed in China as well as continuing publication in the U.S.

Richard Erth

(ME '64), Palm City, Fla., received the Yachtsman of the Year award from the Harbour Ridge Yacht Club. Erth served as commodore for 2016–17 and represented the club at the Florida Council of Yacht Clubs and The Rivers Coalition. In these roles he furthered the spirit of yachting throughout the state and the

importance of the health of the Saint Lucie Estuary.

Phyllis Chillingworth

(DSGN '66), New York, was featured this past summer in a special exhibition titled *Phyllis Chillingworth: Of Joy... an Experience in the Land of Zihuatanejo* at the Atlantic Gallery in New York. She created the paintings after visiting Zihuatanejo, Mexico.

Ilana Rovner

(LAW '66), Chicago, received the 2018 Lifetime Achievement Award from the Decalogue Society of Lawyers.

James Beback

(PHYS '67), Seattle, is retired from the U.S. Navy Office of the General Counsel.

Philip Calabrese

(Ph.D. MATH '68, MATH '63, M.S. '65), San Diego, had his book *Logic and Conditional Probability—A Synthesis* published as Vol. 69 in the series *Studies in the Logic* (College Publications, Ed. Dov Gabbay).

Bruce Harmon

(PHYS '68), Ames, Iowa, is retired after a career as a Distinguished Professor at Iowa State University and deputy director of Ames Laboratory. He is enjoying his passions, including wine, travel, and outdoor adventures. He recently married Mary Lesniak.

Joel Weisman

(LAW '69), Northbrook, Ill., host of "The Week in Review" on Chicago's WTTW-Channel 11, stepped down after being with the show since it was first broadcast in January 1978.

1970s

Manu Vora

(M.S. CHE '70, Ph.D. '75), Naperville, Ill., completed his first Fulbright Specialist Project at his undergraduate alma mater, Indian Institute of



Members of Illinois Tech's Gunsaulus Society gathered in April for a luncheon at Greek Islands in Chicago. Attendees heard from Ray Trygstad, associate chair of information technology and management at the School of Applied Technology, as he presented on "Cybersecurity at the Crossroads." Photo: Bonnie Robinson



[Left to right] Chairman of the Board of Trustees Alan W. "Bud" Wendorf (ME '71); University Regent John W. Rowe; his wife, Jeanne Rowe; President Alan W. Cramb; Ronald H. Krueck (ARCH '70); Distinguished Professor Russell Betts; and the Rowe Family College of Architecture Dean Endowed Chair Michelangelo Sabatino shared a photo with the newly invested John and Jeanne Rowe Endowed Chair in the College of Architecture John Ronan [seated].
Photo: Michael Goss



Illinois Tech alumni gathered at The Morton Arboretum in June for a continental breakfast and a day of exploring the arboretum.

Technology (BHU), Varanasi, India, in March 2018. He was also presented with the 2018 NRI (Non-Resident Indian) of the Year Award in Philanthropy from North America sponsored by *Times Now* and ICICI Bank.

Martin Hudik (MAE '71), Pingree Grove, Ill., and his wife, Eileen, have two grandchildren, Katie and Josh.

Susan Solomon (CHEM '77), Nahant, Mass., was listed in The 50 Top Women in STEM by TheBestSchools.org.

1980s



Perri Irmner (ARCH '81), Chicago, was featured in *PRIME* magazine for her work as president

and chief executive officer of the DuSable Museum of African American History.

Max Willig (ARCH '81), Buffalo, N.Y., recently celebrated 30 years in private architectural practice. He was given a Lifetime Achievement Award from the Grant Amherst Business Association for contributions toward neighborhood revitalization in Black Rock, one of Buffalo's oldest historic neighborhoods.

Naresh Shanker (CS '85, M.B.A. '86), Menlo Park, Calif., was interviewed by *Forbes* to comment on the digital transformation he is implementing as chief information officer at his company, HP Inc.

Christopher Underwood (EE '85), Schaumburg, Ill., was featured in the Rockford Illinois School District 205 volunteer campaign on three billboards and on television and cable in the Rockford area to inspire the community to volunteer.

Abdullah Abonamah (Ph.D. CS '86), Palos Heights, Ill., is a professor of strategy and innovation and the founding president and provost of Abu Dhabi School of Management, a subsidiary of the Abu Dhabi Chamber of Commerce and Industry.

Robert Milan (LAW '88), Chicago, has joined Alvarez & Marsal as managing director in the firm's disputes and investigations practice. He leads complex global forensic investigations in the areas of anti-corruption, corporate fraud, and data-breach response.

Kathleen Becker (née Richards) (LAW '89), Richmond Heights, Mo., was named chief executive officer of The University of New Mexico Hospitals. Becker is a St. Louis native who spent the past 15 years working in her hometown.

Rajinder Singh (M.A.S. MAE '89), Plymouth, Mich., has signed an agreement with the Indian Institute of Technology Madras in Chennai, India, to set up a national endowment for an adjunct chair professorship. He also made a donation to develop a scholarship



Howard Tullman, executive director of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship [center], led a tour of the construction site for members of Illinois Tech's Board of Trustees in May. Photo: Michael Goss

UPCOMING ALUMNI EVENTS

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

Illinois Tech is coming your way!

This fall and winter, Illinois Tech is hitting the road to bring you a series of events featuring Illinois Tech President Alan W. Cramb. We will be in the following regions for these special events:

**Arizona • Asia • Bay Area • Boston
Southern California • Chicago • Europe
Houston • New York • Seattle • Washington, D.C.**

Don't see your area listed? Contact Akshar Patel, director of alumni engagement and giving programs, at apatel34@iit.edu to learn more.

Visit alumni.iit.edu/events/alumni-calendar for dates, and be sure to mark your calendars!

Giving Day

March 14, 2019

Celebrate Pi Day with us! Come together with the entire Illinois Tech community to show your support for the university. Your help can make a huge difference for student scholarships, educational supplies, and campus initiatives.

Mies Birthday Party

**Thursday, March 28, 2019 | Illinois Tech
Mies Campus**

With the celebration of the centenary of the founding of the Bauhaus in Germany, the Mies van der Rohe Society will host an event coinciding with Ludwig Mies van der Rohe's birthday in March.

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 to update your contact information today.

Members of the alumni online community enjoy extra perks such as access to the alumni directory—perfect for networking! Visit alumni.iit.edu/sign-up to join today.

that will benefit any deserving and economically underprivileged student.

1990s

Ratna Dalal

(M.S. ARCH '90), Winchester, Mass., launched the online business Ratna's Seasonal Art. She has designed six collections of more than 200 products featuring nature-inspired works. Dalal was interviewed by *Boston Voyager* magazine and has had her work on exhibit, most recently, at the Winchester Public Library.

Milena Higgins (née Groblewski)

(PHYS '90), Vadnais Heights, Minn., was promoted to chief operating officer of Black Hills IP.

Cameron Davis

(LAW '92), Evanston, Ill., works at the engineering firm GEI Consultants, Inc. He is founder of Genoir, which helps families and businesses tell their stories as a way to pass lessons on to the next generation and to enhance a unique brand. Davis previously served as the point person on Great Lakes Restoration initiative under former President Barack Obama.

Brian Ippolito

(AE '92), Edgewater, Md., president and chief executive officer of Orbis Technologies, Inc., is celebrating his company's multimillion-dollar production contract with the U.S. Department of Defense for its Redaction and Exploitation Releasability (REnDER) Tool. REnDER enables the military to efficiently and effectively share multi-source intelligence information with coalition partners.

Elias Fernandez

(PHYS '93), Chicago, was promoted to project specialist II at the Chicago Transit Authority.

Ann Cresce

(LAW '94), Long Grove, Ill., joined Bcause as general counsel. Bcause is building the world's first full-stack cryptocurrency ecosystem, which will include a digital mining facility, a spot market, regulated derivatives exchange, and a clearinghouse.

Jimmy Akintonde

(ARCH '95), Chicago, is a member of the Lakeside Alliance, a joint construction venture that has been chosen to help build the Obama Presidential Center on the South Side.

Nancy Ardell (née Fox)

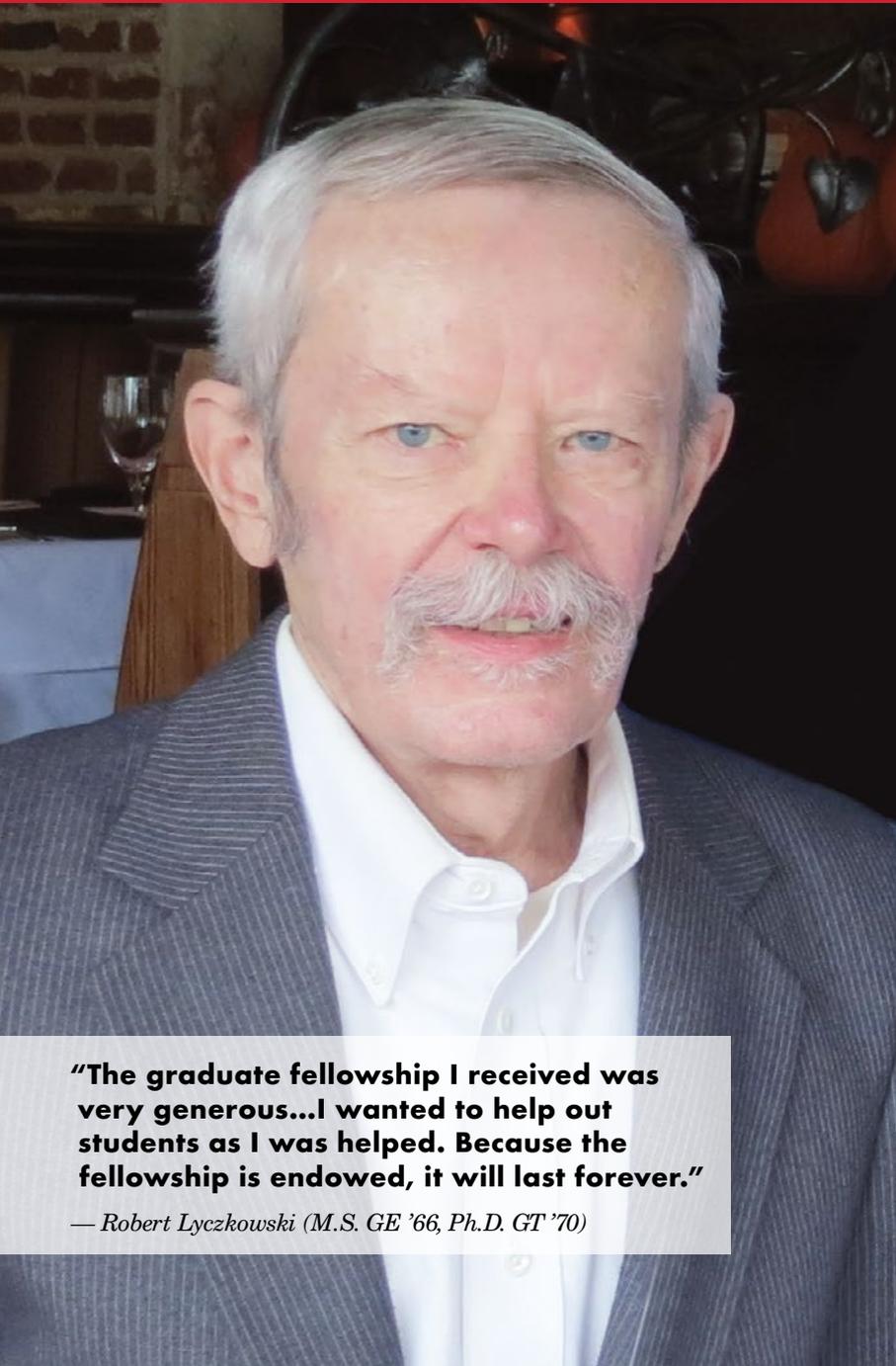
(LAW '96), Glen Ellyn, Ill., is executive vice president and general counsel of Enlivant. Previously she was senior associate general counsel at Northwestern Memorial Health Care.



Kathleen Lubke (née Pierucci)

(ME '96) and Dave Lubke (ME '96), Milan, Mich., had a baby girl, Maggie Lowetta, on February 7. The baby was welcomed home by her big brothers, Noah and Joey, and her big sister, Jessica.

The Legacy of a Good Neighbor



“The graduate fellowship I received was very generous...I wanted to help out students as I was helped. Because the fellowship is endowed, it will last forever.”

— Robert Lyczkowski (M.S. GE '66, Ph.D. GT '70)

If you have named Illinois Tech as a beneficiary in your estate plan through your will, trust, IRA, retirement plan, or insurance policy, please let us know so that we may acknowledge your generosity and include you in the Gunsaulus Society, which offers exclusive university events, lectures, and luncheons, as well as recognition for members in university publications.

Contact Dean Regenovich, senior director of major gifts and gift planning, at dregenovich@iit.edu or **312.567.5018** for more information.

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

An Institute of Gas Technology Fellowship allowed Robert Lyczkowski (M.S. GE '66, Ph.D. GT '70) to pursue his doctorate at Illinois Institute of Technology studying under Dimitri Gidaspow (Ph.D. GT '62), a leading expert in fluid dynamics and energy conversion. This experience opened the door to an exciting career working with energy companies across the country, ultimately securing Lyczkowski a research position at Lawrence Livermore National Laboratory. Lyczkowski later moved on to Argonne National Laboratory, where he remained for decades. He joined Illinois Tech's Gunsaulus Society by making a bequest in his will to create two doctoral fellowships—one named in honor of Dimitri Gidaspow, the other in his own name.

Benefits of an 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.*

Gunsaulus | SOCIETY



Alan "Bud" Wendorf (ME '71) and his wife, Suzanne [center], enjoy a dinner honoring his time as chairman of the Illinois Tech Board of Trustees. Joining him were President Emeritus John Anderson and his wife, Pat [left], and President Alan Cramb and his wife, Anna. Photo: Bonnie Robinson



The School of Applied Technology hosted the DuPage Area STEM Expo in February, giving families the opportunity to engage in hands-on exploration in science, technology, engineering, and math. Illinois Tech alumni were invited to enjoy a continental breakfast and were given early access to the STEM Expo.

Gregory Mimms (M.S. EM '97), Greenwich, Conn., vice president of environment, health, safety, and sustainability at Xylem Inc., is celebrating his company's #10 ranking of *Barron's* 100 Most Sustainable Companies.

Jorge Ramirez (LAW '97), Lemont, Ill., joined GCM Grosvenor, the Chicago-based firm billed as one of the "world's largest independent alternative-asset management firms," as its managing director.

Patrick Rush (FMT '97, M.B.A. '98), Greensboro, N.C., chief executive of Triad Financial Advisors, was named to *Barron's* America's Top 1,200 Financial Advisors. He and Triad Financial Advisors were ranked #7 in North Carolina, the highest ranking of any firm in the Triad region. This is the second consecutive year Rush has received this honor.

Robert Brevelle (CS '98, M.S. '98), Rowlett, Texas, has been appointed chief executive officer of Juice-BX, a leading provider of charging solutions for smart devices, electric vehicles, and drones. He is also managing director

of the venture capital firm Startup Evo and the president of the Dallas Chapter of the Association of Old Crows.

William Dec (LAW '99), Chicago, was featured on an NBC segment of *Megyn Kelly Today* in May. Dec recently opened a Sunda restaurant in Nashville.

Harper Ko (LAW '99), Las Vegas, was appointed executive vice president, chief legal officer-general counsel of Everi Holdings Inc. She has more than 17 years of corporate legal and regulatory compliance experience in the casino gaming industry and has received accolades such as the Rising Star Award by Great Women in Gaming.

Christiana Lawson (M.S. EM '99), Ankeny, Iowa, chief communications officer of InnerPrize Group, is working with families to create children's educational materials for community sustainable development.

2000S

Steven Beitzel (CS '01, M.S. '02, Ph.D. '06), and **Amanda Kastern** (M.P.A. '06),

Hillsborough, N.J., welcomed Eleanor to their family in April. At 20 inches in length and 7 lbs. 4 oz., the baby joined big sister Abigail, 7, and big brothers Nathaniel, 5, and Samuel, 2.

Hazem Dawani (CPE '01), Chicago, has been appointed chief executive officer of Predata, a predictive analytics platform that anticipates the risk of future events. He is a member of the Stuart School of Business Board of Advisors.

Andrew Mills (AE '03), Oakland, Calif., co-authored the article "As More Solar and Wind Come Onto the Grid, Prices Go Down But New Questions Come Up," published on The Conversation website, which offers commentary and debate on the issues affecting the world. The article was also distributed by the *Associated Press*.

Robert Reiter (LAW '03), Orland Park, Ill., is the newly elected president of the Chicago Federation of Labor.

William Gibbs (LAW '04), Chicago, has been selected to the advisory board of The Mike Adame Project: Rise Above, a new initiative

to provide tools, resources, and support to patients living with symptoms of Chronic Traumatic Encephalopathy.

Yu Wang (Ph.D. CS '04), Charlotte, N.C., was recently elevated to Institute of Electrical and Electronics Engineers Fellow for his contributions to topology design and performance optimization in wireless networks.

Virgil Abloh (M.A.S. ARCH '06), Paris, France, founder of the label Off-White, was named menswear designer of the fashion house Louis Vuitton in March. He is Louis Vuitton's first African-American artistic director.



Eric Choi (LAW '07), Glenview, Ill., was named partner at the Neal Gerber & Eisenberg litigation firm. His practice focuses on complex civil litigation matters, including licensing, breach of contract, compliance with consumer protection laws, tort defense, and insurance recovery.

ALUMNI NEWS

Christopher Jones

(AE '07, Ph.D. BME '14), Malden, Mass., launched a medical device company, HD LifeSciences, which develops 3-D printed titanium orthopedic implants. He is also mentoring other startups (notably oral cancer detection in India) and is launching an artificial intelligence startup, leveraging his neuroscience and robotics background.

Juan Morado

(LAW '07), Chicago, is president of the Hispanic Lawyers Association of Illinois. He is of counsel at Benesch, Friedlander, Coplan & Aronoff.

James Rotella

(ARCH '07), Lisle, Ill., wrote the article "3 Ways Multi-User VR Will Enhance the Design Work of the Future," which was published on *ArchDaily*.

Andrew Swantek

(AE '07, ME '07), Chicago, has been at Illinois Tool Works as a principal research analyst focusing on strategic research and development efforts for its various divisions since 2015. Previously, he was a postdoctoral appointee at Argonne National Laboratory in the X-ray fuel sprays group in the Center for Transportation Research. Swantek received an M.S. and

a Ph.D. in aerospace engineering from the University of Illinois at Urbana-Champaign.

Margaret Battersby Black

(LAW '08), Chicago, is a founding member and the inaugural chair of the new Women's Caucus of the Illinois Trial Lawyers Association. She also secured a \$4.1 million Illinois Nursing Home Care Act verdict in July 2017, a record Illinois verdict for a nursing home case.

Anthony Carfang

(AE '08, CS '08), Oklahoma City, Okla., works at Boeing OKC with his wife, Jennifer Ryu Carfang. They are expecting their first child in November. He earned a Ph.D. from the University of Colorado, with a focus on unmanned aircraft communication systems.

Cheryl Balough (née Dancey)

(LAW '09), Chicago, was appointed chair of the American Bar Association Business Law Section Cyberspace Law Committee. She is a principal in a boutique law firm, serving as outside general counsel to small- and mid-size businesses and protecting clients' intellectual property. Balough also teaches Copyright Law at Chicago-Kent College of Law as an adjunct professor.



Rowe Family College of Architecture Dean Endowed Chair Michelangelo Sabatino [at podium] spoke at the 132nd celebration of Ludwig Mies van der Rohe's birthday. More than 200 people gathered to celebrate the pedagogy of Mies; to hear a panel discussion; and to view an exhibition of original drawings, collages, and models at this annual event hosted by the Mies van der Rohe Society. Photo: Bonnie Robinson



Alumni from the Class of 1968 attended their 50th reunion during Homecoming & Reunion Weekend on September 21-22. Each member of the class received a golden medallion as part of their induction into the Golden Society.



[Left to right] John P. Calamos Sr. (ECON '63, M.B.A. '70), President Alan W. Cramb, Janice Nadler, and Christine Himes, dean of Lewis College of Human Sciences, posed with the newly invested John & Mae Calamos Endowed Chair in Philosophy, J. D. Trout [seated], after his investiture ceremony. Photo: Michael Goss



The Illinois Tech Young Alumni Council and Chicagoland Alumni Chapter co-hosted a bowling event earlier this year.

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

ALUMNI AWARDS 2018



1



2



3



4

PHOTOS: BONNIE ROBINSON

2018 Alumni Awards Winners

Alumni Medal

Victor A. Morgenstern (CHE '64)

Alumni Service Award

Michael E. Hill (CS '82)

Collens Merit Award

Joel D. Krauss (MATH '71)

Galvin Award

James E. Cowie

International Award of Merit

Victor Y. Tsao (M.S. CS '80)

John J. Schommer Honor I Award

Michael W. Mikula (MET '91, M.S. MME '93)

Lifetime Achievement Award

Robert H. "Pete" Bragg II (PHYS '49, M.S. '51, Ph.D. '60)

Vice Admiral Diego E. Hernandez, Retired (PSYC '55)

Outstanding Young Alumnus/ Alumna Award

Rebecca A. Buchmeier (M.ARCH. '06)

Mark S. Haraburda (M.S. FM '04)

Mayank Kashyap (Ph.D. CHE '10)

Professional Achievement Award

Charles J. Carter (Ph.D. CE '09)

Nestor J. Zaluzec (PHYS '73)

1. [Left] Michael P. Galvin (LAW '78), a member of the Illinois Tech Board of Trustees, presented the Galvin Award, named for his late father and longtime Illinois Tech benefactor Robert W. Galvin, to fellow trustee Jamie Cowie [center], in recognition of his contributions to Illinois Tech. **2.** Victor A. Morgenstern (CHE '64), the 2018 recipient of the Alumni Medal—the Alumni Association's highest honor—stands with his wife, Faye, alongside the names of previous medal recipients. **3.** Guests gathered to recognize the achievements and contributions of the 2018 Alumni Award winners. **4.** This year's winners came together for a photo to mark the occasion of becoming part of the Alumni Awards tradition, which dates back 70 years.

2010S

Robert Boyer

(BME '10), Gladstone, N.J., director of product development at HS Design, and his team received the 2018 European Product Design Award Gold and the International Design Award Gold for the Canfield WB360, a 3-D imaging system for pigmented lesions and distributed diseases. Boyer also spoke at the MDTX and BIOMEdevice conferences discussing various topics in the field.

Michael Dunn

(CS '10, M.P.A. '11), Dayton, Ohio, graduated from the Air Force Institute of Technology with an M.S. in Cyber Operations, moved to Keesler Air Force Base, and started a new position as an instructor for U.S. Air Force Undergraduate Cyber Training. He and his wife, Amber, welcomed their third child, Ender, in June.

Christopher Kuehn

(M.A.S. BIOL '10), Kirkland, Wash., is a senior program manager in portfolio strategy and management at

Seattle Genetics, supporting a late-stage antibody drug conjugate candidate for treatment of cervical cancer.

Kat Weissman

(CE '10), and **Marc Lain** (M.S. EE '12), Chicago, were married in January.

Jesse Footlik

(LAW '11), Chicago, is a partner at Peck Ritchey. He was named an Illinois Super Lawyers Rising Star and selected by *Leading Lawyers Magazine* as a top Emerging Lawyer in

Elder Law and Trust, Will, and Estate Planning Law.

Grant Shackelford

(LAW '11), Alexandria, Va., associate with Sughrue Mion, co-authored the case law reference "The Essential Case Law Guide to PTAB Trials," which is the first comprehensive text on decisions of the United States Patent and Trademark Office regarding the newest form of administrative law practice before that agency. It was published by the American Bar Association.

Rebecca Charles

(LAW '17), Evanston, Ill., joined Swanson, Martin & Bell as an associate.

Bryce Hensley

(LAW '17), Chicago, joined Romanucci & Blandin as an associate.

Paige Mass

(BME '17), Minooka, Ill., began a position performing research and design engineering in the cardiology department at Children's National Heart Institute shortly after graduating. As a credit to her work in senior design at Illinois Tech and her work at Children's National, Mass now has four patent applications to her name.

Nirja Shah

(BME '17), Buffalo Grove, Ill., visited Nicaragua with Illinois Tech MEDLIFE, connected with patients, and aided in setting up medical camps. She also began her dream job as an engineer at Baxter.

Kathleen Karnig Sullivan

(LAW '17), Chicago, joined Swanson, Martin & Bell as an associate.

Attendee

Sandra Biedron

Chicago, was honored by the Institute of Electrical and Electronics Engineers (IEEE) Nuclear and Plasma Sciences Society with the Particle Accelerator Science and Technology Award for "broad impact in accelerator science and technology." She was also featured in the March issue of *NPSS News*, a publication of the IEEE.

Share Your News!

We want to hear from you. Send us your class note by visiting alumni.iit.edu/class-notes. Submissions may be edited for style and brevity.

Spotlight



PHOTO COURTESY OF JOHN D. NELSON

John D. Nelson (CE '60, M.S. '62. Ph.D. '67)

Principal Geotechnical Engineer and Expert Witness

John D. Nelson, co-founder of the consulting firm Engineering Analytics, Inc., is long familiar with the click-click-click of a Geiger counter. One of his areas of expertise is tailings dams, vast reservoirs for storing the byproducts of mining activities including the mining of uranium. His current project is on the failure of the Mount Polley Tailings Dam in British Columbia, still undergoing litigation. In 1979 he lent his expertise to what is considered to be one of the largest accidental releases of radioactive material in United States history.

"I was the chief technical reviewer for the U.S. Nuclear Regulatory Commission on the failure of the Church Rock Uranium Mill Tailings Dam in Church Rock, New Mexico," says Nelson, adding that the probable cause of the failure was due to a large settlement of collapsible soils along and under the dam embankment. "Collapsible and expansive soil problems are ubiquitous in the western U.S. but also exist and cause problems in the Midwest."

Nelson began working at Armour Research Foundation (IIT Research Institute) before beginning a 39-year academic career at the Asian Institute of Technology and Colorado State University (CSU). He retired from CSU in 2007 and started Engineering Analytics in 2008. He is the senior author of *Foundation Engineering for Expansive Soils* (Wiley & Sons, 2015), which focuses on the identification of expansive soils, remediation efforts, and foundation design. He has served as an expert witness on numerous cases dealing with failures of tailings dams and foundations on collapsible or expansive soils. He and his wife, Darlene, raise Texas Longhorn cattle on their ranch in Colorado. —Marcia Faye

Akshar Patel (CE '13)

knows what alumni want, and he's making it his mission to ensure that they get it. From the first moment he came to campus as a senior in high school, Patel, who wanted to study architecture, knew Illinois Tech was the place he was meant to be.

"I took the train, got off the Red Line at 33rd Street, saw the skyline, and that was the moment I knew—if I wanted to learn how to build buildings, this was the place to learn how to do it," he says. Although he ultimately ended up studying civil engineering rather than architecture, Patel says he wouldn't trade his college years for anything. Which is why it's no surprise he ended up coming back to his alma mater two years later to accept a career development coach position in the Career Services Office.

"After graduation, I went to Vermont and began my career in the undergraduate admissions office at Champlain College," Patel says. "I had started a master's program at the University of Vermont and planned to finish my master's thesis remotely, from Chicago. I figured I could finish the writing while working at Illinois Tech, then fly back to Vermont to defend it, no problem. It actually took me a year to finish, but I'm so happy I stuck with it."

Patel says his dream was to come back to Illinois Tech to work after he graduated, and he was blown away by the sense of connection he felt when he returned in 2015.

"[It] was an exciting time to be at Illinois Tech, with President [Alan] Cramb's inauguration and the first Global Spirit Day," he says. "It was fun to see those things through a different lens as a staff member."

As a career development coach, Patel worked with students and alumni to build connections and networking opportunities. He helped recruit companies to the career fair events and coached students about their futures. But Patel knew he wanted more.

"As a career coach, it was difficult to see alumni only come back to the university when they needed help. I wasn't seeing alumni celebrate their successes and talk



Building Bridges Between Alumni

about the great things they've done," he says. "Our alumni are doing amazing things, but they don't always think about how they can come back to share their news."

Patel recently saw an opportunity to change that when he accepted a new role at the university as director of alumni engagement and giving programs in 2018. "I see this position as an opportunity to help alumni connect with the university because I'm an alumnus myself; I understand what alumni are looking for. This is personal for me. It's less of a job and more of engaging with people who share the same background as me," Patel says.

This fall he will begin traveling around the country hosting alumni events in various regions.

"The Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship is the most exciting thing happening on campus right now," he says, "and the plan is to bring that excitement on the road and to share the new building

and programs with people who can't necessarily come to campus to see it in person." Patel also plans to increase college collaboration and grow the alumni online community and available resources.

"The thing I'm most excited about in this new position is the relationships that I'll build with alumni. I'm looking forward to being able to connect them with their fellow alumni and students—future alumni," Patel says. "I hope that my phone will be filled with new contacts and people I can reach out to who want to make Illinois Tech an even better place."—Rebecca Scherer

Have an idea for an alumni engagement opportunity? Let us know!

Contact Akshar Patel at apatel34@iit.edu or 312.567.7149 to discuss new ideas for alumni events, collaboration opportunities, and networking initiatives. Visit alumni.iit.edu to view alumni resources and connect with the Alumni Association online.

In Memoriam

Alumni

Robert Abrahamson ME '40
Paul Beckmann ME '41
John Ferraro ARSC '41, Ph.D. CHEM '54
Bernard Rasof ES '41
Wayne Ault FPE '42, EE '43
Robert Erickson ME '42
Jean Michels ARSC '42
Wolfram Futterer ME '43
Richard Hameister ME '43
Marcus Heidmann ME '44
Robert Misch CHEM '45, M.S. '47, Ph.D. '50
Edward Schaschl CHE '45
Joseph Calabrese CHE '46
Harold Burkart EE '47
Martin Gabriel ME '47
William Goldman CE '47
Carl Johnson ME '47
Arnold Tanzman ME '47
Norman Eslinger ME '48
Kenneth Gerleman CE '48
Dorothy Turck Hill ARCH '48
Herman Laude ME '48, M.S. '55
Robert Walsh EE '48
Fred Bernstein EE '49
Rodney Dabe CE '49
Herbert Gertz MATH '49
Ronald Morris EE '49
John Morrison MATH '49
Joseph Nelson ARCH '49
John Washburne ME '49
Lois Bey CHE '50
Oscar Fisher CHE '50
Walter Henderson PHYS '50
Arthur Krieg BE '50
H. Carl Recknagel ME '50
Victor Sirwinski EE '50
Merwyn Brodsky M.S. CHEM '51, Ph.D. '55
William Hayes EE '51
Henry Lokay EE '51
John O'Brien PHYS '51
Everett Ottoson ME '51
Augustine Sheng M.S. ME '51, Ph.D. UNK '60
Laddie Vitek CE '51
Richard Yahrmarkt ME '51
William Feliss CE '52
William Gross ME '52
Charles Marner ME, CE '52
Lambert Neighbour EE '52
James O'Leary ME '52
Eugene Orłowski CHE '52
Rita Biagiotti HE '54
Frederic Bisshopp PHYS '54
Gerard Fairfield LAW '54
Robert Malhiot M.S. PHYS '54, Ph.D. '57
Stanley Mazurek ME '54
Carl Vespa M.S. PHYS '54
Frederick Wunder M.S. ME '54
Eleanore Fredrick BE '55
Edward Matus LAW '55
Arthur Odegard ME '55
Robert Rosencranz IE '55, MAE '69
Robert Stein Ph.D. CHEM '55
Vincent Cushing Ph.D. PHYS '56
James Jung LAW '56
Frank Chloupek CHEM '57
Armand Hess IE '57
Gary Peterson IE '57
Alan Schick EE '57
Wayne Schmuhl CHEM '57
Jurgis Stuopis CE '57
Marvin Warshay M.S. CHE '57, Ph.D. '60
Wilson Frost LAW '58
Shen-Ching Lee M.S. ME '58
Waldemar Stopkey M.S. CE '58
Joseph Bronec ME '59
Richard Frey LAW '59
John Higgins FPE '59
Richard Kastel IE '59
Shi Wu M.S. ME '59
Carmen Chiappetta EE '60
Eugene Dechter LAW '60
Richard Guelfi CHE '60, M.S. '65
Joseph Gurnik EE '60
Rolf Hofstad EE '61
Edward Kaschins BE '61
Fred Kayne CHEM '62
David Wunder LAW '62
Bertram Christoffel ARCH '63
Robert Kempf LAW '63
L. Stanton Dotson LAW '64
Richard Noel PS '64
Eldon Jann EE '65
Marion Skalka EE '65
Melvin Wilson ARCH '65
William Clover MATH '66, M.S. '68
Oldrich Fryc ME '66
Joseph Cassidy ME '67
Robert Dennen Ph.D. PHYS '67
Richard Joyce MATH '67
Dwight Adams LAW '68
Charles Jaworski PSYC '68
Frederick Kubicek PS '68
Edward Rauch EE '68
Robert Townsend M.S. SOCT '68
Emil Biedron MATH '69
Eui Choe Ph.D. CHEM '69
Albert Jones MATH '69
Edward Marozas MET '69
Michael O'Mahoney PSYC '69,
M.S. REHB '70, Ph.D. PSYC '72
Ethel Wayerski M.S. MATH '69
Stephen Ledvina PHYS '70
Gerard Seyler MAE '70, M.B.A. '86
Niranjan Shah IE '71
Donald Forester LAW '72
Thomas O'Gara LAW '72
William O'Malley LAW '72
Joseph Babbo M.S. COUN '73
Roger Flynn M.S. CST '73
David Postle M.S. COUN '73
John Sereikas MGT '73
Michael Sheehan EE '74
Joseph Zameic LAW '74
James Henson LAW '75
Daniel Lata M.S. MT '75
Raymond Baker LAW '77
Deborah Lojkutz EE '77
Richard Zeck CS '77, M.S. '79
Reino Warren M.S. OR '78, Ph.D. MSC '81
Myrna Knepler Ph.D. LING '80
George Malek ME '81
Charlotte Keeton LAW '82
Thomas Mackie M.S. BIOL '82
Jordan Meschkow LAW '82
Ernest Miller LAW '82
James Podgers LAW '84
John Preston M.B.A. '85
Branch Pierce M.S. ENVE '87
Daniel Ryan ME '87
Steven Rizzi LAW '88
Lois Hudson M.P.A. '89
Paul Bauer M.P.A. '92
Gary Jackson M.S. EE '93
Camelia Zlatea Ph.D. CS '00
Rhonda Crawford LAW '03
Raja Gaddipati LAW '06
Si-Yong Yi LAW '06

Attendee/Non-Degreed

Jack E. Bridges
Arnold Goudreau
John Kahoun
Conrad Nielsen
Walter Soderstrom
Charles Weitzenfeld

Obituaries

Vernon Armour

Lake Forest, Ill., Illinois Institute of Technology Life Trustee, was the great-grandson of Philip Danforth Armour, who responded to Reverend Frank Wakely Gunsaulus's "Million-Dollar Sermon" with a donation in that amount to found Armour Institute, the predecessor to Armour College of Engineering. Vernon Armour had a career in investment management and was active in various civic organizations in Chicago and Lake Forest. Vernon was a member of Illinois Tech's Philip Danforth Armour Society, which was named in honor of his great-grandfather and recognizes families who have made transformational gifts of \$1 million or more in support of the university's mission.

Bahman Atefi

McLean, Va., served as president and chief executive officer of IIT Research Institute (IITRI) before becoming president and chief executive officer of Alion Science and Technology Corporation in 2002. He spent 15 years at Science Applications International Corporation, last serving as senior vice president of the company's Energy and Environment Group, before joining IITRI. Atefi formed the new employee-owned Alion from the sale of the majority of IITRI's assets. In 2017 Atefi left those positions to assume the role of vice chairman of the Alion Board of Directors. He was elected to the Illinois Tech Board of Trustees in 2003.

Charles Bauer

Norridge, Ill., professor emeritus, began teaching computer science courses at Illinois Tech in 1962 and retired from the university earlier this year. One of Bauer's notable achievements was coordinating a noncredit Saturday program in the 1960s to help advance computer education for high school students; more than 15,000 students and 1,200 teachers participated. Bauer also taught Introduction to Programming to Illinois Tech students and wrote a number of self-instruction guides on programming languages. All four of his children are Illinois Tech alumni including Matthew Bauer (MATH '86, M.S. '87), a senior lecturer of computer science at the university.

Frank Crossley

CHE '45, M.S. MET '47, Ph.D. '50, Attleboro, Mass., was recognized as being the first African-American United States Navy officer, the first person to earn a Ph.D. in metallurgical engineering at Illinois Institute of Technology, and the first person of African ancestry in the world to earn a Ph.D. in the field. Crossley entered into the historic naval V-12 program at Illinois Tech, and his outstanding leadership as an officer influenced then-President Harry S. Truman to ban discrimination in the military in 1948. As a metallurgist, Crossley obtained seven patents and invented a new class of titanium alloys.

Dolores Hanna

LAW '52, Chicago, was an award-winning trademark attorney who worked to encourage the advancement of women in the legal profession throughout her career. She served as the first woman president of the International Trademark Association among other organizations and chaired the federal Trademark Review Commission in the 1980s. Hanna founded the trademark practice at Bell, Boyd & Lloyd (now K&L Gates) and retired from the firm in 2006. Chicago-Kent College of Law honored Hanna with the Professional Achievement Award in 1995 and named her among the 125 Alumni of Distinction in 2013.

Richard Jaffee

Chicago, Illinois Institute of Technology Life Trustee, was president (1960) and then chief executive officer (1962) of Oil-Dri Corporation of America. He retired in 2001 and served as chairman until his passing. Before joining Oil-Dri, Jaffee, a certified public accountant, had a brief career at Deloitte & Touche and served as an officer in the United States Army. He was active in various civic and philanthropic efforts and received an honorary Doctor of Humane Letters from Illinois Tech in 2001.

Arthur Paul

Chicago, Illinois Tech attendee, was the founding designer and art director of *Playboy* magazine who created the iconic rabbit head that became the instantly recognizable symbol of the Playboy corporation, headed then by Hugh Hefner. Paul served in the United States Army Air Corps then enrolled at the Institute of Design, where he took courses for four years. The subject of numerous articles and a documentary slated for release later this year, Paul was the recipient of many awards including a Professional Achievement Award from the Illinois Tech Alumni Association in 1983.

Nicholas Thomopoulos

Ph.D. IE '66, Burr Ridge, Ill., served as a faculty member at Illinois Tech for 44 years and advised 32 Ph.D. students on the completion of their theses before retiring in 2010 as professor emeritus. He published more than 70 papers and 11 books including *100 Years: From Greece to Chicago and Back*, a memoir about growing up in a Greek immigrant neighborhood in the city. In 2009 Thomopoulos received the Outstanding Alumni Achievement Award from Illinois Tech. His wife, Elaine, and their three daughters are all Illinois Tech alumnae.



PHOTOS COURTESY OF IIT ARCHIVES

A Distinguished Past

Under Henry T. Heald’s presidency, Alumni Memorial Hall—a product of Ludwig Mies van der Rohe’s “almost nothing” philosophy—served as both an armory and a hub for the Naval Reserve Officer Training Corps from its opening in 1946 until 1972. Originally dubbed the Navy Building, it now houses the Department of Civil, Architectural, and Environmental Engineering, yet honors all Illinois Tech alumni who gave their lives in active military service. It is also a testament to the more than 40,000 individuals who completed defense-related training courses at the university from 1941 to 1943 as well as to those in the V-12 Navy College Training Program—a nationwide effort that gave aspiring officers the opportunity to earn bachelor’s degrees at civilian institutions of higher learning.

The building was last renovated in 1972 when it was converted to hold offices. Now standing alongside showcase facilities such as the new Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship and the transformed John T. Rettaliata Engineering Center, Alumni Memorial Hall is overdue for restoration and additional renovation and is one of President Alan Cramb’s highest fundraising priorities.



“Its slightly quirky assemblage of spaces—different from the other more classically organized buildings on campus—and its standing as the first of Mies’ classroom buildings make Alumni Memorial Hall a very special example of his principles. It reflects the beginnings of the structural expression, scale, and vocabulary that define the historic Mies Campus,” says Steven F. Weiss (ARCH ’73), principal of Weiss Architects. Weiss and retired corporate business leader Fred Dew (CE ’70) serve as co-chairs of the Alumni Memorial Hall fundraising committee. “The restoration of Alumni Memorial Hall is the next step in preserving Mies Campus and Mies’ heritage as both a great architect and a great educator,” Weiss adds. —*Marcia Faye*

Are you a World War II veteran or graduate of Illinois Tech’s V-12 program who would be willing to share memories of your experiences? Complete the form at alumni.iit.edu/alumni-hall to tell us your story.

MORE ONLINE

Navy Building Blueprint: moma.org/collection/works/162614



Elevate Education at Illinois Tech

Illinois Tech places a premium on experiential, hands-on, action-oriented learning. We believe this robust approach to education transforms our students into graduates who are uniquely equipped to create, solve, and innovate—people who will change the world.

Elevate at Illinois Tech connects undergraduates with out-of-classroom opportunities and other experiences that propel their education to new heights. From internships to immersive research to study abroad, Elevate programs empower our students to be dynamic leaders and innovators—knowers and doers.

All undergraduates from all majors can participate in Elevate in as early as their first year of study. Illinois Tech supports students with **awards of up to \$5,000 for qualifying programs.**

Chicago-area businesses and corporations can benefit from Elevate in several ways:

- ✓ By creating mutually beneficial partnerships and connections with local university talent
- ✓ By working with students and Illinois Tech faculty experts to help solve unique business challenges
- ✓ By envisioning new opportunities with the emerging workforce of the future



Undergraduates from all majors can participate in Elevate in as early as their first year of study. Illinois Tech supports students with awards of up to \$5,000 for qualifying programs.

Alumni can play an important role in the success of Elevate by making a gift to the program or by providing internships to Illinois Tech students.

You can make a gift, submit an opportunity, or learn more at go.iit.edu/elevate-mag.



**Students
need *your*
expertise.**



The Bridge

Advise Illinois Tech students who are interested in your career or industry, and connect with other alumni.

- 1** Create a profile in The Bridge in minutes or import your profile from LinkedIn.
- 2** Find members through search, curated recommendations, and communities.
- 3** Share advice with students and get career support from other alumni.

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Questions? Contact Akshar Patel at apatel34@iit.edu.