

FALL 2019

ILLINOIS TECH

Magazine

Sowing the Seeds of Innovation

**First-Person
Crusade for a Cure**

**Appetite for
Architecture**

Letter from the President



NOW, AS WE ARE deep into fall, I find myself thinking back to a celebration that coincided with the beginning of the season: the Illinois Institute of Technology Homecoming & Reunion Weekend 2019. The event's two days of activities for alumni, students, faculty, and staff included a 50th Reunion Breakfast, trolley tours, athletics events, and the Homecoming Carnival. In addition to welcoming members of the Golden Society as well as alumni who graduated in 1969, 1994, 2009, and 2018 back to Mies Campus, we held the Alumni Awards ceremony and reception.

The Alumni Awards, normally held in the spring, were added to Homecoming, which seemed a fitting backdrop to recognize alumni who have made substantial contributions to society, to their professions, and to their communities—including their alma mater. This year's event paid tribute to leaders in industries ranging from finance to engineering to medicine. We also honored an alumna who is undoubtedly our most "seasoned" awardee—Beatrice Lumpkin (M.S. MT '71), activist and educator. You can read her story, enjoy Homecoming & Reunion Weekend photos, and view the complete list of Alumni Award winners in this issue of *Illinois Tech Magazine*.

Our current student body is well on the way to earning alumni awards of their own one day. The 2019–2020 class of first-year students is one of the largest in the university's history and is reaping the benefits of new and strong

college leadership. Deans beginning during this academic year are Lance Fortnow of the College of Science, Reed Kroloff of the College of Architecture, Anita K. Krug of Chicago-Kent College of Law, and Jamshid Mohammadi (our longtime faculty member) of the Graduate College. We also welcomed seven new department chairs across campus. You can read short bios of the deans on page 2.

Another new member of the Illinois Tech community is Ernie Iseminger, vice president for institutional advancement. A proven leader in development and fundraising with a longtime career in higher education, Ernie is the right person to lead our efforts to support Illinois Tech as it takes its rightful place as one of our nation's premier tech universities. You will surely be hearing from Ernie in the near future.

This fall and throughout the year, when I consider the many individuals who comprise our great institution, from a 101-year-old alumna awardee to our newest students, I am proud. I look forward to another year of exploration, invention, and achievement.

Sincerely,

Alan W. Cramb

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Illinois Tech Magazine is published twice a year by the Office of Marketing and Communications.
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Send Letters to Illinois Tech Magazine

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10 West 35th Street, 13th Floor
Chicago, IL 60616

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Illinois Institute of Technology, also known as Illinois Tech, is a private, technology-focused research university. Based in the global metropolis of Chicago, Illinois Tech is the only university of its kind in the city. It offers 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 provides an exceptional education centered on active learning, and its graduates lead the state and much of the nation in economic prosperity. At Illinois Tech students are empowered to discover, create, and solve, and thus uniquely prepared to succeed in 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.



Features

10 Tech agriculture visionary **Craig Rupp** (M.S. EE '94) wants to give farmers the gifts of time and increased productivity by introducing them to autonomous field operations.

12 More than 20 years ago, Harvard investigator **Michael Retsky** (PHYS '61) made a career change into cancer research for entirely personal reasons.

14 The Chicago Police Department launches a mental health pilot program designed by officer **Catherine Sanchez** (M.P.A. '17).

16 With jobs at Blommer, Nestlé, and now, JB Cocoa, **Dan Kazmierczak** (MTM '01, CERT. FST '02, M.A.S. MTO '03) is living a chocoholic's dream.

18 Repurposed salsa jars as lights and broken speakers as custom trim are part of the design personality of **Charlie Vinz** (ARCH '04) and his Adaptive Operations studio.

20 Centenarian-plus 2019 Alumni Award winner **Beatrice Lumpkin** (M.S. MT '71) is still rallying in the name of social justice.



Departments

- 2 Letters
- 2 On Campus
- 6 Philanthropy News
- 7 Athletics
- 8 Research Briefs
- 22 Alumni News
- 36 Rewind

Read *Illinois Tech Magazine* online at magazine.iit.edu

On The Cover:

Craig Rupp (M.S. EE '94) at a friend's corn and soybean farm in Maple Park, Illinois



Letters

Slide Rules Rule

George Bob (TD '63), Grand Rapids, Michigan, shared his copy of the spring 2019 issue of *Illinois Tech Magazine* with James R. Carr, a professional engineer who sent the magazine a letter about his slide rule memories that were prompted by the article "Giant Slipstick Returns to Mies Campus." Carr says that his father (who worked with Ludwig Mies van der Rohe as a contractor) gave him his first K&E slide rule in about 1939. His wife sent him a 7-inch K&E Doric Model 9069 in 1951 while he served with the United States Naval Mobile Construction Battalion 3 Seabees in the Aleutian Islands; he still uses it today as a retiree. Carr recommends that slide rule fans read the article "Lament for the Slide Rule" by Robert Kanigel, which first appeared in *Johns Hopkins Magazine* in the late 1970s. (A reprint can be found at <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=5526356>.)

Who Dat?

A photo of retired faculty who visited Mies Campus for an annual luncheon prompted a question from Bob Rohde (M.S. PHYS '67, Ph.D. '70). What are their names? In case other readers were wondering the same thing, here is the photo again with the addition of names and in some cases, fields of discipline:



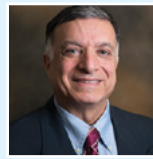
[Left to right] Tammy Lezotte (guest); Daniel Lezotte (psychology); Robert Irving (biology and physics); Margaret Huyck (psychology); Elaine Harrington (guest); Kevin Harrington (architecture); John Kallend (mechanical engineering); Cesar Sciammarella (mechanical, materials, and aerospace engineering; civil engineering); Jay Fisher (CHE '63); George Koutsogiannakis (computer science); Porter Johnson (physics); Marietta Land (guest); Peter Land (architecture); Jon Gorham (business); Vincent Turitto (biomedical engineering)

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TRANSITIONS

Illinois Institute of Technology welcomed four new deans to the university this past summer:



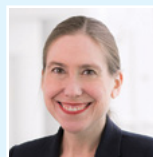
Jamshid Mohammadi was named dean of the Graduate College and vice provost for graduate academic affairs. With Illinois Tech for more than four decades, he served as associate dean of the Graduate College and professor of civil and architectural engineering.

For 14 years Mohammadi was the chair of the Department of Civil, Architectural, and Environmental Engineering. During his tenure, he was successful in receiving Accreditation Board for Engineering and Technology accreditation for the first time for the architectural engineering program.



Renowned architecture educator, consultant, and commentator **Reed Kroloff** joined the university as the Rowe Family College of Architecture Dean Endowed Chair. He has more than 30 years of professional experience as an

architectural educator and academic leader, which includes being dean of architecture at Tulane University School of Architecture and director of the Cranbrook Academy of Art and Art Museum. Kroloff is a principal at jones|kroloff, a design consultancy that helps clients envision their projects and select their designers. He previously served as editor-in-chief of *Architecture* (now *ARCHITECT*) magazine.



Anita K. Krug was selected as dean of Chicago-Kent College of Law and is the first woman to hold the office permanently in the school's history. She was most recently the D. Wayne and Anne Gittinger Professor of Law at the University of Washington School

of Law and held a variety of positions in the University of Washington system, including interim dean at the School of Law and interim vice chancellor for academic affairs at the University of Washington Bothell. Her academic research has focused primarily on securities regulation and the regulatory environment surrounding investment advisers, public and private investment funds, and other financial institutions.



Lance Fortnow, former professor and chair of the School of Computer Science in the College of Computing at Georgia Institute of Technology, was named dean of the College of Science. His research at Georgia Tech focused on computational

complexity and its applications, most recently in the field of micro-economic theory. Prior to Georgia Tech, Fortnow was a professor at Northwestern University and at the University of Chicago. His work on interactive proof systems and time-space lower bounds for satisfiability led to his election as an Association for Computing Machinery Fellow in 2007. He served as a National Science Foundation Presidential Faculty Fellow from 1992–98.



PHOTO: ANDREW CONNOR

Design Thinking Outside the Box

In late 2018 Institute of Design Studio Professor Martin Thaler asked his product design students to create something for a client one mile from Illinois Institute of Technology's Mies Campus. The class devised a system of modular, box-shaped seats for Boxville—a seasonal food, retail, and community space built from shipping containers at 51st Street and the CTA Green Line—that debuted over summer 2019.

The idea was to connect Boxville to surrounding communities through product design, but it evolved into much more. Master of Design students Matthew Impola, Justin Walker, and Yuqing Zhou, along with Chris Rudd, adjunct faculty member, and Denis Weil, ID dean, set up a design lab called “51 Futures” at Boxville. The group devised exercises to introduce design methods and frameworks to vendors and patrons, and helped them ideate potential improvements to Boxville and their community. Rudd says that the project introduced community members to key tools in design.

“The work I’ve traditionally done is community-empowerment design, and that’s kind of the approach we took,” says Rudd. “Design tools are helpful for understanding the world. We’ve had a lot of comments from folks saying, ‘I’ve never thought about this small thing in this big way.’ It allows us to look at things in a much broader and more holistic way.” —Andrew Connor

MORE ONLINE

Boxville: boxville.org

A New Light

Can a 63-year-old icon of Modernist architecture become a beacon for sustainable and efficient architecture?

Mohammad Shahidehpour, Distinguished Bodine Chair Professor of Electrical and Computer Engineering and director of Illinois Institute of Technology's Robert W. Galvin Center for Electricity Innovation, seems to think so. As a part of Galvin Center's evolving microgrid project—a self-sufficient and environmentally sustainable energy system on Mies Campus—Illinois Tech has installed a system of photovoltaic panels on the roof of S. R. Crown Hall.

More than a part of the microgrid, Crown Hall is its own nanogrid, a self-sufficient island-within-an-island that can function independently

of the grid in the event of a blackout by pairing the solar panel system with a 500 kilowatt-hour (kWh) lithium-ion battery from Tesla that is able to supply the building with enough energy to operate off the grid for up to eight hours.

On a daily basis, the setup reduces the building's reliance on electricity generated from emission-producing sources. Battery power can be used during the building's peak hours, when the cost of electricity is at its highest and solar conditions are ideal. It's also capable of providing what Shahidehpour refers to as “peak shavings.” When the energy load of the building exceeds 100 kWh, the battery feeds power to the building to cover energy usage up to 350 kWh.



PHOTO: DAVID ETTINGER

“Crown Hall was designed at a time when energy efficiency was not a critical subject for discussion, but now it's a common consideration in architecture design,” says

Shahidehpour. “Since it is a focal point on campus, we wanted to demonstrate that by putting solar panels on it. We can bring the old and new together.” —Andrew Connor

Illinois Tech Headliners



“It’s long been thought of as an indicator of how bad the air in a space might be.”

Brent Stephens, associate professor of architectural engineering, commenting on carbon dioxide levels in a room in a *New York Times* article about studies on the importance of indoor air quality

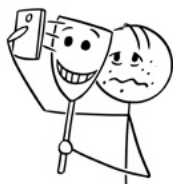
“It’s an incredibly fine line. You can be infringing on a patent without even knowing.”

Assistant Professor of Law **Greg Reilly** in *Automotive News*, discussing lawsuits filed against Ford Motor Co. in cases where it has been accused of developing copycat programs and parts



“If you can conceptually separate banana-ness from costume-ness, then the banana may be copyrightable. If I sculpted a banana, I could copyright it, but if it’s simply a costume, I cannot.”

Associate Professor of Law **Mickie A. Piatt** in *The Guardian*, in an article on a judge’s ruling over two banana costumes that are too similar in appearance



“What the research has shown is that even the ability to retouch, to use filters, to alter one’s body size or shape does not make people feel better about their appearance.”

Assistant Professor of Psychology **Alissa Haedt-Matt**, who was interviewed on WGN9 Morning News in the Medical Watch segment “The Impact of Selfies on Your Self-Esteem” for National Selfie Day



Ernie Iseminger Is New VP for Institutional Advancement

Illinois Institute of Technology welcomed Ernie Iseminger as vice president for institutional advancement on September 16. A leader in development and fundraising for more than three decades, he joined Illinois Tech from the Los Angeles Biomedical Research Institute, where he was involved in garnering a transformational gift of \$70 million this past year.

Having raised more than \$1 billion over his career at five separate institutions of higher education (Claremont McKenna College, Claremont Graduate University, Washington State University, Oberlin College, and George Washington University), Iseminger was honored by the *Chronicle of Philanthropy* as one of its “Six People to Watch in 2015,” as he closed out a \$635 million capital campaign at Claremont McKenna—the largest in the history of the liberal arts school.

Iseminger received a B.A. in social studies, history, and education from Washington State in 1991. He continues to serve his alma mater as a member of the Cougar Crew Alumni Association.

Illinois Institute of Technology Welcomes New Faculty

New faculty joining Illinois Tech in 2019–2020 include researchers and scholars in Armour College of Engineering, Chicago-Kent College of Law, the College of Architecture, the College of Science, and the Institute of Design.



Victoria Carmona
Clinical Lecturer
Chicago-Kent College of Law

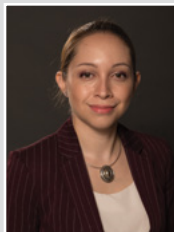
Lurene Contento
Visiting Professor
Chicago-Kent College of Law



Yuhan Ding
Senior Lecturer
College of Science

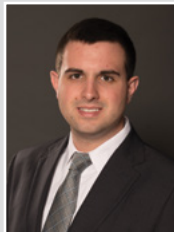


Rachael Ellison
Assistant Professor
Lewis College of
Human Sciences



Alexandra Franco
Visiting Assistant Professor
Chicago-Kent College of Law

David Franklin
Visiting Lecturer
Chicago-Kent College of Law



Matthew Gombeda
Assistant Professor
Armour College of Engineering

**Maria Altagracia
Villalobos Hernandez**
Assistant Professor
College of Architecture

Jesse Hopkins
Research Assistant Professor
College of Science

Andrew Ingram
Visiting Assistant Professor
Chicago-Kent College of Law

Anthony Kougkas
Research Assistant Professor
College of Science

Weikang Ma
Research Assistant Professor
College of Science



Yuanbing Mao
Professor and Chemistry Chair
College of Science



Jeff Mudrock
Visiting Associate Professor
College of Science

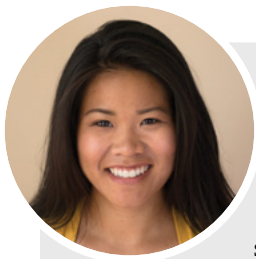
Arvind Sabu
Visiting Assistant Professor
Chicago-Kent College of Law



Ruth Schmidt
Associate Professor
Institute of Design

Career Path Plus

“Having a scholarship gave me the freedom to do what I’m doing today because I’m not sitting on a mountain of debt,” says **Margaret Lee (ME/EGMT ’17)**, a former Camras scholar [below, left] now living and freelancing in New York. This is a common sentiment from students in Illinois Institute of Technology’s scholarship and leadership programs; not only are students better prepared for positions of leadership, but the philanthropy that provides full-tuition scholarships enables them to fearlessly set their sights high, pursuing career paths both planned or unplanned. Meet some young alumni who rose to new heights because of the opportunities they received as students:



Lee double-majored in mechanical engineering and engineering management with an eye on a career in renewable energy. Her participation in Illinois Tech’s student-led theater troupe led her toward a successful career as a director/choreographer. Though her background in engineering helps her to creatively meld the artistic and technical side of theater-making, Lee is most grateful for the formative leadership experiences she found at the university. “At the end of the day, the best experiences at IIT aren’t always the ones in the classroom,” says Lee. “You have to constantly listen to what’s tugging at your heartstrings in order to have a fulfilling career and life.”



Chicago native and former M. A. and Lila Self Leadership Academy student **Cara Karter (CECD ’16)** says that her course of study was a natural extension of her “early and sustained interest in community, and in particular, this city.” Combined with her passion for working with teens, Karter discovered a career path in youth-focused evaluation at policy-research firm Chapin Hall, where she works to engage the community and policymakers to implement positive solutions for Illinois families. “I’m always trying to make sure that the evaluations that I design and influence elevate the voices of people who are typically underrepresented in the policy-making process,” says Karter.



Peter Chinetti (CPE ’15) studied computer engineering, but as a member of the first cohort of Duchossois Scholars, landed a summer internship at Goldman Sachs, where he discovered a passion for finance. He is now based out of Goldman Sach’s Hong Kong office. “[Finance] has a tighter feedback loop than most engineering projects. If your idea is 10 percent more effective, you’ll make 10 percent more dollars,” Chinetti explains.



Brandon Simons (EE ’18) wanted to channel his expertise into projects that could make a social impact. He now lives in Zambia as a Peace Corps volunteer, applying aquaponic farming practices he developed through research and the Interprofessional Projects (IPRO) Program at Illinois Tech. As the youngest-ever member of the Leadership Academy, Simons received guidance from his older peers and discovered a passion for encouraging other STEM students to seek out leadership positions. “Sometimes STEM students seem almost afraid to step up and take that leadership position,” says Simons. “How many people in Congress have a STEM background?”
—Joseph Giovannetti



Howell a Home Run on the Field, In the Classroom

The traits that make Ted Howell stand out on the baseball diamond for Illinois Tech are the same reasons he excels in the classroom, so it's not hard to understand why Howell became the Scarlet Hawks' first Division III Google Cloud Academic All-American.

"He's really smart, and he's a generous person," Illinois Tech baseball coach Ed Zeifert says, adding: "He treats the guys on the team that way, as if they're family. If they're struggling in class, he's there to help them. He's a special human."

Howell (ME/M.S. MAE 4th Year) scored academic All-America honors after earning a 4.0 grade-point average during the 2018–19 academic year as an accelerated master's engineering student. All the while, he hit .295 with 28 RBIs and a team-best eight home runs during what Zeifert says was a breakout season last spring.

Beyond his academic activities—such as an Inter-professional Projects (IPRO) Program course that has him debating a career making medical devices to "do something that will have more of a practical impact and make people's lives better"—managing his time to ensure he stays successful in both arenas is no easy task when you consider that much of Howell's spring semester features him playing four baseball games each weekend.

"I work really hard at trying to do both of those things really, really well," Howell says, adding: "It feels validating to be recognized for both."

Men's Tennis Aces Test

Making the National Collegiate Athletic Association Division III national tournament was a needed first step for an Illinois Tech men's tennis program entering its third season this spring, coach Erik Scanlan says. Bursting through that barrier in May was a "breakthrough." But Scanlan is focused on building upon that success as the program aims to triumph on the court and in the classroom.

"We're working toward bigger and better things than just winning our conference and trying to make the national tournament," says Scanlan, who has led the Scarlet Hawks men's and women's tennis programs since they began play in 2017–18. "That's a step in the right direction, but that's not why we get out of bed in the morning and what we're trying to do with the program. What I was able to see, just growth-wise, from both players individually and from the team, I thought was phenomenal."

The men's tennis team finished the season unbeaten in Northern Athletics Collegiate Conference play, losing just four matches along the way. It clinched the first NCAA Division III national tournament berth for the Illinois Tech athletics department when it won the NACC tourney title with identical 5-0 victories over Edgewood College and Concordia University Wisconsin, respectively. The Scarlet Hawks fell 5-1 to Rose-Hulman Institute of Technology in the first round of the national tournament.

"It's an honor. It's humbling in a way just to know that we were able to achieve it. We're very honored to do it. We don't look at it that we were first," Scanlan says, adding: "Without the department, without the other coaches, without the support of everyone and the student body, we wouldn't be where we are. We're just the first of many, I'm sure of that." — *Andrew Wyder*



The Illinois Tech women's lacrosse team finished a strong season with a 13–8 loss to Aurora in the Midwest Women's Lacrosse Conference tournament semifinals. The Scarlet Hawks (11–5) were one of four teams to qualify for the conference tournament after finishing second in the 14-team MWLC. Led by MWLC Attacker of the Year Shanie Scoles (BME 3rd Year), three Scarlet Hawks players earned first-team All-MWLC honors including Jennifer Young (CE/M.E. TE 5th Year) 09/25 and Alyssa DeLuca (ME/M.E. MAE 5th Year).

PHOTO: STEPHEN BATES, WCS PHOTOGRAPHY



Professor Aleksandar Ostrogorsky examines indium iodide crystals in his laboratory on Mies Campus.

Growing Crystals Onboard the ISS

Nuclear radiation on Earth may soon be more easily detected thanks to investigations launched into low Earth orbit on the International Space Station (ISS). Aleksandar Ostrogorsky, professor of mechanical and materials engineering at Illinois Institute of Technology, is the principal investigator of an ISS research project dedicated to studying the effects of microgravity on the production of single semiconductor crystals. ¶ The 2019 experiments are conducted in a furnace built in 2002 for Ostrogorsky's project "Solidification Using a Baffle in Sealed Ampoules" (SUBSA). The SUBSA furnace is roughly the size of a small microwave and was designed to operate inside the Microgravity Science Glovebox, a major science facility where astronauts can safely manipulate the experiment by inserting their hands into a pair of built-in gloves that reach inside the box.

¶ SUBSA is used to study the impact of microgravity on the formation of semiconductor and scintillator crystals. Semiconductors power electronic devices such as computer chips, circuits, medical imaging devices, and detectors of nuclear and infrared radiation. ¶ Typically, crystals benefit from growth in microgravity because the reduced melt motion in space allows for fewer imperfections during solidification. ¶ "On Earth, buoyancy continuously deforms and moves fluids in complex manners, making it difficult to study how materials behave when they solidify from the melt to form semiconductor crystals," Ostrogorsky explains. ¶ The material used in the present study is indium iodide, which is a heavy metal halide and promising semiconductor material for detecting nuclear radiation. Indium iodide does not contain toxic elements and is currently the only

detector material suitable for use on the ISS. ¶ This expansive investigation involves contributions from Volodymyr Riabov (M.S. MAE '16, MAE Ph.D. candidate) studying melt growth, which is a slow, precise solidification of the pure material, while Martin Volz, project scientist from NASA's Marshall Space Flight Center, and Arne Croell, professor at the University of Freiburg in Germany (currently on leave at the University of Alabama in Huntsville), are focusing on crystal growth by vapor transport. ¶ Ostrogorsky shares, "The goal of our experiment is to understand the formation defects in microgravity in order to improve the production process on Earth." ¶ Three melt growth experiments and one vapor transport study were conducted on the ISS from March through April 2019. Each melt growth experiment lasted 24 hours, while the vapor growth continued for 30 days. These crystals recently landed on Earth and are being used for testing and fabrication of gamma-ray detectors in the fall. Two more experiments were conducted in September using the SUBSA furnace, which was brought down from space for minor repairs and maintenance. ¶ Two additional experiments are planned for the ISS in November 2019.
—Mary Ceron-Reyes

Aleksandar Ostrogorsky, "Detached Melt and Vapor Growth of InI in SUBSA Hardware," Center for the Advancement of Science in Space (managers of the International Space Station U.S. National Laboratory) (\$299,827)



Space crystals in their protective cylinders

MORE ONLINE

Upward | Magazine of the ISS:
upward.issnationallab.org/using-space-to-improve-radiation-detection



PHOTO: DAVID ETTINGER

Research Chemist Deborah Millard and IITRI President and Director David McCormick discuss progress being made in the sleep apnea drug project.

From Apnea to Zzzs Relief

An IIT Research Institute (IITRI) scientist and Illinois Institute of Technology biology professor is working to provide convenient relief to some of the estimated 22 million Americans who suffer from sleep apnea. David McCormick, IITRI president and director, is collaborating with University of Chicago Harold Hines Jr. Professor of Medicine Nanduri Prabhakar to develop a sleep apnea pill that becomes active in about 15 minutes and lasts for 7 to 8 hours. ¶ More than contributing to poor shut-eye, apnea is a common yet potentially dangerous disorder in which normal breathing is suspended, especially during sleep. United States Food and Drug Administration-approved treatments for sleep apnea include oral appliances, but the most common in use is the continuous positive airway pressure (CPAP) machine, which uses mild air pressure to keep the body's airways open. The FDA has not yet approved a pharmaceutical to treat sleep apnea, so if McCormick's drug becomes commercially

available, it would be pioneering. ¶ "The problem with CPAP machines is that about half of the people quit using them after a couple of months," McCormick says. "They're noisy. They're uncomfortable. They're hot. And they don't always work." ¶ A five-year, \$8.6 million grant from the National Heart, Lung, and Blood Institute (part of the National Institutes of Health) is supporting the development and testing of the potential pill. McCormick is also seeking venture capital to complete the filing of an Investigational New Drug application to the FDA. Clinical trials are expected to begin sometime in 2020. ¶ "These people will get more sleep. They will have many fewer apneas, and they're going to wake up much less often during the night," says McCormick.—Casey Moffitt

David McCormick and Nanduri Prabhakar, "Therapeutic Targeting of Carotid Body Chemoreflex for Sleep Disordered Breathing," National Heart, Lung, and Blood Institute (\$8,601,288; Illinois Tech: \$3,786,584)

.....

MORE ONLINE

American Sleep Apnea Association: www.sleepapnea.org
IITRI: iitri.org

CULTIVATING CHANGE

By Mary Ceron-Reyes

CRAIG RUPP (M.S. EE '94) recalls walking into a RadioShack in northwest Iowa as a child and discovering the thrill of tinkering with electronic components.

His appetite for understanding how things work would allow him to engineer his dream job—reimagining agriculture technology. Today Rupp is co-founder and chief executive officer of Sabanto, an Iowa-based, farming-as-a-service company using autonomous planting equipment.

“My dad was a farmer and owned tractors with radios that would invariably break down,” says Rupp, who grew up in Cherokee, Iowa, where his family produced corn and soybeans, and also raised hogs and cattle. “He would give the radios to me, and I’d take them apart and just look in there and marvel at the electronics.”

This sense of curiosity led Rupp to pursue electrical engineering at Iowa State University. He launched his career as a hardware engineer at Motorola, designing and developing the first GSM (Global System for Mobile Communications) mobile station, and then worked on Motorola’s Iridium project as a lead engineer addressing satellite communication issues.

“My DNA was established at Motorola,” Rupp says.

His professional and graduate experience at Illinois Institute of Technology further enhanced his desire to experiment with new technologies. In his next role, as systems engineer for John Deere,

Rupp developed the StarFire L1 and L2 GPS/L-band receivers to ensure accuracy for desired in-field performance, and architected the GreenStar 1800 and 2600 displays.

“I left Deere to start another company and then went back into wireless,” Rupp explains. “When the iPad came out, it reminded me of the display that I was working on at Deere. I thought, why aren’t farmers using this display in their tractors?”

Rupp reached out to Corbett Kull (M.B.A. '98), a friend and fellow Motorola engineer, and they launched 640 Labs, a Chicago-based agriculture technology startup whose goal is to help farmers make better decisions with the FieldView data system, which plugs into a tractor and is then implemented into the iPad for analysis. In 2014 Climate Corporation acquired 640 Labs to strengthen the company’s data science platform for farmers.

Kull, who in 2018 co-founded Tillable, an online service for landowners to solicit farmland rental offers from growers, describes Rupp as one of his greatest mentors and recalls his friend’s fascination with integrating technology into agriculture.

“Although Craig is an engineer by training, he is actually a scientist,” Kull says. “His approach to farming is this: farming is the manufacturing of a crop. It requires measurement. It requires analysis. And it requires a feedback loop.”

In October 2018 Rupp and business partner Kyler Laird started Sabanto, a Japanese word

for “servant,” underscoring the company’s mission to provide a service to the farmer. Rupp explains that farmers have a narrow window to get their crops into the ground, and Sabanto works to augment their productivity through autonomous field operations.

Sabanto modified a JCB Fastrac 4220 tractor to be controlled remotely with a specialized device that directs transmission and steering movements. This system monitors latitude, longitude, vital engine parameters, and planter statistics. It can also regulate other functions by mimicking analog and digital signaling, based on observations from the GPS unit mounted on the tractor’s roof.

This past spring Rupp and Laird were the first to autonomously plant a farmer’s soybean fields in five Midwestern states. Rupp emphasizes that no matter how the duo fine-tunes its autonomous technology, it will never supplant farmers and their vast knowledge.

“We are not taking the job away from farmers; we’re taking the monotony out of it and trying to optimize their organization,” he says.

To relax, Rupp enjoys exploring the countryside on his motorcycle, pursuing what is around each curve and bend and envisioning ways to transform the agriculture industry.

“There are a lot of innovations on the horizon, and I want to see those happen,” Rupp says. ☺

MORE ONLINE
Sabanto: sabantoag.com



PHOTO TIM KLEIN

When Life Happens

By Steve Hendershot

“

There were a lot of observations on issues like early detection, tumor growth, and chemotherapy, and some vague connections between them, but there was no numerical, mathematical way of tying it all together.”

I T TOOK TWO DECADES for Michael Retsky to realize that he had missed out on the “Wild West” era of physics. By the mid-1980s Retsky (PHYS '61) had collected a series of patents related to electron microscope technology while working at Hewlett-Packard in Colorado Springs, Colorado, but he also came to recognize that the age of rapid discoveries and astonishing breakthroughs in his field had ended. For Retsky, the study of physics had matured, becoming a little less fun in the process.

The field of oncology was different, however, as Retsky would soon discover.

A colleague at HP whose wife was battling cancer recruited Retsky to join a small, informal team investigating cancer research. At first it was a side project for Retsky, who used HP's computers to run cancer simulations.

“There were a lot of observations on issues like early detection, tumor growth, and chemother-

apy, and some vague connections between them, but there was no numerical, mathematical way of tying it all together,” recalls Retsky, 80. “It was like physics over 100 years ago. It was wide open.”

The group of researchers soon began publishing in academic journals concerning a set of findings that ran contrary to industry consensus. The computer simulations indicated that tumors grew in inconsistent bursts after lengthy states of dormancy, which meant that the common practice of intensive chemotherapy immediately after surgery might not be the best course. Retsky left HP and joined the University of Colorado as a professor of biology, completing a career change he had begun in his 40s.

Then came an unexpected development: Retsky himself was diagnosed with cancer in 1994. True to his research, he rejected the traditional post-surgery blast of chemotherapy and instead followed a course of regular, low-dose treatments over two years, an approach now called metronomic chemotherapy.

To Retsky's relief the treatment worked—he emerged healthy and reinvigorated, and suffered very few of the side effects often associated with chemotherapy. But when Retsky tried to pursue the large-scale studies needed to validate metronomic therapy, he came to another professional crossroads. He learned that the health care industry had little inclination to fund research related to inexpensive cancer treatments.

“For better or for worse, that's the business model for oncology; the payback on investment is what drives new therapies. It's not a good situation, but that's the way it is,” says Retsky.

Joining the research staff of Harvard Medical School in 1998,

Retsky refocused his academic energies on a related field of inquiry, again aided by computer simulation: the notion that the administration of a nonsteroidal anti-inflammatory drug (NSAID) just before primary tumor-removal surgery might prevent early relapses. The idea is that severe post-surgery inflammation can unlock dormant cancer cells and initiate their growth; in essence, the removal of one tumor sets the table for the growth of another.

At the time of Retsky's initial exploration, “this was totally out of the normal range of thinking,” he says. Since then the idea has gained serious traction, and a series of independent studies and publications have validated Retsky's research.

“We've moved from heretics to mainstream,” says Michael Baum, professor emeritus of surgery at University College London and a frequent Retsky collaborator. Baum says that Retsky's physics-informed perspective constitutes a “revolutionary approach [that] could change the paradigm in which we work to overcome the complacency of the oncology establishment.”

That's quite an impact for someone who had not even considered oncology during his formal education or during the first years of his career. Retsky, whose research interests remain focused on the administration of NSAIDs prior to cancer surgery, is now a research associate under the banner of the Harvard T.H. Chan School of Public Health. He says his career is an object lesson in the value of keeping your eyes and options open.

“Something could fall into your lap that might make a major change in your worldview, or in what you want to do with the rest of your life,” he says. ☹

MORE ONLINE

“MIA in the War on Cancer: Where Are the Low-Cost Treatments?": <https://bit.ly/2Zai5yO>

A Fortuitous BEND IN THE ROAD

BY SCOTT LEWIS

“THIS IS NOT A TYPICAL JOURNEY THAT A PATROL officer would take,” says Catherine Sanchez (M.P.A. '17), a 13-year veteran of the Chicago Police Department (CPD).

Sanchez has blazed a trail at CPD by creating, and now piloting, a new crisis intervention model designed to reshape how Chicago police interact with people with mental illness by placing community outreach and treatment front and center.

“We want to increase public safety and reduce the demand on officers for crisis response,” she says, “especially for high utilizers of emergency services—people with mental illness that we’re taking to the hospital time and time again.”

Sanchez has traveled a winding path from her small-town roots in Michigan to Chicago’s streets. An interior designer for more than a decade, she changed course to enter the police academy, hoping to use her problem-solving skills as a detective. After a few years on the force, she felt the tug of the classroom and enrolled part-time in Illinois Institute of Technology’s Master of Public Administration program at Stuart School of Business.

In 2016, while in the final stretch of juggling school, work, and family to earn her degree, Sanchez was asked to join a police unit that was liaising with the United States Department of Justice investigation into CPD policies and procedures. At the time, she was looking for a topic for her master’s capstone project. Her job and studies aligned.

“One of the biggest gifts I was given from my schooling was to ask the question: Just because it’s been done this way forever, is this the best way?” she notes. “To ask, what can be improved upon, is there something missing?”

Crisis intervention strategies and models were on the rise, and Sanchez talked to people in police departments across the U.S. and Canada who had tried them. For her capstone project, she customized a model that centered on a mental health resource officer at the district level—an approach that hadn’t been tried in Chicago. The CPD adopted the model, and Sanchez started a pilot program

to try it out in the 19th District on the city’s North Side.

The 19th District leads the city in the highest rate of mental health-related calls to first responders. Sanchez serves as a resource for officers who handle mental health crisis calls, going on calls herself when possible. She also scours the daily call reports to identify people who are frequently showing up in the mental health calls, and then works to connect them with local mental health care providers and social services for support.

“Every other day, it seems, I have meetings with [people and organizations in] the community,” Sanchez says. “Over the last year the relationships have changed 180 degrees, and that’s helped everybody. The community knows what they can expect from us, and we know what we can expect from them.”

Sanchez’s roll-up-her-sleeves approach and calmly energetic manner are among the keys to her effectiveness, according to Stacey Brown, a coordinator for behavioral health services at Advocate Illinois Masonic Medical Center in the 19th District.

“She’s very creative and finds very specific solutions for different people,” Brown says, recalling times when Sanchez

has helped mental health caseworkers track down homeless people to administer medications or accompanied home visits to mentally ill clients who might become violent. “What makes her unique is that she’s got a lot of empathy, she’s really smart, and she thoroughly understands police culture.”

Initial reporting on the pilot program points to progress in reducing the mental health-related emergency calls involving people chronically in crisis. Listening to Sanchez, though, it’s clearly the individual stories behind the data that animate her daily work.

“The successes we’ve had are pretty cool,” she begins, before talking about one person who is now connected with services, is in treatment, and is no longer a regular in the daily reports. ☹

“One of the biggest gifts I was given from my schooling was to ask the question: just because it’s been done this way forever, is this the best way?”

.....

MORE ONLINE

CPD 19th District: <https://bit.ly/2lDWbVB>



PHOTO: JOEL WINTERMANTLE

In His Own *Sweet Time*

By Andrew Wyder

Chocolate holds a special place for Dan Kazmierczak—in his mind, in his stomach, and in his heart. A veteran of this delectable food industry for nearly a decade and a half, Kazmierczak says chocolate doesn't just make him happy—it's part of who he is.

He eats chocolate, in one form or another, “every day of my life” and spends about as much time working with it, even when he's not traveling for his job. All Kazmierczak has to do is walk into the small lab he built in his home on the South Side of Chicago to devise a chocolate product that could be used in a candy bar, snack, or nutrition bar for, say, Pepperidge Farm or PepsiCo, with which he's helped develop products recently.

Now director of technical sales at JB Cocoa, Kazmierczak never dreamed *this* could become his career.

“Sometimes I sit back and it's hard to believe that I've gotten as far as I have making chocolate,” Kazmierczak says. “No matter who I talk to and tell them what I do, that always puts a smile on their faces, and they always want to talk about it. I think that's cool.”

Kazmierczak (MTM '01, CERT. FST '02, M.A.S. MTO '03) took an unconventional path to earn his golden ticket. It was only in his master's program that he realized working in the food industry could combine the manufacturing and engineering he enjoyed with his growing interest in food technology. And yet the pieces didn't fully fit together until his first job as a project engineer at Schulze and Burch Biscuit Company, where Kazmierczak saw the possibilities that his training in manufacturing and food technology offered.

“[Customers] would come in with a formulation, and I would help design the way it would be made in the production facility,” he says. “I never knew that existed, and I fell in love with it—the food aspect of it, but the engineering part of it, too.”

Kazmierczak's inspiration to work in chocolate came through a candy bar collaboration between Schulze and Burch and Nestlé. The experience



stuck with Kazmierczak, who took a job at Blommer Chocolate Company in 2005, where he learned the intricacies of producing chocolate through a crash course in the lab and the manufacturing facility. He has spent the last 14 years working at leading chocolate companies, including Barry Callebaut and Nestlé.

Kazmierczak describes his employers as suppliers. Some provide core ingredients for chocolate, such as cocoa powder, cocoa butter, or chocolate liquor; others make the chocolate that snack and candy companies use in their various creations. He has worked in research and development, in industry



PHOTO: JOEL WINTERMANTLE

plants, and with customers to create the chocolate used in their decadent concoctions.

“They’ll have an idea in mind about what they want to do with their finished product, whether it’s hitting a nutritional profile or a flavor profile, or even a finished product texture,” he says, adding that he must also determine whether the product can be produced at the plant.

Former colleague Rob Solomon says Kazmierczak’s knowledge and skill separate him from his fellow formulators in an industry small enough that everyone seemingly knows one another.

“He made my job easy,” says Solomon, who worked with Kazmierczak in the last year at Barchemy, a custom coatings and fillings startup. “Being able to nail the customers’ expectations just from a phone call or me sending notes from a customer conversation, he’s pretty

well-versed in formulas that are well-balanced, especially with the flavors.”

Not a bad way to make a living for someone who had little food science training and expected to spend his career in a machine shop.

“I could probably barely make my own dinner,” Kazmierczak says with a laugh, recalling his younger days. He acknowledges that the subsequent years have made a sweet difference in who he is today. “When it comes to chocolate-related stuff, I know pretty much as much as there is.” ☺

MORE ONLINE
“A Tactical Matter”:
bakingbusiness.com/articles/42130-a-tactical-matter

Bauhaus-Inspired Verve

By Steve Hendershot

Charlie Vinz (ARCH '04), founder of the Adaptive Operations architecture studio, is building a reputation as a top restaurant architect, thanks to his work at culinary hot spots such as Chicago's Parachute restaurant, whose chefs earned a 2019 James Beard Foundation Award. Yet Vinz isn't drawn to restaurants per se as much as he is to working with fellow artists who see architecture as part of a larger creative vision. Chef-owned restaurants fit that bill.

Vinz's emphasis on seeking out inventive partners was honed as an Illinois Institute of Technology student, especially during a semester he spent studying at Germany's Bauhaus-Universität Weimar in 2002.

"It was a pretty magical little place," Vinz recalls.

Vinz explains how his Bauhaus background helped to shape two projects this year:

PHOTOS: DAVID ETTINGER

Project: Superkhana International

Description: Modern Indian restaurant
Bauhaus Influence: Incorporating purpose-built elements

"A huge part of the design thought process focused on how to consider the experience and expectations for a space that serves Indian cuisine, without falling back on tropes. As I researched traditional Indian designs, I gravitated toward the rich history of textiles. Chintz, in particular, became a really exciting entry point for me. All the upholstery at Superkhana is dead-stock chintz fabric that I dyed using an old natural process that ties it back to India's history as a global textiles center. And it fit our concept for a clean, raw, modern aesthetic, but layered with loud, brash, exciting textiles."





Project: Wherewithall

Description: Follow-up restaurant by Parachute chefs Beverly Kim and Johnny Clark
Bauhaus Influence: Creative collaboration

“[Clark and Kim] are fun people to work with because they have a similar approach in terms of wanting to try things out that they haven’t seen before. For example, we decided not to have communal tables to help differentiate Wherewithall from Parachute, but we still wanted to create that sense of having a shared experience. We built what I call a banquette island: everything’s pushed off the walls and into the center of the room. It’s an unusual layout, and it takes away some flexibility, but we believe it makes up for that by being more comfortable and also creating this striking effect that ties the whole room together.”

MORE ONLINE

Charlie Vinz Adaptive Operations: adaptiveoperations.com



UNSTOPPABLE

BY MARCIA FAYE

Beatrice Lumpkin (M.S. MT '71), 101, will not stay still.

The petite, gray-haired dynamo fusses over her visitors, pouring cups of golden oolong tea and serving a bowl of artfully arranged cookies and chocolate drops in the living room of her home in Chicago's Hyde Park neighborhood. She whizzes into the kitchen, opening drawers, before stopping briefly for a photo while standing atop her balance board. She then takes her guests on a tour of her top-floor senior co-op with its 270-degree views overlooking the city and Lake Michigan. Lumpkin sometimes watches jet skiers hurtling over the water through her telescope. She frets for their safety; after all, she says, she is a mother of four.

“
...while most
of us love our
families, we
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more about the
entire human
population as
our family.”

In a second bedroom, all admire Lumpkin's east view of the lake. After commenting on the many sunrises she has enjoyed through that window, she points out a low-rise structure in the distance.

"You can see the steel mills, all the way over in Indiana," Lumpkin says, her sprightly voice becoming a touch subdued, as if a small cloud briefly obscured the horizon.

Finally taking a seat at her dining room table ("I can see you including shots of me at 101, sipping my tea like a good centenarian should do," she says, in characteristic good humor), Lumpkin talks about her storied life as labor activist, educator, and champion of the common person. She glances at her computer monitor, where a grandson has arranged a screen saver of personal photos as well as images of ancient Egypt, the country Lumpkin researched for her Illinois Institute of Technology master's thesis in mathematics for teachers.

"The rough thing is when you look at a photo like that, well," she says, nodding at a headshot of Frank Lumpkin, her husband of 61 years, who passed away in 2010 at 93. "Some of the people are no longer alive."

An African-American Wisconsin Steel mill worker, Frank Lumpkin launched a 17-year battle to retrieve the pensions and lost wages owed to him and some 3,000 fellow employees when the Southeast Side plant closed without warning in 1980. His Save Our Jobs Committee succeeded in winning settlements amounting to \$19 million. Lumpkin wrote about her husband's activist roots and his fight for social justice in the 1999 book *Always Bring a Crowd!: The Story of Frank Lumpkin, Steelworker*.

"We were very much in tune with what we were trying to do. We were both lucky that we were together even at age 90, and enjoying life and loving each other. But I think the most important thing is, while most of us love our families, we have to think more about the entire human population as our family," she says. "I realized from an early age that individual efforts cannot change all of the things that need to be changed; only a group effort can do that. There is a joy that comes with being a part of a group."

Lumpkin chronicles this deep feeling, which seems to permeate her very being, as well as her own efforts to advance various labor movements in her 2013 memoir *Joy in the Struggle: My Life and Love*. The daughter of Russian Jewish socialist activists who eventually settled in the Bronx as laundry workers, Lumpkin credits her parents

with igniting her power-to-the-people philosophy. Likewise, Lumpkin's son John, president of the Blue Cross and Blue Shield of North Carolina Foundation, has carried forward what his parents exemplified, influencing his own career paths in medicine, public health, and philanthropy.

"We grew up in a home where the affairs of people in the United States and the whole world were part of our lives," he recalls. "My mother gave us an appreciation of the impact that we could have on our fellow humans as well as a sense of obligation to do something. She has always lived with a confidence that our nation and the world can be improved if only we keep on trying."

Professing a lifetime love of science, Lumpkin, a 2019 recipient of Illinois Tech's Professional Achievement Award among other honors, became a mathematics instructor in 1967 at the future Malcolm X College, where she began investigating the mathematical contributions made by Africans and African Americans, largely unrecognized in traditional curriculums. She became a consultant on multicultural education for Chicago Public Schools and the Public Schools Multiethnic Curriculum Project in Portland, Oregon. To enlighten children about her findings, Lumpkin wrote *Senefer: A Young Genius in Old Egypt*, about a budding mathematician.

Lumpkin's eyes shine when she talks about her support of young activists and her latest youth-focused initiative, INTERGEN, an intergenerational and multiracial coalition that she helped co-found in 2016. Jenny Carson, associate professor of history at Ryerson University in Toronto, Canada, who discovered Lumpkin when she was researching laundry workers during the Great Depression, perhaps best sums up the inimitable Lumpkin.

"Beatrice Lumpkin: social justice warrior, civil rights activist, organizer, mathematician and teacher, comrade, author, friend, mother, grandmother, great-grandmother, and inspiration and mentor to so many, including me," she states. "Words cannot convey how many lives Bea has shaped through her fierce determination to make the world a better place and unbending commitment to social justice. Bea is an example of how one person can shape the arc of history." **E**

MORE ONLINE

2019 Alumni Awards Bio: alumni.iit.edu/alumni-awards-2019-lumpkin
 "Love Is a Battlefield": <https://bit.ly/2lDSlft>

ALUMNI NEWS

Class Notes

1940s

Bud Mann

(ME '46), Kokomo, Ind., published his fourth book, *On and Off the Road*, an illustrated travel anthology of nine trips he and his wife took across the United States, Canada, and Europe.

Burton Lewis

(CE '48), Chicago, a World War II veteran, was an honored guest of the National WWII Museum's 75th Anniversary of D-Day Cruise aboard the Regent *Seven Seas Navigator*.

1960s

Russell Notar

(BE '60, M.S. '66), Lewes, Del., retired president and chief executive officer of the National Cooperative Business Association, was named by the State of Delaware Division of Libraries to the Board of Commissioners of the Independent Public Library.

Richard Chadwick

(PS '62), Honolulu, a professor at the University of Hawaii at Manoa, has also worked for Illinois Tech, Yale University, and the Weatherhead Center for International Affairs. He led the East-West



Duchossois Leadership Professor Carlo Segre [far left], University Regent Craig Duchossois [gray jacket, center], Janet Duchossois [sixth from left], Duchossois Family Foundation President Ashley Joyce [second from right], and Duchossois Leadership Professor Geoffrey Williamson [far right] enjoy conversation and networking with student participants in the Duchossois Leadership Scholars Program.

Center's global modeling project with seminars in India, Japan, and China.

Fred Weil

(PS '64), San Francisco, was honored as the 2019 Moraga Citizen of the Year for his more than 42 years of volunteer work, including 34 years as an elected trustee of an elementary school district, a high school district, and a fire district.

Gerald Bepko

(LAW '65), Indianapolis, proudly saw the inaugural presentation of the 2019 Gerald

Bepko Faculty Community Engagement Grant Award by the Indiana Commission for Higher Education. Recipients of the Bepko Award are model faculty members currently engaged in teaching, research, or service commitments that contribute to the greater good of their communities.

George Bradburn

(ARCH '65), Nîmes, France, has retired to France.

John Lounsbury

(Ph.D. CHEM '66), Las Vegas, retired from a technical management career at IBM and then enjoyed a second career in personal financial management. He spent the last 10 years as co-founder and managing editor of *Global Economic Intersection*.

Eugene Phillip

(EE '67), Great Falls, Va., was commissioned in the United States Air Force after college and spent four years as a specialist for the Minuteman missile system in Wyoming. In 1971 he returned to Chicago, where he worked as an engineer. Phillip then served as program manager and division chief for national security communications.

Frederick Porter

(ARCH '68), Chicago, has contributed more than 200 hours as a volunteer in the University of Illinois Extension DuPage County Master Gardener volunteer group.

Robert Johnson

(CE '69, M.S. '71), Chicago, was inducted into the William Howard Taft High School Hall of Fame this fall.

1970s

Manu Vora

(M.S. CHE '70, Ph.D. '75), Naperville, Ill., was the keynote speaker at the second International Conference on Contemporary Technological Solutions Towards Fulfillment of Social Needs, held September 28-29 in Bhopal, India. The following week he also presented lectures to M.B.A. students as part of a continuing education program.

Phillip Pardun

(M.S. MT '71), South Barrington, Ill., an adjunct faculty member at Harper Community College and Elgin Community College, is celebrating his 52nd year teaching mathematics. Pardun's four children are also teachers.

Thomas Demetrio

(LAW '73), Chicago, has been ranked as the top lawyer in



Kishor "Josie" Kulkarni

(M.S. MAE '68, Ph.D. '72), Naples, Fla., was selected by the ASM Materials Education Foundation to receive the 2018 George A. Roberts Award for his efforts in increasing awareness of materials and applied science careers. He is a fellow of both ASM International and APMI International, and has served on committees of several engineering societies.

Homecoming & Reunion Weekend 2019



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1 Members of the Class of 1969 celebrate their 50th Reunion with a trolley tour through Mies Campus, reminiscing and seeing how the campus has changed. 2 Golden Society members celebrate alongside family and friends at the 2019 Homecoming Reunion Luncheon, which featured the induction of 41 new members into the Golden Society. 3 President Alan W. Cram welcomes alumni to the Reunion Luncheon. 4 The Class of 1969 at the Victor Morgenstern Pitch at the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship. 5 Mies Society Director Cynthia Vranas Olsen (M.ARCH '01, Ph.D. '17) guides alumni on a walking tour of Mies Campus. 6 A brave soul challenges the mechanical bull at the 2019 Homecoming Carnival. 7 Students and alumni enjoy a friendly competition during the Homecoming Video Game Tournament in the MTCC Esports Arena. 8 Chair of the Class of 1969 Reunion Committee Harley Feldman (CHEM '69) shares his fond and funny memories by way of an original poem during the Reunion Luncheon. 9 Alumni reconnect at the annual African American Alumni Association mixer at the MTCC Pritzker Club.

You can view more Homecoming 2019 photos at bit.ly/iithomecoming.

Illinois for 2019 by the website Super Lawyers. This is the third consecutive year he has been ranked as the top lawyer.

Jack Schmitt

(CE '73, M.S. MGT '82), Carol Stream, Ill., published the memoir *Potato People: Tales from the Trenches of the U.S. Army—1967 to 1970*.

Jeffrey Essmann

(IE '74), Berwyn, Pa., was appointed to the Montana 2020 Districting and Apportionment Commission. He recently concluded 14 years of legislative service in the Montana Senate and House and is now retired.

Mary Vandendorpe

(M.S. PSYC '75, Ph.D. '80) and **James Vandendorpe** (PHYS '68, M.S. IS '71, Ph.D. CS '80), Naperville, Ill., celebrated their 50th wedding anniversary. The couple has two children and four grandchildren.

Robert Zagar

(M.S. PSYC '75), Chicago, published "Implications of Machine-Learning, Internet-Tests to Save Lives and Money: 7-Point Violence Profile" in the *Review of European Studies* (Vol. 11, No. 1, 2019).

John Cheng

(MGT '78), Singapore, is managing director of Citus Group, a global energy trading company.

Richard Shreve

(Ph.D. BE '78), Boynton Beach, Fla., at 82, is the oldest professor at the Boca Raton campus of Palm Beach State College. He has served on the faculty for 15 years.

1980s

Ben Bogner

(M.S. CHE '80), Glen Ellyn, Ill., has been retired for eight years. He enjoys traveling the world and is still involved in writing structural standards for composite materials for the American Society of Civil Engineers.

E. Beth Jensen (née Phillips)

(LAW '80), Libertyville, Ill., joined Astellas Pharma US as a project manager.

Timothy Grabacki

(EE '81), Barrington, Ill., was promoted to vice president, product management for Cummins Allison, the leading innovator and provider of check, currency, and coin handling solutions, as well as full-function ATMs.

Mark Zerwic

(M.S. PSYC '81, Ph.D. '84), Coralville, Iowa, is deputy director of mental health and chief of psychology at the Iowa City VA Health Care System. He also is a clinical professor at the University of Iowa College of Medicine. He was a keynote speaker at the 24th annual Haymarket Center Summer Institute on Addictions, where he presented on positive psychology and resilience.

Andrea Berry (née Jenkins)

(CS '84), Tarzana, Calif., has joined Production Resource Group, the world's leading provider of entertainment and event technology solutions, as senior vice president and

general manager, broadcast and television. In her role, she will oversee the company's live sporting and special events and scripted and unscripted television teams.

Nabeel Riza

(EE '84), Cork, Ireland, was awarded the 2019 Edwin H. Land Medal by the Optical Society and the Society for Imaging Science and Technology for inventing and commercializing pioneering macro- and micro-scale imaging techniques across RF and optical wavelengths, as well as for the education and mentoring of distinguished scientists and engineers.

John Swierk

(ARCH '84), Winnetka, Ill., founder and president of DDCA Architects, is celebrating the 30th anniversary of his firm's incorporation. He is licensed in 28 states, with current projects from New York to California.

Naresh Shanker

(CS '85, M.B.A. '86), Menlo Park, Calif., was named senior vice president and chief technology officer of Xerox.

Lisa Jensen

(LAW '87), Belvidere, Ill., was selected by the U.S. District Court to serve as the new magistrate judge for the Northern District of Illinois, Western Division. She will be the first woman to serve as a judicial officer in the Western Division.

Lucille Podlesny (née McGinty)

(EE '88), Naperville, Ill., was promoted to the City of Naperville's electric utility director.

1990s

Christopher Rauch

(EE '91), Glenview, Ill., is chief intellectual property counsel at Illinois Tool Works Inc.

Cameron Davis

(LAW '92), Evanston, Ill., was elected as a Metropolitan Water Reclamation District commissioner. Against eight other candidates in a write-in election, he won six times the required votes.

Nicholas Clifford

(LAW '93), St. Louis, joined Tucker Ellis as a partner.



[Left to right] President Alan W. Cramb joins President Emeritus John Anderson and his wife, Pat Anderson, at the unveiling of John + Pat Anderson's Cafe in the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship.

John Fialko

(ARCH '94), La Salle, Ill., moved back to Illinois after living and working in San Diego for more than 20 years. After retiring in 2017 he has been following his passion of building kit cars.



Anurag Gupta

(M.B.A. MKT '94), Weston, Fla., was appointed to the Board of Directors of Roseburg, a forest products company, as well as to the Drive My Way Board of Directors.

Jennifer Welch

(LAW '94), Chicago, was named a co-chair on the Health and Human Services Transition Committee for newly elected Chicago Mayor Lori Lightfoot. She is the president and chief executive officer of Planned Parenthood of Illinois.

Jimmy Akintonde

(ARCH '95), Chicago, is part of the team that was awarded design/build services for the City of Chicago's Engine Company 115, which will be the second-largest fire station in the city.

Karen Klein (née Ruzic)

(LAW '95), Clarendon Hills, Ill., joined Ticketmaster as executive vice president and general counsel.

Camille Robinson (née Brown)

(BA '96), Chicago, is director of specialized services at South Holland School District 150.

Jill Webb

(LAW '96), Chicago, is a fellow of the International Society of Barristers. She was also selected to serve as the American Board of Trial Advocates Executive Committee Membership Chair for the Illinois chapter.

Mark Cumba

(LAW '98), San Diego, received the San Diego County Bar Association Service to the Legal Community Award in May 2019.

UPCOMING ALUMNI EVENTS

For information about the upcoming Illinois Institute of Technology 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**.

DuPage Area STEM Expo

Saturday, February 22, 2020

Daniel F. and Ada L. Rice Campus, Wheaton, Illinois

Join us at the DuPage Area STEM Expo (formerly known as DuPage Area Engineers Week) for an interactive exploration into science, technology, engineering, and mathematics. The event will feature more than 50 displays, presentations, take-home projects, and activities for children in grades K-12.

Giving Day

Spring 2020

Celebrate Pi Day with us! Come together with the entire Illinois Tech community around the world to show your support for the university. You can help make a huge difference in the areas of student scholarships, educational tools, and campus initiatives.

Mies Birthday Celebration

Thursday, March 26, 2020

Join the Mies van der Rohe Society for its annual celebration! Engage in conversation and view the exhibition *Long Spans and Prairie Gardens* (5:30 p.m.), then enjoy a Flower Power dinner and reception (7 p.m.).

Students Need Your Expertise. Join The Bridge Today!

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

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A Legacy of Wisdom



"I started giving little by little. I just wanted to help the school. When I was able to give more, I did.... I believe in Illinois Tech. It's my alma mater, and I enjoyed my time in Chicago."

— Robert Bernacchi (MATH '63)

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 our Gift Planning team at giftplanning@iit.edu or 312.567.5065 to learn more.

Robert Bernacchi (MATH '63) is grateful for the scholarship that allowed him to attend Illinois Institute of Technology. His background in mathematics and statistics led to a 30-year career in the Illinois Department of Employment Security as a statistician.

His career also provided the security and capital that allowed Bernacchi to make some smart investments, such as taking a stake in 1980 in a startup coffee shop chain called Starbucks. Thanks to his investing savvy, Bernacchi found himself in a position to make a positive financial impact on many philanthropic endeavors. After many decades of dedicated giving to Illinois Tech, Bernacchi joined the Gunsaulus Society in 2017 by naming Illinois Tech as a beneficiary of his Individual Retirement Account.

.....

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

ALUMNI AWARDS 2019

Winners

Alumni Medal

John P. Calamos Sr. (ECON '63, M.B.A. '70)

Alumni Service Award

Steven Weiss (ARCH '73)

Collens Merit Award

Dirk Lohan

Galvin Award*

Peter B. Cherry

**This award was presented at Commencement 2019.*

International Award of Merit

Dr. Mitchell Golbus (PSYC '60)

John J. Schommer Honor I Award

Matthew Pearson (ME '04, M.S. MAE '06, Ph.D. '11)

Lifetime Achievement Award

Charles A. Harrison Jr. (M.S. DSGN '63)

Walter Nathan (ME '44)

Outstanding Young Alumnus/Alumna Award

Dr. Saurabha Bhatnagar (CS '02)

Manish Motwani (CPE '03, M.S. CS '06)

Dr. Suruchi Thakore (MBB '05)

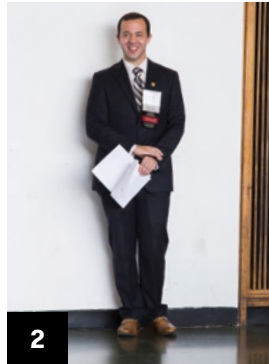
Professional Achievement Award

Charles Haas (BIOL '73, M.S. ENVE '74)

Beatrice Lumpkin (M.S. MT '71)

Rohit Prasad (M.S. EE '99)

William S. Saric (ME '63, Ph.D. MECH '68)



1 Alumni Medal Recipient and Life Trustee John P. Calamos Sr. (ECON '63, M.B.A. '70) [left] and University Regent Craig Duchossois [right] catch up before the Alumni Awards program begins. **2** Jason Resch (CS '06) prepares to take the stage. **3** Dawn Schuette (ARCH CRP '92, M.A.S. CRP '93) acknowledges the audience. Resch and Schuette served as the 2019 Alumni Awards committee co-chairs. **4** Alumni Awards recipients and family members take a group photo with President Alan W. Cramb [left to right]: Richard Nathan, Nina Schroeder, President Cramb, Susan Scholl, Charley Harrison III, Betsy Nathan, William Saric (ME '63, Ph.D. '68), Manish Motwani (CPE '03, M.S. CS '06), Ann Nathan, Rohit Prasad (M.S. EE '99), Dr. Suruchi S. Thakore (MBB '05), John P. Calamos Sr. (ECON '63, M.B.A. '70), Beatrice Lumpkin (M.S. MT '71), Dr. Mitchell Golbus (PSYC '60), Dirk Lohan, Dr. Saurabha Bhatnagar (CS '02), Steven Weiss (ARCH '73), and Matthew Pearson (ME '04, M.S. MAE '06, Ph.D. '11). **5** International Award of Merit recipient Dr. Mitchell Golbus (PSYC '60) [left] celebrates with family and friends at the Alumni Awards reception at The Bog.

You can view more photos of the Alumni Awards 2019 at bit.ly/IITAlumniAwards2019.

PHOTOS: MICHAEL GOSS

Spotlight



A multiple sclerosis patient who has participated in repurposing clinical trials funded by Cures Within Reach is treated with a portable neuromodulation stimulator at Rush University Medical Center while Dr. Bruce Bloom (LAW '88) [left] and Dr. James Young [right] discuss the next stage of clinical trials.

Good Health for All

Dr. Bruce Bloom (LAW '88) stepped down this past summer after almost two decades as chief executive officer of Cures Within Reach, a pioneering nonprofit he founded that funds research into repurposing pharmaceuticals to treat rare diseases. He will continue to support Cures Within Reach while working as chief collaboration officer at Healx, a Cambridge, United Kingdom-based company that uses artificial intelligence in drug repurposing for rare diseases.

A dentist by training but unable to practice full-time because of a vision condition, Bloom pursued a new career. After graduating from law school, he worked for several years at Bausch & Lomb and CNA Insurance, while practicing law part-time, before joining the nonprofit sector.

What is a popular repurposed drug? In the 1960s thalidomide was originally used as an anti-nausea drug and was given to a lot of pregnant women. Depending on when women took the drug, it caused birth defects in their offspring, so it was removed from the market. It was brought back on the market because it helped patients with leprosy. Thalidomide was eventually repurposed for the blood cancer multiple myeloma, with support from Cures Within Reach, which led to the development of additional drugs that were based on thalidomide that had an even greater impact on multiple myeloma and other cancers.

What was your biggest success at Cures Within Reach? We were the first nonprofit organization in the world to champion drug repurposing. The thing that is most important to me is that we directly impact patient lives.

In the 10-plus years we've been repurposing drugs, we've created 13 therapies, 10 of which are being used off-label in medicine to improve, and in many cases, save lives. A drug is generally approved for one disease, but a physician can decide to use it "off-label" for a secondary disease if there is compelling reason to do so. The other three drugs are moving toward commercialization.

How can artificial intelligence be used to identify promising treatments? Healx and other biotechs understand that there may be combinations of two or three drugs that together work to solve a disease. Drug A might improve something going on in a cell but the cell might have a compensatory mechanism that blocks what that drug is doing. Drug B can block the compensatory mechanism, and now Drug A can keep doing its job without the cell thwarting it. In cancer, chemotherapy often works initially but the cell knows how to stop it. So we give a second drug that can stop the cell from thwarting the chemotherapy. Artificial intelligence and machine learning can help humans do a better job of figuring out how to make those combinations work.

How have you used your law education throughout your career? I'm always involved in creating collaborations, and every collaboration has a series of agreements. I'm a law school nerd and love wordsmithing agreements. I became a much better writer, thinker, and speaker, and learned how to be a prudent risk-taker. So I'm not afraid to get out there to try new things. —*Jacqueline Seaberg*



Illinois Institute of Technology Trustee James Cowie speaks onstage at Tech-X, a biennial fundraising event that recognizes a technology leader who fosters innovation and advances an entrepreneurial spirit within the university community and around the world. The fundraiser benefits Illinois Tech's Active Computational Thinking Center in the College of Science, and this year raised \$525,000.

Ill., was a finalist for the 2019 Ernst & Young Entrepreneur of the Year 2019 Southwest Award.

Jason Sposeep (LAW '03), Oak Park, Ill., was promoted to equity partner of Schiller DuCanto & Fleck. This fall Sposeep began serving as the incoming president of the Chicago-Kent College of Law Alumni Board of Directors.

William Gibbs (LAW '04), Wheeling, Ill., a partner at Corboy & Demetrio, was named to the 2018 Irish Legal 100.

Carrie Zalewski (née Solberg) (LAW '04), Riverside, Ill., was appointed chair of the Illinois Commerce Commission by Governor J. B. Pritzker this past April. She came to the commission from the Illinois Pollution Control Board where she had served since 2009.

Bryan Peterson (M.S. CPE '05), New Lenox, Ill., was named by TMP Architecture as one of 20 top industry professionals appointed to a groundbreaking new review

Holly Gordon (LAW '99), Oakland, Calif., joined the Ike Robotics self-driving truck company as head of public policy and government affairs. Gordon came to Ike from the Bay Area Rapid Transit as a group manager in sustainability.

Lisa Ulrich (LAW '00), Armonk, N.Y., was honored as a Volunteer of the Year by the New York and Fairfield County branch of the Pro Bono Partnership. She has volunteered with the Pro Bono Partnership since 2011.

Christopher Bruenjes (CHE '01, ENVE '01), Philadelphia, is a partner at the Washington, D.C., office of Drinker, Biddle & Reath.

Biju Nair (M.S. CS '01), Long Grove,

Tiana Taylor (née Robinson) (ARCH '99), Concord, Calif., was named associate principal at Huntsman Architectural Group. She is also an active member of the American Institute of Architects, the National Organization of Minority Architects, and the International Facility Management Association.

2000S

Renee Czeryba (née Maciasz) (M.S. PHRD '00), Arlington Heights, Ill., was promoted to senior manager, global procurement transformation at Walgreens.

Varun Goyal (CPE '00), Carmel, Ind., is co-founder and chief executive officer of illuminate.health, a medication management app.



Illinois Institute of Technology Trustee Chris Gladwin stands next to a placard at the dedication of the Ocient Computational Center during the College of Science Philanthropy Celebration. Other named spaces dedicated at this event included the Ron Hochsprung (CS '72) and Lynda Bowlin Conference Room; Anita Nagler (LAW '80) and Robert Moyer Conference Room; Robert E. Frey Jr. (CHEM '65) Chemistry Suite; Cyrus Chung Ying Tang Foundation Classroom; and the Albert B. and Audrey G. Ratner Classroom.



Dancers from the Ruth Page Center for the Arts perform at the annual Mies Birthday celebration.

program called the Specification Content and User Experience Advisory Committee, which was launched by Building Systems Design.

Virgil Abloh

(M.A.R. ARCH '06), Chicago, debuted his exhibit *Figures of Speech* at the Museum of Contemporary Art Chicago.

David Blau

(LAW '07), Canton, Mass., was named co-author and editor of *Patent It Yourself*, beginning with the 19th edition.

Patrick Kelly

(LAW '07), Naperville, Ill., owner of The Kelly Law Firm, won a seat on the Naperville City Council this year.

Michael Hallock

(LAW '08), Oxford, Miss., presented at the Speaker's Commission on Public Policy regarding investigation and prosecution issues in human trafficking.

Sarmad Naqvi

(M.A.S. CS '08), Schaumburg, Ill., joined 84.51° as a lead data engineer.

2010S

Sean Jungels

(LAW '10), Chicago, was elected a principal shareholder of Banner and Witcoff.

Xiangyu Deng

(Ph.D. BIOL '11), Atlanta, along with a colleague, headed a team of researchers in the development of a machine-learning approach that could lead to quicker identification of the animal source of certain Salmonella outbreaks. They used more than 1,000 genomes to predict the animal sources, especially livestock, of *S. Typhimurium*.

Angela Ng

(CE '11), Chicago, became licensed as a Professional Engineer in Illinois. She is also celebrating four years with EFK Moen.

Emily Acosta

(LAW '13), Atlanta, an attorney with Childers, Schlueter & Smith, was named one of the Top 40 Lawyers Under 40 in Georgia by The National Trial Lawyers.

Saad Mahmood

(CPE '15), Chicago, joined 84.51° as a senior software engineer. Previously, he was a senior software engineer for Allstate Roadside Assistance.

Adeeb Ahmed

(CIS '17), Minneapolis, open-sourced the blockchain application ConsensSource for the

Target Corporation and the open-source project Hyperledger Grid. Ahmed's work has earned him resident expert status on applied distributed ledger technology, and he has been promoted to senior software engineer, allowing him to build his own team to work in this new and innovative space.

Tehlyr Kellogg

(PSYC '17), Homewood, Ill., joined Northwestern University as a program assistant and this fall, has entered into the Vanderbilt University Master of Education programs in Learning, Diversity, and Urban Studies and International Education and Policy.

Joshua Guberman

(PSYC '18), Ann Arbor, Mich., completed his first year as a doctoral student at the University of Michigan School of Information, where he studies accessibility and assistive technology. He received a National Science Foundation Graduate Research Fellowship for the co-design of assistive technologies for people with dyslexia to aid in the reading of printed text. Guberman also was recently issued a U.S. patent.



University leaders gather to celebrate faculty achievements during the spring Illinois Institute of Technology Board of Trustees dinner. Those honored include Senior Lecturer Alan Glodowski, Associate Professor Hemanshu Kaul, Associate Dean and Professor Geoffrey Williamson, Professor Michael Young, and Senior Lecturer Promila Dhar.

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



Siddhesh Nanaware (M.A.S. ITO '19), Laurel, Md., was lead manufacturing intern at East Coast Fresh and was then offered a position as a process engineer responsible for improving the company's state-of-the-art food processing production floor.

Jeffrey Mudrock (Ph.D. AMAT '18), Wauconda, Ill., became a tenured professor of mathematics at the College of Lake County in Grayslake, Illinois. He also joined Illinois Tech as an adjunct visiting professor in the College of Science.

Hailey Borowczyk (BIOL '19), Forest Hills, N.Y., is a supplier quality analyst with The Hain Celestial Group.

Hiva Nasiri (Ph.D. EE '19), Chicago, was selected as a chair of the 2019 Institute of Electrical and Electronics Engineers Power & Energy Society General Meeting paper forum.

Attendee/Non-Degree

Norio Fujikawa San Francisco, was promoted to executive creative director at design agency Astro Studios, where he had spent 14 years as a creative director.

Spotlight

Engineering for Shakes, Rattles, and Rolls

Alaska native **Amy Mestas** (CE '04, M.S. '06) credits Illinois Institute of Technology for charting a career path that prepared her not only for designing cold-weather projects but also for evaluating buildings that have been subjected to events that happen with greater frequency in Alaska than in any other state: earthquakes. A senior-level associate and senior structural engineer with PDC Engineers, Mestas was recognized as Alaska Engineer of the Year and as the American Society of Civil Engineers Region 8 Engineer of the Year for 2018.



Amy Mestas (CE '04, M.S. '06) in her lucky Illinois Tech gear while fishing for sockeye salmon on the Kenai River

PHOTO: COURTESY OF AMY MESTAS

What steps did you and other engineers take with clients after a 7.1 magnitude earthquake struck on November 30, 2018, outside of Anchorage?

Newer buildings typically did not sustain damage to the main structure, but rather, just to the building components such as the sheetrock or sprinkler heads. In many buildings we saw little to no damage after the initial earthquake, but after tens and hundreds of aftershocks, we began to see damage that needed repairs. I truly believe this experience has created a higher level of understanding about earthquakes as well as a desire to build more resilient structures in the years ahead. The post-earthquake inspection of a facility includes looking for the overall alignment of the structure, looking for substantial damage to finishes indicating possible damage to the primary structure, and looking at the structure itself. We look for evidence of significant ground settlement, especially settlement caused by liquefied soils.

Have you developed any innovative processes for PDC? I had the opportunity to design a load-bearing cold-formed steel structure in Juneau for the University of Alaska Southeast, which was not a standard construction method at the time. I was also fortunate to work on United States Department of Defense projects that required designing for large blast loads in addition to large seismic, wind, extreme temperature, fully or partially frozen soils, and snow-load criteria.

When you get up each morning, how do you know that you are really in Anchorage and not in Chicago?

In the winter months there is a calm that comes from the cold and the dark. You look out the window and while we experience months of less than eight hours of daylight, it is rarely dark because we have a blanket of snow that reflects the moonlight and light from the streetlamps. In the summer months we live in the energy of the sun. You go to bed in broad daylight and wake up in broad daylight. We live in sync with the seasons, and the pace of work and life reflects that. —*Marcia Faye*



A Community of Generations

When asked to reflect on memorable moments from her first year as chair of Illinois Institute of Technology's Alumni Association Board of Directors, **Sherrie Littlejohn** (M.S. CS '82) doesn't hesitate.

"Speaking at commencement," she says. "The chance to share my story and connect and hear from our students...that's what I do. In 40 years of being a leader and an executive, I've always loved to hear from the young people on my staff. I want them to know how much I value their voice and their input."

Littlejohn describes herself as a coach "by definition," someone who is passionate about growing and developing talent. But she knows that coaching students isn't a one-woman job. She's eager to bring together current students with generations of Illinois Tech's alumni, who can relate better than anyone to the balancing act between academic rigor

and planning for a professional future. She adds that hearing from recent graduates is also important, as fresh perspective is just as valuable as decades of workforce experience.

"It's important that we learn from each other. I'd love to see more seasoned alums mentoring students. So many of our students are first-generation college students and unless they're in the [M.A. and Lila Self] Leadership Academy or another program, I understand it can be difficult to find that mentor who's willing to listen. I think alumni can fill that role," she says.

As Illinois Tech moves into its new strategic plan, Littlejohn is optimistic about the future. She's also candid about the challenges that the university and higher education as an industry face, and looks to Illinois Tech's unique position as Chicago's only tech-focused university as offering a distinctive advantage.

"We're in a sweet spot the likes of which we haven't seen

before," she says. "How do we cross industries and engage our values and make the results of our education visible and tangible? How can our education solve social problems? The future demands that we don't just sit in our own little worlds. Illinois Tech has given us this great foundation, so I believe we as alumni have a responsibility to reach out and bring others along with us."

She adds that untold opportunities will arise out of the new Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, so long as the greater Illinois Tech community of students, faculty, staff, and alumni are committed to bringing innovative thinking to education and to applying ideas to solving real-world problems.

"We have a role to play in making Chicago that heartbeat of the technology sector," says Littlejohn. "It will take a lot of commitment to get there, but it's a worthy goal."—*Joseph Giovannetti*

Ready to step up and give back?

Visit iit.wisr.io and import your LinkedIn information to join The Bridge, our network of students and alumni, or visit alumni.iit.edu/regional-chapters to get in touch with other Illinois Tech alumni in your area.

In Memoriam

David Shapiro
ARSC '36

H. V. Sivertsen
ARSC '36

Frank Steinbach
UNK '37

Howard Downing
FPE '38

Irving Distelheim
ARSC '39

Lee Niems
ME '41

Richard Noyes
ME '42

Warren Spitz
ARCH '42, M.S. CRP '68

Philipp Kegel
ME '43

Richard Foerster
CE '44

Harry Wayne
EE '44

John Capron
EE '47

William Porcelli
ME '47

Ernest Baldini
EE '48

Roger Dreffin
EE '48

Irving Kovnat
ME '48

Robert MontBlanc
IE '48

Frank Falch
EE '49, MATH '49

William Firestone
M.S. EE '49

James Londrigan
LAW '49

Richard Genis
ME '50

Maxine Karesh (née
Schnierow)
HE '50

Ramon Klitzke
FPE '50

Narciso Modesto
ARCH '50

Saul Needleman
CHEM '50, BCHM '55

Francis Supple
FPE '50

William Blaine
ME '51

Arthur Crowley
EE '51

Ralph Brill

Chicago, professor of law emeritus, was a member of the Chicago-Kent College of Law faculty for 58 years. He also served as associate dean from 1970–73 and as acting dean the following year. Brill was perhaps best known for establishing the first three-year legal writing program in the country, which he directed from its opening in 1977 until 1991. Brill's leadership in this area also led to the creation of Chicago-Kent's Moot Court Honor Society. He was the society's first faculty advisor and headed the program for more than a decade; during that time, students won numerous national and regional titles. In 2011 Chicago-Kent established its first endowed faculty chair and named it in honor of Brill, who received prominent awards for his contributions to the field of legal writing including the Thomas F. Blackwell Memorial Award for Outstanding Achievement from the Association of Legal Writing Directors and the Legal Writing Institute.

Sidney Jeffe

ME '50, Tucson, Ariz., joined Chrysler Corporation after graduating from Illinois Institute of Technology and worked at the company for 32 years as an automotive engineer and executive, becoming vice president of engineering and research. He was also an adjunct faculty member at The Ohio State University during his last two years at Chrysler, and then went on to hold executive positions at Sheller-Globe Corporation and Mesnel S.A.-Schlegel Corporation. Jeffe was awarded several patents related to a vehicle's transmission and advanced braking systems, and developed a hydrogen-powered, hybrid, solid-fuel storage system.

Frank Brilando

ME '52, Niles, Ill., helped create an iconic bicycle—the Schwinn Sting-Ray—that gave countless kids a breakthrough dream machine on two wheels. Advertised as the “bike that changed cycling,” the sporty Sting-Ray featured high-rise handlebars and a banana-shaped seat, a dramatic redesign among bicycles when it made its debut in 1963. Besides the innovative Sting-Ray, Brilando, who worked as a designer and engineer at Schwinn for more than 40 years, also helped create the Schwinn Varsity and Continental bicycles, and the Airdyne fan-resistance stationary exercise bicycle. He also assisted in the launch of the first derailleur-equipped mass-produced bicycles in the United States. A two-time summer Olympics cyclist (1948, 1952), Brilando contributed to the initial United States Consumer Product Safety Commission on bicycle safety standards.

Marshall Nelson
ME '51

Joseph Peck
CE '51

Roger Rosback
ARCH '51

Albert Yamamoto
M.S. MET '51

Philip Dieffenbach
M.S. CHE '52, M.S. GT '52

Murray Luftglass
CHE '52

Harry Obarski
CHE '52

Miroslav Zich
EE '52

Richard Brooker
ARCH '53

G. Thomas Delahunty
CHE '53

Donald Fergle
ME '53

William McCain
ME '53

In Memoriam

George Kacek Jr.

EE '54, M.S. '55, Chelmsford, Mass., began his career at General Electric soon after graduation and within seven months was drafted into the United States Army, where he served in the Signal Group on Okinawa, Japan. He then returned to GE, working for 15 years in management and in computer software. He was then employed for 25 years at the Raytheon Company. Over the course of his career he helped to develop power systems for aerospace and the military, working on Atlas missiles and the Patriot missile system.

James Lemke

PHYS '59, La Jolla, Calif., was credited with being a physicist, entrepreneur, inventor, mentor, and holder of more than 110 patents in the fields of information theory, magnetic materials, information storage devices, aviation, and internal combustion engines. Lemke began six high-tech research and development companies including Spin Physics, Inc., a developer and supplier of high-density magnetic recording equipment and materials, which he sold to Eastman Kodak in 1972. Lemke also founded Achates Power to develop a fuel-efficient, light, and clean diesel engine. He was most recently working on a noninvasive way to detect breast cancer through his latest company, Scan Physics. Lemke was a member and/or fellow of the National Academy of Engineering, the American Association for the Advancement of Science, and the Institute of Electrical and Electronics Engineers, among others.

Kenneth Freutel
EE '54

Tong Yoonsim Kang
ME '54, M.S. ME '56, Ph.D.
MAE '67

Virginia MacNerland
(née Daugherty)
M.S. HE '55

Charles Munson
FPE '55

William Ratliff
UNK '55

Richard Zych
MET '55

Albert Fleitman
M.S. MET '56

Richard Knapp
ME '56

William Cole
EE '58

Robert Skyer
DSGN '58

John Wheeler
MET '58, M.S. '61

Donald Gouldsberry
EE '59

Arthur Billy
ME '60

Sydney Christophersen
EE '60

Edward Drum
ME '60

Charles Hanekamp
FPE '60

Robert Roseborough
ME '60

Donald Delaney
EE '61

Barton Laney
EE '61

Kenneth Eldrup
ME '62

Richard Gallimore
CE '62

Elmer Prothero
EE '62

William J. Sigle
EE '62

James Carbonari
CHE '63

Lorenz Kull
PHYS '63

Andrew Plonka
EE '63

William Snyder
ME '63

Melburn Laundry
LAW '64

Mikio Sasaki
M.S. ARCH '64

Steve Skowronski
ME '64

Joseph Francesconi
EE '65

Carl Kempka
EE '65

Chris Pappageorge
ME '65

Edward Schwartz
ME '65

Joseph Christiano
ME '66

Frank Connell
ME '66

Miroslaw Noyszewski
M.S. CE '66

August Spyksma
ME '66

Patricia Winston
M.S. MT '66

Carl Kellett
EE '67

Lynn Larsen
M.S. MBIO '67

Marion Wognum
M.S. DSGN '67

James Jablonski
EE '68

Gerard Keller
EE '69

Paul Koch
MATH '69

Robert Kratochvil
EE '69

Robert Seewald
MATH '69

James Woodhill
BE '69

Ralph Enderby
M.S. EE '70

Richard Molay

LPSC '58, Temple Terrace, Fla., and Saranac Lake, N.Y., was known to family and friends as a talented wordsmith. He was a creative director at the former Bozell & Jacobs advertising agency for 10 years and then became president of Production Associates, Inc., a television production facility specializing in commercials and industrial videos.

Jeffrey Sherman

Chicago, professor of law emeritus, joined the Chicago-Kent College of Law faculty as an associate professor in 1978, after teaching two years at the University of Illinois College of Law. He was a visiting professor at a number of schools, including Harvard Law School (Sherman's alma mater), UCLA School of Law, and the University of Miami School of Law. Sherman wrote extensively in the areas of wills, taxation, and employee benefits, and is the author of *Pension Planning and Deferred Compensation* and *New Limitations on Contributions and Benefits*. Named a Norman and Edna Freehling Scholar and an Arthur and Marjorie West Scholar in 1989, in 1991 he was elected an academic fellow of the American College of Trust and Estate Counsel.

Barbara Crane

M.S. PHOT '66, Chicago, a groundbreaking artistic photographer, was encouraged to enter the Institute of Design by mentor Aaron Siskind. While at ID, Crane began teaching photography at her alma mater, New Trier High School, chairing and developing the school's photography program through 1967. Months after graduating from ID, she joined the faculty of the School of the Art Institute of Chicago, where she remained until her retirement from teaching in 1995. Her work is in the collections of the Art Institute of Chicago, the Getty Museum, and the Museum of Modern Art, among others across the United States.

William Fabis
ARCH '70

Plato Ioannou
MATH '70

Ross Lambert
MATH '70

Robert Meyer
MATH '70

Barbara Miller
M.S. DSGN '70

Theodore Panitz
M.S. CHE '70

Richard Tirman
Ph.D. PSYC '70

John Wasson
Ph.D. CHEM '70

Loretta Malone
M.S. MT '71

Steven Sherwood
PSYC '71, M.S. REHB '73

Paula Kolano
Ph.D. CHEM '72

Daniel Kukulka
CHE '72

Nathaniel Pappalardo
ARCH '72

Edward Killmer
ECON '73

Richard Pong
Ph.D. CHEM '75

Robert Casey
M.P.A. '76

Lowell Cutsforth
M.B.A. '76

Bernard O'Donnell
PHYS '76

Charles Johnson
ME '77

Landie Parr
MATH '78

Ralph Rzeszutko
MATH '78

Brian Dosch
LAW '79

Philip Smucker
M.B.A. '81

Craig Kavensky
LAW '82

Joan Eagle
LAW '83

Edward Mendenhall
EE '85

Michael Haughan
LAW '94

Thomas Hutch
M.S. BCHM '00

Belinda Foor
M.A.S. CHE '02

Daniel Morales
EE '14

Brayan Abreu-Gomez
AE '18

Attendee/Non-Degreed

Marcia Arenson

Donald Houck

Ernest Larson

Norman Lind

Eamonn Roche

Marvin Wortell

Faculty

Champ Davis
Chicago-Kent College of Law

Glen Slack
Armour College of
Engineering

Margaret Stewart
Chicago-Kent College of Law

Domingo Carreira

M.S. CE '74, Ph.D. '83, Chicago, taught as an adjunct professor in Armour College of Engineering for some three decades until 2018, and took great pride in bringing innovative methods of teaching to structural engineering students. He was certified as a Professional Engineer in Florida and Illinois, and also as a Structural Engineer in Illinois. For many years Carreira was a lead engineer at Sargent and Lundy. He was a fellow of the American Concrete Institute and in 1985 received a recognition award from the American Society of Mechanical Engineers.

Treasures Out of Paper and Glue

Illinois Institute of Technology's legacy as a nexus for the teaching of design and architecture has its roots in the Bauhaus, an influential arts and crafts, design, and architecture school founded in 1919 by Walter Gropius in Weimar, Germany. The Bauhaus remained open for 14 years before it closed under the dictatorship of Adolf Hitler.

In the early 1930s business leader Marshall Field III donated a family mansion on Chicago's South Prairie Avenue to the Association of Arts and Industries to house a new school of industrial design. Gropius recommended that artist and Bauhaus colleague László Moholy-Nagy be named director of the school, which became the New Bauhaus: American School of Design. Although it was only in existence under that name from October 1937–June 1938, the New Bauhaus went on to become Illinois Tech's Institute of Design.

Among the many curiosities that visitors to the University Archives and Special Collections of Paul V. Galvin Library can view is a black plastic-covered scrapbook adorned simply with a lowercase “b” cut-out. The “b” stands for Bauhaus; the scrapbook's design pays homage to the minimalistic and handcrafted leanings of the German school. The scrapbook is believed to have been created by Moholy-Nagy, commemorating the period that The New Bauhaus existed. As with most any scrapbook, it showcases proud moments and accomplishments. An article from *The Architectural Forum* features a sentence underlined in red for emphasis:

“Because of Dr. Gropius’ confidence that Professor Moholy-Nagy and his faculty will continue ... the best Bauhaus tradition he granted permission that the School of Design be called the New Bauhaus.”

A story from the Sunday, September 12, 1937, edition of the *New York Times* is bordered by red ink. Titled “America Imports Genius,” the article cautions Americans not to be too eager to “Americanize” emigrants Albert Einstein, Thomas Mann, Walter Gropius—and Moholy-Nagy. The writer states, “To make the most of their presence here, we must think not only of what we have to tell them but of what they have to tell us.”

Other pages of the scrapbook include large black dots in which key aspects of the page are summarized, such as “Dr. Walter Gropius recommended L. Moholy-Nagy as the best person we could get for the director” and “*Time* magazine speaks of the New Bauhaus as a name exciting to all architects and designers.”

A final black dot brings the scrapbook full circle: “The integration of art, science, and technique is the essence of the Bauhaus education.”—Marcia Faye



the new bauhaus American School of Design has been founded by the Association of Arts and Industries of Chicago.

Night Class and Spring Semester 1938

the new bauhaus American School of Design 1935 Prairie Avenue Chicago, Ill.

Night Class

February 7, 1938 - June 10, 1938 (18 weeks)

A night class will be opened in response to the requests of many persons who believe that the idea of the new bauhaus is more than a new principle in art education.

These persons who have already received practical training will not need the detailed technical instruction of the full-time curriculum presented in the day classes.

I want to join the night class 1938 (Spring)

I want to join the spring semester (Preliminary course) 1938

These want good college and application blank

NAME, AGE, OCCUPATION, ADDRESS

The schedule of the Night Class

Table with columns: Time, Day, Class Name, Instructor

In the schedule of the night class of the new bauhaus the following are included:

Table with columns: Date, Day, Class Name, Instructor

The lectures begin at 8 P.M. A limited number of seats will be available for the night class will be admitted without charge.

Spring Semester

(Preliminary Course) February 7, 1938 - June 10, 1938

the new bauhaus

American School of Design

1935 Prairie Avenue Chicago, Ill.

the new bauhaus requires first of all students of talent

The education of the student is carried on in theoretical and practical courses and in the workshops of the school.

The preliminary curriculum offers a host of the student's abilities.

It helps broaden the mind to self-expression. It aims to conceal the essential components of the training given in the specialized work-

Advertisement for The Weekly Newsmagazine, October 25, 1937. Features a large 'M' logo and text about the magazine's content.

Chaloner Prize After six months of sober thought, judges and trustees of the Chaloner Prize Foundation last week finally made up their minds and awarded a three-year scholarship to Jacky Robert E. Weaver, 24, of Peru, Ind.

ple of so-called "functional" design. After the first completion of Colonial building disappeared in the U. S. during the 19th Century, industrial architecture of talent were lost in a great drive of construction by its cost.



Mies van der Rohe (left) and Marcel Breuer in London, September 1937.

New in Old In Chicago early this week 30 bright young men filed into a big, weathered mansion on Prairie to make up the Chicago year's study of principles which have made this house and houses like it as early and obsolete as a dinosaur.

we need out of what we have that best serves the purpose, using the best tools available. It is not studied in schools of architecture so much as in the record of the work, materials and tools of architecture in the past.

Advertisement for The New York Times, September 12, 1937. Includes the masthead, date, and a large article titled 'AMERICA IMPORTS GENIUS'.

AMERICA IMPORTS GENIUS Nothing can compensate for the untimely death of the physicist, Albert Einstein, who died in Princeton, N. J., on April 18, 1955.

Editorial in the New York Times stresses great gain and inspiration to the United States in the distinguished men recently "imported" to our institutions of learning. Einstein, Thomas Mann, Walter Gropius, L. Moholy-Nagy.

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