



Letter from the President

he summer season brings to mind a passage from the book *The Call of Solitude* by the late university educator Ester Schaler Buchholz: "Others inspire us, information feeds us, practice improves our performance, but we need quiet time to figure things out, to emerge with new discoveries, to unearth original answers." This period between our spring and fall semesters gives our faculty time to recharge and focus more intently on their projects. While the outward-facing pace of the university may appear to slow somewhat, the work never stops. In this issue of *IIT Magazine* you can read about some of the high-level research that is taking place.

For example, interdisciplinary teams are solidifying ideas and writing proposals for consideration in the Nayar Prize II competition. Madhavan Nayar (M.S. IE '68) and his wife, Teresa, on behalf of the Nayar Family Foundation, have established this second gift package totaling \$1.1 million to further support breakthrough, innovative projects. This issue of the magazine includes a profile of Assistant Professor Lili Du, a recent National Science Foundation CAREER Award winner, who is exploring ways to coordinate the centralized movement of vehicles with the help of an innovative online routing system and other technologies. She is also one member of a team exploring "The Driverless City" that has been awarded \$100,000 in the first phase of the Nayar Prize I competition. The April 2016 issue of *Wired* magazine featured an article on the team's project with comments by Du and Associate Professor Marshall Brown from the College of Architecture.

Headed by Professor Thomas Irving, Illinois Tech's Biophysics Collaborative Access Team performs research at Argonne National Laboratory. The team utilizes the Advanced Photon Source, one of three global sites and the only one in the United States where investigators can conduct state-of-the-art diffraction studies and macromolecular solution scattering. You can read about Irving's work on muscle proteins, funded by the National Institutes of Health, and even watch an *IIT Magazine* video conducted with Irving at Argonne.

In 2008 Illinois Tech launched Perfect Power at IIT, a smart microgrid system that saves the university about \$1 million a year, and reduces the time and money lost to power outages while meeting our school's energy needs. This year the largest electric utility in Illinois, ComEd, received a \$4 million grant from the U.S. Department of Energy to design and develop solar power and battery storage as part of a microgrid the utility is building in Chicago's Bronzeville community. That system will connect with Illinois Tech's microgrid. Bodine Chair Professor Mohammad Shahidehpour, who is leading the university's efforts, worked with ComEd, Argonne, and industry partners to develop the master control system that will enable the microgrids to share power. You can look forward to reading more about this project in the fall issue of *IIT Magazine*.

All of these research areas—urban transportation, heart health, and energy-saving improvements—pertain to issues that impact us all on a massive scale. Such work is a year-round pursuit, and reflects Illinois Tech's dedication to relevant research and education—and a commitment to unearthing original answers.

Sincerely,

Alan W. Cramb President

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

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

MISSION STATEMENT

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

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

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ON THE COVER: Professor Thomas Irving at Argonne National Laboratory [see Research Brief, pages 6–7]



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



Both Diane Oestreich (née Jones, CHEM '59), Rock Island, Illinois, and Christopher T. Jones (CHE '64), Knoxville, Tennessee, wrote in to call us out on the article "Fun As a Timeless Commodity" in the spring 2016 issue of IIT Magazine, which included a comment referring to the structure in the accompanying sketch as Main Building instead of Armour Mission. Our apologies.

Oestreich also contributed a colorful memory:

"There was a cafeteria in the basement of Armour/Union and a large auditorium above it. Occasionally there would be a cosmetics company (I remember Toni permanents) that would pay students to sit for half an hour with wet gauze on their arms, testing for allergies, in a large room on the second floor. We got paid for that, which students always loved."

Jones made an insightful observation and provided a link to the book *An Illustrated Historical Sketch of Armour Mission* (1905) at http://bit.ly/27eGQJf:

"...the history makes clear that the original Armour Mission and Institute had a very distinctive architectural style that, in its own way, was as powerfully articulated around 1900 as was Mies' style as reflected in the expansion of the 1950s and '60s. The Mission building, Main, Machinery, and Chapin Hall (the apartments when I was there) constituted a distinctive and powerful statement of a modernist sensibility."



Bob Huenemann (M.S. EE '70), Hollister, California, sent an email questioning our

use of the tomato graphic [below left] in "Partners in Prevention," in the spring 2016 issue of *IIT Magazine*. He felt that the "face of a pig" would have been more relevant in the article, which focuses on the Food Safety Preventive Controls Alliance and foodborne illness outbreaks.

Write Back!

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

IIT Magazine c/o Letters 10 West 35th Street, Suite 4D7-1 Chicago, IL 60616 Email: iitmagazine@iit.edu

News Briefs

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NAYAR PRIZE

ILLINOIS INSTITUTE OF TECHNOLOGY

Moving the Innovation Needle Forward: the Nayar Prize II

Members of the Illinois Institute of Technology community have a second opportunity to make a difference in the world through their participation in the Nayar Prize II, launched on March 1. Trustee Madhavan Nayar (M.S. IE '68) and his wife, Teresa, on behalf of the Nayar Family Foundation, have established an additional \$1 million-plus prize package for this competition, which encourages and challenges faculty, staff, and students to develop breakthrough, innovative projects that will produce meaningful results with a societal impact within a three-year period. Introduced in 2015, the Nayar Prize I provided \$100,000 in funding to each of three teams. This October, one team will be selected to complete the remaining two years of the project and be awarded \$200,000. Upon the successful completion of benchmarks and performance metrics set by the team and approved by the Steering Committee, members will receive \$500,000.

Visit web.iit.edu/nayar-prize/about to learn more about the Nayar Prize I and the Nayar Prize II. Read about entrepreneur Madhavan Nayar and the three winning teams competing in the Nayar Prize I at magazine.iit.edu/spring-2016/noble-experiment.



Kathryn Spink and Martin Jischke (PHYS '63)

Fueling Faculty

Fueling Innovation: The Campaign for IIT has delivered increased student scholarships, capital project developments, academic program and research initiatives, faculty support—and much more. A great example of faculty support comes from Martin Jischke (PHYS '63), member of the Illinois Institute of Technology Board of Trustees and president emeritus of Purdue University.

Jischke, who went on to earn a master's degree and a Ph.D. from Massachusetts Institute of Technology, touts the exemplary education he received at Illinois Tech and gives credit to the faculty members who taught him, pushed him, and inspired him.

"It takes a lot of time and energy to be an excellent teacher, and Patty and I hope that this award will serve as inspiration and encouragement to make that commitment."

-Martin Jischke

In 2016 Jischke established the IIT Board of Trustees Undergraduate Teaching Award as a token of gratitude. He and his wife, Patty, were inspired to create the award for three reasons: to say thank you for his own excellent undergraduate

experience, to encourage a continued emphasis in excellent undergraduate teaching, and to show the Illinois Tech community the importance that the Board of Trustees attaches to the excellence of its programs.

"I've spent my career in higher education, and one enduring lesson I've learned is that all faculty members hope to become excellent teachers. And when that hope is realized, recognized, and validated by an award like this, it can have a tremendously positive reinforcing effect on the commitment to teaching," Jischke explains. "It takes a lot of time and energy to be an excellent teacher, and Patty and I hope that this

award will serve as inspiration and encouragement to make that commitment."

The first recipient of the IIT Board of Trustees Undergraduate Teaching Award is Kathryn Spink, senior lecturer of biology, chief

health professions advisor, and chair of the University Premedical Advisory Committee. Jischke is not part of the award recipient selection committee, which is composed of faculty and led by Provost and Senior Vice President of Academic Affairs Frances Bronet, but he couldn't be happier with the outcome. "I met Kathryn this year at Commencement, and she's obviously a very gifted teacher who's very committed to her students," he says. "I'm delighted with the selection of Kathryn as the first recipient."

The Jischkes have made the IIT Board of Trustees Undergraduate Teaching Award part of their Fueling Innovation campaign commitment. "The focus of our giving has been on the education of students and the improvement and enhancement of that education," Jischke says. "This award is just another step in the continuation of the high-quality teaching found at Illinois Tech."

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

fueling innovation

Campaign Progress May 15, 2016

\$233,077,432 Raised

- 15 Endowed Chairs
- Capital Projects:
- Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship: \$32.7 million
- Robert A. Pritzker Science Center: more than \$5 million
- John T. Rettaliata Engineering Center: more than \$10.3 million
- \$39 million raised for scholarships
- Six families have made gifts of \$10 million or more

fuelinginnovation.iit.edu





AUTOPIAN ALGORITHMS

n automotive Utopia ("Autopia") of driverless vehicles may be the key to safer roads, better fuel efficiency, and smoother traffic flow. By moving you at higher speeds, it might even shorten your commute ¶ But, in order to function optimally, it will also require you to relinquish the steering wheel because, according to transportation scientists, an algorithm is a better driver than you. It's immune to distraction and, when built into a connected-vehicle system, is designed to make decisions that benefit everyone on the highway. ¶"Currently people use Google Maps to check roads for traffic and then each driver makes route decisions independently. We want to build a mechanism that collaborates with other connected vehicles on the road and mathematically program a solution that everybody is happy with," says Lili Du, assistant professor of transportation engineering, who recently received a National Science Foundation CAREER Award to develop algorithms that reduce traffic congestion by coordinating vehicle route choices. ¶ Such collaboration requires autonomous (driverless) vehicles, which will actually follow the software's directions. That's because people can choose to ignore instructions, explains Du. ¶ Du is also a member of The Driverless City project team, one of three selected to participate in the first phase of Illinois Tech's Nayar Prize I. As such she is working on algorithms to address decisions about lane choice, vehicle speed, and following distance (the amount of space left between your vehicle and the one in front of you). ¶ "When traffic is congested, we speed up and then we stop. That causes excess emissions and traffic accidents," Du says. "Our algorithm would help each vehicle react to traffic disturbance or fluctuation properly. As a result, we can keep each vehicle in efficient motion while making the traffic flow more stable." ¶ Some experts suggest an Autopian future will arrive as early as 2023, but Du says it will largely depend on society's acceptance of autonomous vehicles. Driverless cars are legal in four states (Nevada, California, Michigan, Florida) and Washington, D.C.; another 20 states (Illinois is one of them) are considering similar laws. If The coming Autopia must also address cybersecurity to prevent hackers from taking over individual vehicles or the entire network, and that issue may take a few years to work out. I Yet an Autopian future will indeed arrive, ironically, by dismissing the driver. –Koren Wetmore

MORE ONLINE

"American Cities Are Nowhere Near Ready for Self-Driving Cars": wired.com/2016/04/ american-cities-nowhere-near-ready-selfdriving-cars

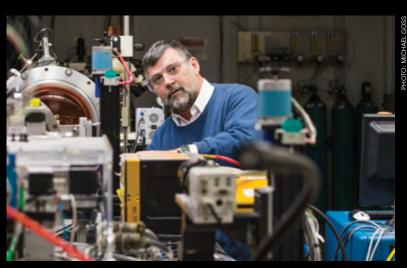
SUMMER 2016



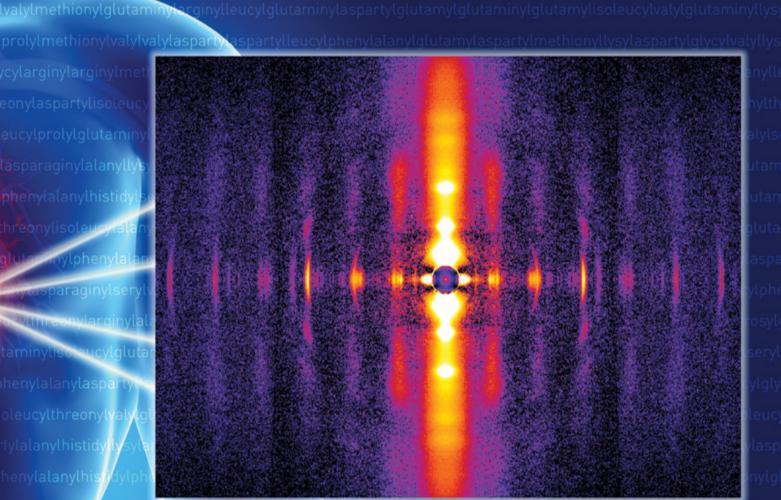
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OR MORE THAN 100 YEARS, a basic physiological tenet has ruled cardiac function: A healthy beating heart will pump out the same amount of blood that it receives. Known as the Frank-Starling Law of the Heart, it is as accepted as gravity-and, like gravity, is still not fully understood. Using X-ray diffraction techniques, Thomas Irving from Illinois Tech's College of Science and Pieter de Tombe from Loyola University Chicago Stritch School of Medicine discovered that the protein titin may play a critical role in the nano-science behind Frank-Starling. ¶ Blood enters the heart during its diastolic phase, when cardiac muscle is relaxed and lengthened. As the heart pumps

and enters into its systolic phase, the muscle forcefully contracts through the interaction of myosin and actin protein filaments. Titin serves as a kind of elastic band that stores energy when cardiac muscle is stretched and releases energy when the muscle contracts and shortens. Irving and



Professor Thomas Irving adjusts equipment in the Biophysics Collaborative Access Team bay at Argonne National Laboratory's Advanced Photon Source.



A diffraction pattern shows the positions and structure of proteins that cause muscles to contract.

de Tombe learned that the action of titin pulling on the myosin filaments causes changes that ultimately result in increased strength of muscle contraction when muscle is stretched when the heart fills in the diastolic phase. ¶ "The missing piece in all of this is how the one protein talks to the other," says Irving, whose team's findings were published in the *Proceedings of the National Academy of Sciences* (February 23, vol. 113, no. 8). "We have a bunch of candidates in mind and will try to track them down over the next couple of years, at which time we should have a pretty complete story about the Frank-Starling mechanism." ¶ This past spring the National Institutes of Health awarded Irving, who is also director of the Biophysics Collaborative Access Team (BioCAT), \$6.3 million to continue this work and other projects at the Advanced Photon Source. —*Marcia Faye*

MODE ONLINE

Watch an *IIT Magazine* Video Extra featuring Thomas Irving at Argonne National Laboratory at magazine.iit.edu.

Methionyl...isoleucine

Not only does titin take the top honor of being the world's largest-known protein, but it also has the longest name in the nomenclature of the International Union of Pure and Applied Chemistry (IUPAC). That "titin" is derived from "Titan," one of the giant deities from Greek mythology, is no surprise. At 189,819 letters, titin's IUPAC name took one man eight minutes longer to pronounce than the time it takes to watch *The Godfather Part II*. Listen to (at least a part of) his titanic effort at http://bit.ly/1c7oslk.

Class of 2016

Cleversafe founder and Illinois Institute of Technology Trustee Chris Gladwin [right] delivered the 2016 Commencement keynote address, during which he asked the Class of 2016 to pose for a photo [below]. Held on May 14 from Illinois Tech's Ed Glancy Field, the ceremony was viewed via live stream in 61 countries. Gladwin, who recently gave \$7.6 million to Illinois Tech to strengthen its computer science program, told the graduates that the photo has a deeper significance than simply being a cool crowd shot. ¶ "Class of 2016, when you look at that graduation picture 10 years

from now, in 50 years, or perhaps even in 100 years, you will see the faces of all of your classmates. You will see the faces of designers and engineers who have created new products used around the world. You will see the faces of lawyers who have advanced just causes..." said Gladwin, including more examples from each of the major fields of study at Illinois Tech. "Class of 2016, all of the elements needed to have these kinds of impacts are seated around you. They are your fellow members of the Class of 2016 and the people of the entire Illinois Tech community."



PHOTO: MICHAEL GOSS



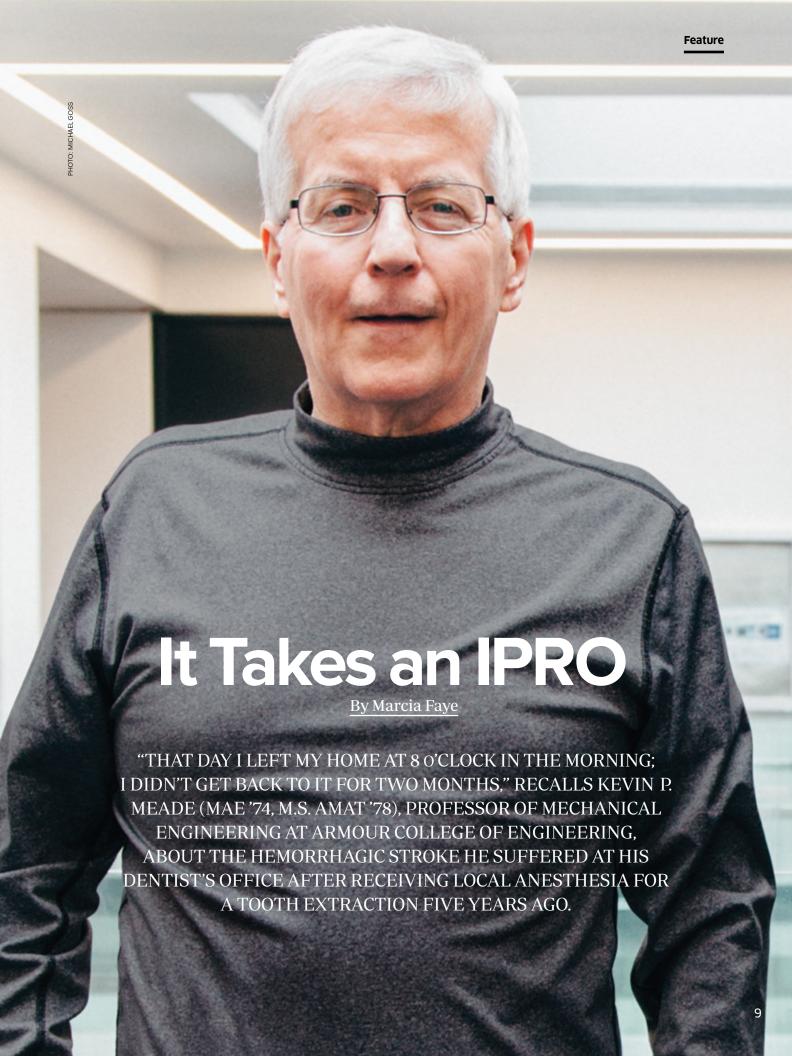
Save the Date!

Join the Illinois Tech community for an exciting event on Thursday, August 25: the groundbreaking for the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship.

The activities will take place at noon in Morton Park (north of Hermann Hall), the future home of the Kaplan Institute. Don't miss out on this fun and historic day at Illinois Tech.

Contact rsvpevents@iit.edu for more information.





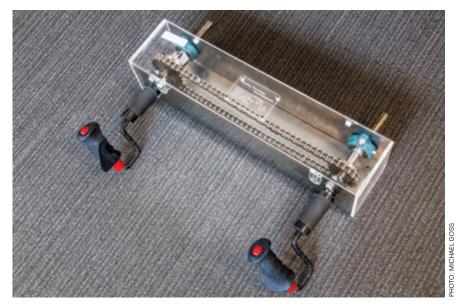
T IS ONE OF THE IRONIES OF life that Meade, who is also a clinical orthotist, now benefits from biomechanical devices much like the individuals he has supported throughout more than a decade in clinical practice. At Illinois Tech Meade may be best known for having led teams of students to Latin America, where they provided orthotic treatment to youngsters with scoliosis, or lateral curvature of the spine, through the university's Interprofessional Projects (IPRO) Program. Since his stroke, some of Meade's former students have designed an IPRO course-and an assistive therapeutic device-to benefit their teacher whose life changed in the proverbial instant.

"I kind of joke about this whole situation," Meade continues in characteristic good spirits, seated in his wheelchair in his office in the John T. Rettaliata Engineering Center. "Now I'm serving in the role of a patient—so I've got it all covered."

Meade's former student Sady Wootten (ME '15) says that when she learned of Meade's stroke and saw the difficulties he was having on his right side both sitting and standing, she wanted to help. Inspired by Mobilus-a standing wheelchair her father had begun to design for a friend with multiple sclerosis-she approached Meade about developing an IPRO that would tailor the wheelchair for his specific needs. Meade was flattered but insisted that the project be applicable to as many people as possible with similar disabilities. They agreed to start the process with Wootten doing an independent study course on biomechanics with him.

"A mechanical engineer learns how parts move, how forces act on bodies; but it's a really interesting twist to start to see how forces act on *human* bodies," recalls Wootten, now a junior quality engineer at L&T Technology Services, about her greatest take-away from that course.

Nearly 25 students enrolled in the first IPRO in spring 2015. She divided the class into three groups: one worked on altering Mobilus, which Wootten's father donated to the project; the second group interviewed and videotaped Meade to determine his needs; and the third group began designing an arm therapy



The Supinator arm therapy device is constructed of readily available components—a motorcycle chain, sturdy gears, and comfortable grips.

"A mechanical engineer learns how parts move, how forces act on bodies; but it's a really interesting twist to start to see how forces act on human bodies."

-Sady Wootten

device—The Supinator—to encourage both pronation (turning the hand/arm so that the palm faces down) and supination (turning the hand/arm so that the palm faces up), both which are limited on Meade's affected side. The Supinator proved to be so beneficial that it became the new focal point of two subsequent IPRO courses (fall 2015 and spring 2016).

"For me, personally, it works," says Meade about the device, which he has been using for 15-minute sessions, twice per week. Composed of a motorcycle chain, heavy-duty gears, and SiliGrips comfort handles, The Supinator is encased in an easily transportable stainless steel and acrylic tabletop box. [Watch the *IIT Magazine* Video Extra of Meade demonstrating The Supinator at magazine.iit.edu.] The student team has

also been working on a similar apparatus to assist in knee flexion, ankle plantar flexion, and ankle dorsiflexion in Meade's lower limb.

While the IPRO is not currently slated to continue in the fall, The Supinator itself has a promising future. One of Meade's physicians at the Marianjoy Rehabilitation Hospital is looking to enlist The Supinator in a clinical trial comparing it to the costly ArmeoSpring therapeutic device now used in stroke recovery. Meade's colleague in Colombia, Jose



Students explored standing wheelchair options in the Mobilus IPRO courses.

Miguel Gomez, M.D., of Gomez Orthotic Systems, has agreed to pilot a Supinator according to the IPRO team's specifications. And a group of Stuart School of Business students has drafted a business model to help the IPRO team bring The Supinator to a wider number of patients. [See sidebar.]

"We're looking into doing an open-source model of The Supinator, which would allow for an even more affordable device, as this model comes in at about \$200," says Tyler Grudowski (ME 4th year), current IPRO project manager. "With the open-source model, made of PVC pipe and wood, the cost will drop down to about \$50."

For Grudowski, who lost several family members to heart disease and cancer, this IPRO experience was a high point of his education.

"As a student one of my overarching goals was to develop something in the medical field that would truly have the potential to make a difference and positive impact in someone's life," he says. "So when Sady told me about this project I thought, this is it. The goal of this IPRO is to reach out and help not only Dr. Meade but as many people as possible. That's why I love this IPRO so much."

MORE ONLINE

NIH "Types of Stroke": www.nhlbi.nih.gov/health/health-topics/topics/stroke/types

"Work-Centric Prosthetics" and "It Takes a Team to Aid a Child": magazine.iit.edu/summer-2013/work-centric-prosthetics and magazine.iit.edu/fall-2012/it-takes-team-aid-child



Tyler Grudowski (ME 4th year), spring 2016 IPRO project team leader [/eff], with Professor Kevin P. Meade (MAE '74, M.S. AMAT '78)

MODELS FOR SUCCESS

Clinical Associate Professor of Innovation Christine Miller says that normally her capstone 480 course for undergraduates explores venture development at the "ideason-a-napkin" stage. When she learned about the Mobilus IPRO course, she thought it would be a perfect real-world opportunity for her students to make an important—and tangible—contribution.

"Experiential learning is key for students," says Miller, who has been on the faculty at Stuart School of Business for the past two years.

About 24 students, half of her class, signed up to craft business models for the Mobilus IPRO team. Zach Pergrossi (BA 4th year) echoes Miller's sentiment about having the chance to gain knowledge by working on a project outside the box—and the textbook.

"I saw it as a chance to do something concrete," he explains. "I had first seen the Mobilus project at an IPRO Day. So it was a really great opportunity to have such a diverse group of students in business and engineering get together to produce results that were practical, not just theoretical."

To help ensure that the IPRO team's Supinator device can benefit as many people as possible, Pergrossi says that his group provided the team with research that informed the design of four distinct business models. They recommended that the IPRO team pursue licensing the device and provided information about competitors and industry conditions. Future collaboration could continue with research on working with a manufacturing company for product distribution and how to partner with a not-for-profit for funding. —Marcia Faye

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IIT Magazine SUMMER 2016



N HIS THREE-PIECE SUIT,
Joseph Wright (LAW '13) resembles a young James Bond, a man of international daring and intrigue.
Yet when he mentions his work with Cannabis, the mystique fades and he's often hit with a barrage of jokes befitting a Cheech & Chong flick.

"Cannabis has a long history connected with amusing things, so you have to have a sense of humor to do this job," says Wright, 31, who was appointed last June to serve as director of the State of Illinois Medical Cannabis Pilot Program. "But it's also a serious medical program."

Established by the passage of the Compassionate Use of Medical Cannabis Pilot Program Act in August 2013, the Illinois program isn't the first for the Midwest—Michigan legalized medical Cannabis in 2008—but it is considered one of the nation's most restrictive.

Patients must undergo background checks and be certified as having one of 39 qualifying medical conditions. Plus, patients are not allowed to grow their own pot. Certifying physicians must prove a prior and ongoing medical relationship with the patient. Licensed growers must comply with zoning laws, maintain 24-hour surveillance, and ensure strict inventory control.

Approximately 7,000 patients have enrolled in the program since its launch in November 2015, and up to 200 new applications arrive every week. Still, the fledgling program is not without its challenges. Some doctors refuse to sign patient identification cards, which certify that a person has a qualifying condition, because they think it's the same as writing a prescription. Growers struggle with zoning and product quality issues—there's no federal standard, for example, on how much pesticide is safe to allow in weed—and the task of building an industry where none previously existed.

Fortunately, Wright, who recently restored a 1979 Yamaha XS 650 motorcycle, enjoys solving problems and building things.

"What enticed me about this job was the challenge to help create this program and put it on solid footing. It's a fantastic opportunity to build something that hopefully makes people's lives better," he says.

POT PRESCRIPTION

Used as a medicine since 2737 B.C., marijuana was classified as a medical compound by the United States Pharmacopeia in 1851. Although declared illegal in 1937, the drug is regaining medical status. Today 23 states plus Washington, D.C., have legalized *Cannabis* for medicinal use.

"The drug interacts with CB1 receptors in the brain, which normally interact with naturally occurring cannabinoids in our bodies to 'turn off' signals between neurons. They tell the sending neuron, 'I got the message. Stop now.'" says clinical pharmacologist Kari Franson, associate professor for the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences.

Cannabis affects receptors in brain areas responsible for nausea, pain response, and appetite. In short, it nixes your vomit urge, reduces your ouch, and spurs you to eat. It also boosts your heart rate by an average 19 beats per minute and creates a sense of euphoria, or "high." Unfortunately, it also makes it difficult to pay attention or stand without swaying, explains Franson.

So why do some patients prefer weed to available medication? For some, it's the perception that a natural product may be better than a synthetic drug. For others, *Cannabis*'s delivery method works better.

"I think most people started using it because they had nausea and vomiting from cancer chemotherapy," Franson says. "If you feel nauseated, why would you want to swallow a pill? Smoking marijuana may be perceived as a better option."

Serving as director was a natural leap for Wright, who spent six months solving issues with the program's grower licenses while working as a lawyer in the Office of Governor Rauner. His previous posts include serving as a law clerk for Holland & Knight, the Office of the Illinois Attorney General, and the Illinois Department of Financial and Professional Regulation.

Chicago magazine dubbed him the "Cannabis King," and it appears that Wright's reign may continue through 2020 after the Illinois legislature and Governor Bruce Rauner this spring agreed to extend the pilot program. While Wright admits that there seems to be an endless amount of issues and legal questions around Cannabis, he intends to embrace the task before him. He knows that an increasing number of individuals are depending upon him and his team.

"The patient population in Illinois appears to be growing in a manner consistent with other highly regulated medical *Cannabis* states—starting small and rising steadily over time," he says. "Overall, the trajectory of the program points upward."

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IIT Magazine SUMMER 2016





Decades later and half a world away, the Zika virus has graduated from benign to deadly. IITRI scientists—the first to model today's new strain—are now testing viable treatments and vaccines.

14 ILLUSTRATION: SCOTT BENBROOK

N 1947 DEFIBRILLATION WAS FIRST performed on a human, the Nobel Prize in Physiology or Medicine was awarded to scientists who discovered how glycogen breaks down in the human body, and the United States Army successfully launched and returned the first living animal—fruit flies—to and from outer space.

A lot has changed since then—including the Zika virus.

"Scientists have started to sequence older samples of Zika from 1947, when Zika was first discovered in Africa, but the current virus is likely different," says Robert Baker, manager of the Microbiology and Molecular Biology Division at IIT Research Institute, Illinois Tech's contract research organization.

IITRI leveraged its experience in modeling similar viruses including West Nile and dengue fever to become the first laboratory in the U.S. to receive human samples of the current Zika strain. In May IITRI completed its pre-clinical model of the virus and as of press date has begun testing the efficacy of existing drugs and vaccines in reducing Zika's symptoms and rates of infection, respectively.

"We have gotten to the finish line before the others," says Baker, who is leading the study.

According to Baker, within a few weeks of testing IITRI could feasibly send its research findings to the U.S. Food and Drug Administration, which could

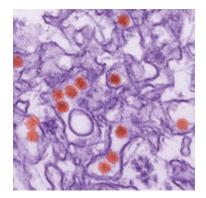
issue an emergency use authorization granting an already-licensed drug to be prescribed for the additional purpose of alleviating Zika.

"Our model shows lethal effects with fewer than 10 virus particles. We could see deaths with as few as two to three Zika virus particles," says Baker, adding that in humans it typically takes more than 10,000 flu virus particles to make someone sick. "This indicates our model is very sensitive at showing how pharmaceuticals can have an effect on Zika."

IITRI's findings may extend well beyond identifying possible Zika medication and assist with the analysis of why, 64 years since the first cases of Zika in humans were documented, the virus is affecting the Brazilian population more severely than individuals in other parts of the world. Although the world's first large human outbreak occurred in Micronesia in 2007, and the second in several Pacific islands seven years later, it wasn't until February of this year that the World Health Organization declared Zika a public health emergency of international concern due to its association with microcephaly and other neurological disorders in Brazil.

"Brazil is an area with previous dengue infection," notes Baker. "Our work may help to show for the first time that infection and recovery from one virus could lead to worse affects from a later infection by a separate virus."

MORE ONLINE
Zika Virus: www.cdc.gov/zika



"FLYING HYPODERMIC NEEDLES"

Robert Baker, a microbiologist at IITRI, says that Zika thus far is confirmed to spread in one of two ways: 1) An uninfected local mosquito bites a human infected with Zika elsewhere and then passes the virus to its offspring (vertical transmission), who later pass it to humans, or 2) Mosquitos (both infected and uninfected) pass it from person to person by biting multiple people. "Zika is transmitted by two species of Asian tiger mosquitos. Asian tiger mosquitos, whose peak biting periods are early morning and before dusk in the evening, thrive in urban environments and cover 50 percent of the United States," says Baker. "They are

promiscuous biters—flying hypodermic needles." This image [*left*] is a digitally colorized transmission electron micrograph (TEM) of Zika virus, with virus particles colored red (source: CDC/Cynthia Goldsmith).

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ARRY JORDAN (EE '89), president of the remote monitoring technology company Wi-Tronix®, says that although he had led the Electro-Motive Diesel team that created the company's signature IntelliTrain remote monitoring system, he just couldn't shake the feeling that an even better system was just down the tracks.

"I can't just have an idea—I have to make it a reality," says Jordan, noting that when he had the chance to collaborate on a project with Electro-Motive colleague Mike Heilmann (M.B.A. '04), he knew that together, they could make it happen.

Both men believed that remote monitoring technology could be developed that would improve the efficiency and safety of locomotives, Electro-Motive's chief product. They lobbied to expand the product's diagnostic scope to address these aspects, but the executive leadership wasn't interested. The duo left in 2005 and began Wi-Tronix in Jordan's basement. Joined by two former co-workers, the team began to develop their Wi-PU™ [Wireless Processing Unit] and remote monitoring system solution. Recognizing that their innovative Internet of Things (IoT) technology was not limited to the rail industry, they coined the term "high-value mobile asset" to encompass expensive (costing more than \$1 million) equipment that can be piloted away (from locomotives to tugboats), has a long life cycle, and demands sophisticated monitoring.

About the size of a square tissue box, the Wi-PU can connect to a locomotive's event recorder, or "black box," and continuously monitors conditions and triggers remote alerts for inefficient or unsafe operations and accidents. In the United States, the recorder monitors and records

data such as train speed, direction of motion, and brake applications and operations. The Wi-PU gathers data remotely in real time and provides the railway with information on fuel monitoring, GPS location, and access to on-board data. The unit is updatable, compatible with any mobile asset's black box, and adaptable to future changes in technology.

While the rail industry has been the company's mainstay, with a client list that includes Amtrak, BNSF Railway, CN, and Kansas City Southern, the Wi-PU has been fitted onto water vessels such as

"We wanted the device to stand out from the blue of companies like General Motors and General Electric and from the blacks and grays of other locomotive electronics."

-Mike Heilmann

the Massachusetts Bay Transit Authority ferries and Illinois Marine Towing boats in suburban Lemont. When Jordan and Heilmann approached the marine industry, they discovered no consolidated method existed for remote monitoring of high-value assets such as tugboats. Heilmann says the marine paradigm mirrors that of the railway's, "a longtime industry in which technology implementation is still a very new concept."

Wi-Tronix now monitors more than 10,000 high-value mobile assets. In 2015

Jordan and Heilmann received the *Daily Herald Business Ledger* Entrepreneurial Excellence Award in the Innovation category for their idea.

While the Wi-Tronix team has grown to more than 90 employees and is now headquartered in a sleek office space in Bolingbrook, Illinois, the duo hasn't forgotten how Illinois Tech helped to shape the company's foundation. Heilmann, executive vice president of business development, explains that he drew on the knowledge he gained in a brand management course at Illinois Tech as the team decided on the company's colors and logo.

"We wanted the device to stand out from the blue of companies like General Motors and General Electric and from the blacks and grays of other locomotive electronics," says Heilmann about the team's decision to use purple as Wi-PU's central color.

"Through the fresh opportunities IIT afforded and with the help of professors, I was able to invent," recalls Jordan, noting that Wi-Tronix offers Illinois Tech students and alumni internship and employment opportunities.

The expanded Wi-Tronix team, including Ken Schleich (AE '11), recently unveiled its latest visionary product. At its annual conference this May, Wi-Tronix officially announced the launch of Violet TM , the new, industry-leading, multi-functional Locomotive Data Acquisition Recording System (LDARS).

Violet makes other LDARS systems obsolete by enabling a host of new functionalities, including predictive diagnostics to increase locomotive reliability and video analytics that will improve safety for crews, railway workers, and the public.

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MORE ONLINE

Wi-Tronix: www2.wi-tronix.com

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Among the Ranks of the Initiated

Sonya Ballentine—four years ago "chronically homeless" and now an Illinois Tech research associate—is a soul soldier.

"WHAT WE DO, WE DO AS THE TWO OF US TOGETHER," says Patrick Corrigan, Distinguished Professor of Psychology at Lewis College of Human Sciences. "I'm the numbers guy and she's the soul with the street smarts."

For 28 years Ballentine counted herself as one of society's cast-offs, a restless, urban nomad with an untreated serious mental illness—in her case, bipolar disorder—suffering abuse through illegal substances, the wrong partners, and desperate lifestyle choices. Weary of her existence, she entered into an outreach program in 2012 offered by Heartland Alliance Outreach on Chicago's North Side. By making the decision to save her own life, Ballentine would go on to help rescue countless other individuals through her involvement with Corrigan and his Community-Based Participatory Research (CBPR) project.

"At the time I met Pat, I had just moved into permanent housing through Heartland," recalls Ballentine, her commanding and spirited voice not unlike those of the preachers in the churches of the South Side neighborhood where she grew up. "I went to Heartland's resource center because I was experiencing a bad bout of depression—I felt isolated and alone in my apartment as it was totally different for me coming from shelter group settings—and noticed an application to participate in a consumer research team at Illinois Tech. I thought it would simply be an opportunity to make a few bucks and get out of the house."

Corrigan hired Ballentine to be one of eight individuals comprising a CBPR team—community members with "lived experience"—who developed a program for peer navigators to assist others with serious mental illness who were homeless.

"The research suggests that people with serious mental illness get sick and die about 10–15 years earlier than everybody else; when you add to that being of color, low-income status, or homelessness, the number goes through the roof," says Corrigan, a recognized CBPR practitioner and director of the National Consortium on Stigma and Empowerment.

Ballentine's first project with Corrigan was so successful that in 2015 he obtained a two-year \$250,000 grant from the Patient-Centered Outcomes Research Institute (PCORI), created as part of the Affordable Care Act, or Obamacare, to develop a curriculum, manual, and workbook to teach





Distinguished Professor of Psychology Patrick Corrigan [*left*] and Research Associate Sonya Ballentine discuss the Kappa Alpha Kappa Sorority Community Impact Days service event attended by Inspiring Change Advisory Board members.

"The research suggests that

get sick and die about 10-15

years earlier than everybody

of color, low-income status, or

through the roof." —Patrick Corrigan

people with serious mental illness

else; when you add to that being

homelessness, the number goes

Chicago-area community-service providers how to establish their own CBPR programs. This year Corrigan's team, including Ballentine, whom he retained as a research associate, selected two providers—Heartland Alliance and Emmaus Ministries—as participants in the new program, Inspiring Change.

"Emmaus is the only organization that is dedicated full time to

reaching out to men in survival sex in Chicago. I would estimate we serve 150–300 African-American men with mental illness every year. For the men we have worked with over the past year, more than 72 percent deal with at least one serious mental health illness; the majority of the men we serve are also African American," says Libby Trudeau, client services analyst. "Inspiring Change intrigued us because a CBPR model includes

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the opinions and input of the men. Our project involves a survey about how these men get physical health care. We will be exploring what barriers and needs this population might face."

Emmaus, and Heartland, which is designing a self-management wellness program, have each been awarded up to \$21,000 to complete their projects by December 31. Through a second, multi-million dollar grant from the National Institute on Minority Health and Health Disparities, Corrigan and Ballentine

will examine how African Americans with serious mental illness control weight gain through diet and exercise when they live in food and activity deserts. In the fall he will begin a funded collaborative CBPR project with Associate Professor of Psychology Eun-Jeong Lee on family decision making among Korean-Americans with Type 2 diabetes. Corrigan says that his

funding will allow Ballentine to continue assisting him for another five years.

"Growing up I passed IIT I don't know how many times, never thinking that I would enter into a building here—and now I have an IIT ID," says Ballentine, shaking her head as she muses over how different her life is today. "I never knew that the challenges I experienced in the past would literally become

assets for the future. My hope and desire is to help other people who are in the position I was in to do the same thing. I'll no longer be the exception. I'll be the norm." ■

MORE ONLINE

Emmaus Ministries: streets.org
"Engaging Patients with Mental Illness in Patient-Centered
Outcomes Research": vimeo.com/156000385
Heartland Alliance: www.heartlandalliance.org

Visit magazine.iit.edu to read Online Exclusives about

- Madeline Murphy Rabb (M.S. DSGN '75), founder and president of the Chicago fine arts advisory firm Murphy Rabb, Inc.
- The brick-shaped world of Rocco Buttliere (ARCH 4th year), who shares his love of all things LEGO
- Team QuiddllTch and its founder and president, Amy Zasadzinski (BIOL 4th year)

Also check out Video Extras with

- **Kevin P. Meade** (MAE '74, M.S. AMAT '78), professor of mechanical engineering, who demonstrates a therapeutic tool created by his IPRO students
- Professor Thomas Irving, chair of the Department of Biology, on the research he is conducting at Argonne National Laboratory's Advanced Photon Source
- University Archivist Ralph Pugh, on milestone moments in the 123-year history of Main Building













PHOTO: SCOTT BENBROOK

GROWING INTO GIVING

Student Receives National Honor for Service and Scholarship

he son of a diplomat, Vignesh Rajagopal (EE 3rd year) learned from his father's example the importance of having a service-oriented attitude in life. Born in Chennai, India, Rajagopal divided his childhood years between Switzerland and his birth continent, and his adolescent years between Sweden and Ethiopia. His experiences as a teen living in Mexico, however, may have been the most profoundly influential pathway to Illinois Tech and on to the 2016 United States Collegiate Athletic Association National Student-Athlete of the Year honor.

"When I was in Sweden I was that quiet kid who'd sit in class and all anyone knew about me was that I was good in math," he recalls about his middle-school education in Stockholm. "I did not like doing community service at all because that meant really getting out of my comfort zone."

When his father was transferred to Mexico City, Rajagopal entered Greengates

School, which required its high school students to be active in volunteer activities. Rajagopal says that he was pleasantly surprised by how much he enjoyed doing what his parents told him from an early age—that giving back to people should be a fundamental part of daily living.

"I would get involved with as many community-service opportunities as I could, just to try to help people and make myself a part of their community," he says. "I liked coaching Special Olympics swimming for kids under 10 with varied disabilities and visiting local libraries to teach English to people of all ages, especially older adults."

During his school lunch hour, Rajagopal discovered basketball. He loved the physical exertion of the sport and the chance it gave him to develop team-building skills. Joe Aldus, former coach of the Greengates boys' high school varsity basketball team, says that players looked up to the young Rajagopal.

"Vignesh was a model sportsman, demonstrating a quiet but powerful leadership amongst his teammates," says Aldus. "He didn't look for glory, scoring, or highlight plays, instead displaying a determination and willingness to do all the little things for a team that wouldn't show up on a stats sheet but are essential for the win."

The chance to play varsity basketball and further explore his mathematical and engineering interests in Chicago drew Rajagopal to Illinois Tech. In keeping with his spirit of giving, he has volunteered at the Museum of Science and Industry and mentored kids at the Mt. Carmel Missionary Baptist Church, and donated to charity his first check from his job tutoring students at Illinois Tech's Academic Resource Center. And as a Scarlet Hawks basketball co-captain, Rajagopal continues to inspire on the court.

"He is one of the most enthusiastic and supportive teammates I have ever seen," says Illinois Tech Athletic Director Joe Hakes, "and eternally cheerful and optimistic."—Marcia Faye

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MORE ONLINE illinoistechathletics.com

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CLASS NOTES

1940s

Warren Spitz

(ARCH '42, M.S. CRP '68), Northbrook, Ill., is looking to reconnect with classmates from '41. '42. or '43.

Robert DeBoo

(ME '45, M.S. IE '61), Stone Mountain, Ga., turned 90 this year and graduated from Illinois Tech at 18 while in the V-12 Navy College Training Program.

V. Robert Baird

(EE '46), Elmhurst, Ill., worked as an electrical engineer for 25 years at Powers Regulator Co. and as an electronics engineer for 40 years at Underwriters Lab before retiring in November 2013. He taught night control courses at Triton College from 1990–2005.

William Burt

(EE '46), Bloomington, Minn., turned 90 this year and would like to see an alumni group form in the Minneapolis-St. Paul area.

Harris Levee

(ME '49), Gaithersburg, Md., is going on 97 and says that he considers himself fortunate that he can still enjoy reading a newspaper occasionally.

1950s

Melvin Friedlander

(ME '50), Menifee, Calif., graduated in June from California State University, San Bernardino at age 94, with a master's in education.

Charlotte Decker

(PHYS '51, M.S. '53), Claremont, Calif., retired in 1998 after almost 30 years at Aerojet Rocketdyne, where she worked on the Defense Support Program.

Richard Ryan

(EE '51), Barrington, Ill., retired in May 2015 after 37 years as a trustee of the Barrington Area Library, 25 years of which he served as board president.

James Albrecht

(FE '53, M.S. '55), Baltimore, continues to serve on the board of directors of the World Trade Center Institute, the board of trustees of the Baltimore Council on Foreign Affairs, and the board of advisors of Monell Chemical Senses Center.

Joyce "Jay" Foster

(ME '53, M.S. '59), Huntsville, Ala., spent 32 years at NASA's Marshall Space Flight Center working on a variety of projects, including Redstone, Jupiter, Skylab, the Saturn V-Lunar rocket, the space shuttle, and the International Space Station. Foster also spent six years with the Canadian Space Agency and 15 years as an aerospace consultant. He is now a docent conducting tours of the United States Space and Rocket Center. Foster and his wife, Betty, who have been married for 66 vears, have two daughters and two grandchildren.

Otto Harling

(PHYS '53), Hingham, Mass., retired after a professional career of more than 50 years as a nuclear research scientist and educator. He is a professor emeritus at Massachusetts Institute of Technology, where he directed the Nuclear Reactor Laboratory, an interdepartmental center of the university.

Paul Herrmann

(PHYS '53), Chicago, and his wife, Phyllis, celebrated their 60th wedding anniversary last October. He retired in 1991 as senior programmer analyst at the American College of Surgeons.

Marilyn John (née Wolff)

(TD '56, M.S. EG '62), Shorewood, Wis., taught both full- and part-time at the University of Wisconsin-Milwaukee (UWM) for 30 years while obtaining her graduate degree, raising three daughters and a stepson, volunteering, and serving at her church. She retired in 1986 at the same time that her late husband Richard John retired as a 30-year UWM professor of accounting. Since her retirement John has traveled extensively and enjoys spending time with her grandchildren.

Patrick Loftus

(CHE '57), Charlotte, N.C., retired from sales at Texaco, Inc.

Edward Messal

(ME '59, M.S. ME '63, Ph.D. MAE '70), Fort Wayne, Ind., retired as professor emeritus of mechanical engineering technology in 2003 from Indiana University-Purdue University Fort Wayne.

Darwin Simonaitis

(EE '59, M.S. '61), Elkhart, Ind., completed three vears as president of the New York Central System Historical Society. He was employed at IIT Research Institute for 14 years, served as IIT evening division faculty for 10 years, and taught quality-engineering courses at Indiana University South Bend. Simonaitis retired from Miles Laboratories/Bayer Corporation after 28 years and is currently active with the American Society for Ouality. He and his wife. Shirley, have three children and five grandchildren.

1960s

Arun Phadke

(M.S. EE '61), Portland, Ore., was honored by the Institute of Electrical and Electronics Engineers (IEEE) with the 2016 IEEE Medal in Power Engineering. A recipient of several other honors, including being named an IEEE fellow in 1980, Phadke previously worked in the electric power industry at Allis-Chalmers and American Electric Power.

Norbert Pointner

(ARCH '61, M.S. CRP '62), Wheaton, Ill., was interviewed by the American Planning Association on the grassroots public involvement program to name Chicago's Pullman Historic District as a national monument. He served as chair of the original preservation committee for five years.

Wavne Stewart

(CE '61, M.S. CRP '65), Portland, Ore., is chair of the Historic Columbia River Highway Advisory Committee, which is working to reconnect the first scenic highway in the United States.

Robert Thompson

(FPE '61), Boxford, Mass., retired in 2013 from

Thompson Consulting Group and in 2001 from the U.S. Department of Veterans Affairs.

Duane Anderson

(ARCH '62), Summerfield, Fla., worked for Ludwig Mies van der Rohe from 1961-69. He has designed 43 Lutheran churches.

Lawrence Shelton

(ME '62), Morton Grove, Ill., a holder of 23 patents, retired after 65 years as a research manager. Shelton is also a Holocaust survivor.

Roger Cooper

(M.S. MATH '63, Ph.D. '69), Menlo Park, Calif., served as an assistant professor of mathematics at the University of Wyoming and taught at various other colleges and universities in the U.S. and abroad. He has conducted extensive grant-funded research at Stanford University. SRI International, and the University of Oregon on a discovery he made involving spontaneous eve-movement responses to the meaning of spoken language.

Larry Darda

(EE '63), Frankfort, Ill., a retired U.S. Air Force lieutenant colonel, served as a survivability/ nuclear weapons effects chief scientist at Hughes Aircraft Company.

John Watson

(BIOL '64), Daly City, Calif., is a professor emeritus at the University of California, San Francisco School of Medicine.

Robert Tingler

(LAW '65), Palatine, Ill., retired Illinois Attorney General bureau chief, holds a National Rifle Association certificate and is an Illinois licensed firearm instructor.

Martha Luehrmann

(PHYS '66), Berkeley, Calif., obtained an M.B.A. from Dartmouth College and was involved in a starting a publishing company, serving as the chief financial officer of a high-tech startup, and performing tech transfer for the University of California. She is now retired from business and is a professional actress.

Kenneth Rimkus

(CE '66, M.S. CHE '72), Willow Springs, Ill., had a 32-year career with BP working as a process designer, process superintendent, project manager, and manager of marketing and distribution engineering. He has been married for 48 years, and has two children and two grandchildren.

Michael Slifka

(FPE '66), Middleton. Wis., since retiring in 2010 as president of PFS Corporation in Cottage Grove, Wis., has been able to fully concentrate on his professional engineering consulting as a fire protection engineer, fire forensics investigator, and expert witness. He has worked on projects as diverse as teaching a class on high-rise fire safety design in Saudi Arabia to the Saudi Arabian Chapter of the Society of Fire Protection Engineers to helping in trial testimony in Wyoming for his clients to achieve the largest civil award in state history on a carbon monoxide exposure case. Slifka is currently consulting on the recent Cosmopolitan of Las Vegas hotel fire.

Ronald Owen

(ME '67), Kihei, Hawaii, acquired more than 20 patents, sold his company to Illinois Tool Works, and retired to Hawaii in 2006.

Norman Phoenix

(EE '67, M.S. '72), Chicago, works one day a week as a substitute teacher for Chicago Public Schools. He also volunteers in IEEE's Science Kits for Public Libraries project, which provides grants to Chicagoarea public libraries, enabling them to set up science kits for circulation.



Joanne Gucwa (CHEM '68), Des Plaines, Ill., authored three *BioFables* children's storybooks.



Southern California Alumni Gathering Alumni gathered with Illinois Tech President Alan W. Cramb [third from left] and host Praful Kulkarni (M.ARCH. '76) [first from left] at gkkworks in Pasadena, California. Photo: South Bay Studio



Bay Area Alumni Gathering Trustee Sherrie Littlejohn (M.S. CS '82) was among the alumni who gathered in the Bay Area to hear College of Science Dean and Distinguished Professor of Physics Russell Betts [*left*] present "Science at IIT—The First 125 Years."

which were published in 2015. The fourth book was released in early April.

Joseph Plankis

(BE '69), Westfield, Ind., retired in 2010 from a career as an economic development director.

1970s

Dolores Aquino

(CHEM '70), Houston, was named as an Outstanding Chemistry Teacher in a Two-Year College by the American Chemical Society, Greater Houston Section.

Jeanne Ladewig Goodman

(M.S. DSGN '70), Scottsdale, Ariz., continues to paint daily.

Robert Hoel

(BE '70), Elmhurst, Ill., in his retirement, has been elected president of the board of directors of the Active Transportation Alliance, which serves the Chicago metropolitan area and is the largest regional advocacy group in the country for walking, biking, and public transit. He is also on the board of Ride Illinois, the state-wide bike advocacy group.

Lester McKeever

(LAW '71), Chicago, has been featured in a number of media outlets, including The HistoryMakers African-American video oral history collection; Perspectives magazine; and the Junior Achievement 75th Anniversary video. Additionally, the Illinois CPA Society Advancing Diversity Award was renamed the Lester H. McKeever, Jr. Advancing Diversity Award.

Edward Resner

(CE '71), Spring Grove, Ill., and his wife, Jeri, celebrated their 52nd wedding anniversary at their son Jason's home in Saratoga Springs, N.Y. Resner recently dissolved his consulting firm, Community Development Inc., and retired to a creative writing profession.

David Roth

(CE '71), Des Plaines, Ill., retired after working for the Chicago Park District for 32 years and the Monahan Landscape Co. for 15 years. He has been married for 52 years, and has four children and nine grandchildren.

Mohamedusman Baki

(M.S. ENVE '72), Chicago, is a retired Metropolitan Water Reclamation District of Greater Chicago plant manager. Baki and Commissioner Frank Avila traveled to India in February to conduct international workshops on "Innovative and Sustainable Wastewater Treatment."

Neda Saravanja Fabris (M.S. MAE '72, Ph.D. '76), Glendale, Calif., coauthored

Materials and Processes for NDT Technology, Second Edition (American Society for Nondestructive Testing, 2016).

Gordon Ramsey

(M.S. PHYS '72, Ph.D. '82). Frankfort, Ill., has been elected to the presidential sequence of the American Association of Physics Teachers (AAPT). He will serve as vice president, president elect, president. and past president for one year each. Ramsey. professor of physics at Loyola University Chicago, is an AAPT fellow and lifetime member. He and his wife have a son and three grandchildren.

Jeffrey Anderzhon

(ARCH '73), Clive,
Iowa, is a contributing
author for the building
environmental chapter
of Managing the Long-Term
Care Facility, a textbook for
individuals approaching
licensure as health care
administrators. Anderzhon
has co-authored two
additional books on
designs for the aging
as well as numerous
periodical articles on
architecture and aging.

Robert Haskins

(M.S. IE '73), Woodstock, Ill., retired to a life of tree farming. He also designed and built a timber truck barn from oak that he harvested, and does wood turning.

Joseph Olechno

(CHEM '73), Sunnyvale, Calif., was recently a guest editor for the Journal of Laboratory Automation. (Through a grant, all of the articles in this special issue are available without charge online at http://jla.sagepub.com/content/21/1.toc.)

Dana Broach

(PSYC '74), Norman, Okla., served as a panelist discussing strategic job analysis at the 31st annual meeting of the Society for Industrial and Organizational Psychology in April. His research for the Federal Aviation Administration focuses on job/task analysis personnel selection, and performance assessment for occupations such as pilot and air traffic controllers.



John Houck

(Ph.D. PSYC '74), Skokie, Ill., integrates psychotherapy and spirituality in his practice. He obtained a Master of Arts in Religion and Personality from the University of Chicago Divinity School in 1968, and served as chaplain and campus minister at Illinois Tech while studying for his Ph.D. He is now semi-retired and plans to move this year to Orlando, Fla., where he hopes to continue a part-time private practice as well as work as a psychologist in several nursing homes.

Joseph Mowbray

(M.S. EE '74), Homewood, Ill., retired from Sargent & Lundy in April 2008 after nearly 38 years.

Christopher Wiatr

(M.S. BIOT '74), Collierville, Tenn., retired from Buckman Laboratories International after receiving his 26th patent. He has five children and five grandchildren.

Marc Bern

(LAW '75), Garden City, N.Y., after 19 years as a founding partner of Napoli Bern LLP, has formed Bern Ripka LLP, headquartered in New York City. Bern is representing 27 families of the victims of the 2012 Aurora (Colo.) Cinemark theater shooting in a civil trial this year.

James Horn

(EE '75), Bingen, Wash., is senior electrical engineer at UTC Aerospace Systems, designing autopilots and stabilized camera systems in the Columbia River Gorge.

Champion Creates a Legacy for Others



TED ERIKSON (CHE '52, M.S. CHEM '59) is a former Illinois Tech student-athlete and swim coach who set multiple world records as a marathon swimmer. He also spent 20 years as a senior chemist for IIT Research Institute (IITRI), where he conducted major government studies on ozone.

Ted still swims in the Illinois Tech Alumni Swim Meet and does laps in Ekco Pool at Keating Sports Center. In 2015 the swim team named its invitational meet in his honor, and he was the 2016 recipient of the Alumni Association's John J. Schommer Honor I Award.

To support the Illinois Tech innovators and record-breakers of tomorrow, Ted is leaving a gift of real estate-his condominium-to the university.

"Illinois Tech as an organization has played a great role in my life. This university put me on the road that led to many of my successes."

—Ted Erikson







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

- · Help ensure Illinois Tech's future.
- · Leave a legacy of giving back.
- · Give without affecting your current cash flow.
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If you have named Illinois Tech as a beneficiary in your estate plan through your will, trust, IRA, or retirement plan, please let us know so that we may acknowledge your generosity and include you in the Gunsaulus Society.

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

Gunsaulus | SOCIETY

Rick Vanden Boogart

(FPSE '75), Kaukauna, Wis., is enjoying his retirement.

Robert John Zagar

(M.S. PSYC '75), Chicago, had the paper "Finding High-Risk Persons with Internet Tests to Manage Risk: a Literature Review with Policy Implications to Avoid Violent Tragedies, and Save Lives and Money" published in the Review of European Studies (Volume 8, 1–31).

Praful Kulkarni

(M.ARCH. '76), Irvine, Calif., president and chief executive officer of gkkworks, has been elected vice chairman of the Design-Build Institute of America. He also served as the chair of the board of the Los Angeles County Economic Development Corporation for the fiscal year that began on July 1, 2015.

James Shelby

(CRP '76, M.A.S. '88), Atlanta, recently retired from the City of Atlanta after 11 years as commissioner of the Department of Planning and Community Development. He is now a substitute instructor at a technical career academy.

Salvatore Biardo

(CS '77, M.S. '83), Park Ridge, Ill., is chief executive officer of Technology Advisors, Inc.

Tyler Patak

(ÅRCH '77), North Fort Myers, Fla., has been named a principal of Parker/Mudgett/Smith Architects, Inc. as it begins its 50th year in business. Patak is one of the first 20 professionals in the country to receive the Crime Prevention Through Environmental Design professional designation.

Joseph Stypka

(ARCH '77), Chicago, vice president of director specifications at JAHN LLC, was elected a fellow of the American Institute of Architects in 2016 for his work "establishing industry standards, educating professionals, and supporting development of signature buildings worldwide." He was also named a fellow in the Construction Specifications Institute in 2006.

John Brophy

(ME '78), Valencia, Calif., was responsible for the development and delivery of the Ion Propulsion System for NASA's Dawn spacecraft, which is now in orbit around the dwarf planet Ceres. In March the National Aeronautic Association announced that the NASA/Jet Propulsion Laboratory Dawn team was awarded the Robert J. Collier Trophy for 2015. The Collier Trophy is awarded annually "for the greatest achievement in aeronautics or astronautics in America. with respect to improving the performance. efficiency, and safety of air or space vehicles, the value of which has been thoroughly demonstrated by actual use during the preceding year."

1980s

David Fleener

(ARCH '80), Chicago, worked with Dirk Lohan on the rennovation of Illinois Tech's Engineering 1 Building, now the John T. Rettaliata Engineering Center. His company, David Fleener Architects, has joined ICL Architecture, whose founder and president is Mo Riahi (ARCH '82).

Raymond Grill

(FPSE '80), Clifton, Va., principal at Arup Group Limited, is an industry expert on National Fire Protection Association codes and Chapter 24, and was a featured speaker for the live webinar Xtalks—Mass Notification Simplified: The Critical Principles of Delivering Robust Protection.

Edmund Rieger

(M.P.A. '80), Madison, Conn., is a principal consultant with Cognizant Technology Solutions focusing on IT strategy. He received his Ph.D. from Wayne State University, and lives with his wife and sons in Connecticut.

Tod Desmarais

(ARCH '81), Wilmette, Ill., has been appointed senior associate by the Chicago office of global design firm Gensler, where he has been directing the design of mixed-use, high-rise, office, retail, and multi-family residential projects across the Midwest. Desmarais was named a fellow of the American Institute of Architects in 2008.

Mathai Varghese

(MATH '81), Adelaide, Australia, was appointed associate editor of the Journal of Geometry and Physics.

Brian Doran

(CHE '82), Washington, D.C., is a retired U.S. Air Force major.

Gary Cathey

(CE '83), El Dorado Hills, Calif., chief of the Division of Aeronautics for the California Department of Transportation, was elected chair of the National Association of State Aviation Officials for FY 2015-16. He is also a member of the American Association of State Highway and Transportation Officials, Subcommittee on Aviation, and is an ex-officio member of the Technical Advisory Committee on Aeronautics for the California Transportation Commission.

John Sheerin

(CE '83, M.S. ENVE '86, LAW '94), Oak Lawn, Ill., is the director of End of Life Tire Programs for the Rubber Manufacturers Association, the national trade association of tire-manufacturing companies.

Mark Sidote

(CHE '83), Keller, Texas, is a contributing author to a newly published book, Innovating Lean Six Sigma (McGraw Hill, 2016).

Robert Theel

(ARCH'83) Chicago was recently elected a fellow of the American Institute of Architects. The honor recognizes his contributions to the profession over his 34-year career with the U.S. General Services Administration As the GSA's first regional chief architect, Theel established the strategic vision and leadership to create a national model for achieving excellence in federal architecture for public buildings across the nation overseeing more than \$3 billion in construction.



Seattle Alumni Gathering Judson Althoff (ME '95) and his wife, Laura, hosted Illinois Tech President Alan W. Cramb and Seattle-area alumni for a gathering at their home.



San Diego Alumni Gathering Illinois Tech President Alan W. Cramb spoke to San Diego alumni about the future of the university from the rooftop terrace of the Bottega Americano restaurant. *Photo: Nathan Petty*

SPOTLIGHT



Steve Bellinger (PSYC '73)

Chicago, science fiction author

The Chronocar (Barking Rain Press, 2015) tells the story of the genius son of a slave who earns his physics degree from Tuskegee University and makes plans to construct a time machine but doesn't have

the technology to build it. Fast-forward 100 years later; a black student at Illinois Tech discovers his plans and travels back in time to visit the inventor.

Steve Bellinger says that he wrote *The Chronocar* because he loves science fiction and wanted to include two aspects in his novel that weren't present in other science fiction books: an African American as the main character and IIT as a setting to honor his alma mater.

Bellinger is currently working on his second novel, a paranormal love story with some science fiction aspects. "The plot is based on my life but wildly fictionalized," he says. "The opening scene of the fourth chapter is set at IIT." — Emma Macmillan

Monique Jones (BIOL '87), Country Club Hills, Ill., is a physician at Women's Wellness World and was recognized this spring for providing outstanding safety,

quality, and service. Francisco Barillas

(EE '88), Isabela, Puerto Rico, is chief operating officer for AM Inc. The company is a food industry leader on the island, introducing best-in-class gourmet, all-natural, and organic products. He also oversees human resources, organizational development, construction and maintenance, and IT functions.

Jeffrey Harris

(LAW '88), Chicago, co-founded the company Run the Call, an app that functions as an on-demand legal services technology company for lawyers. It connects legal professionals to cover court appearances and will be available for iOS and Android.



Michele Hunter

(ARCH '88), Chicago, is a principal with the architectural design firm Architrave, Ltd.

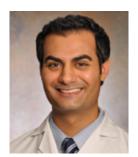
Praveen Gupta

(M.S. EE '89), Palo Alto, Calif., has been named *Quality Magazine's* Quality Professional of the Year for 2016.

Mary Kisinger

(M.B.A. '89), Fitzwilliam, N.H., lives in the Boston area and is the senior business analyst in Information Systems and Technology at Massachusetts Institute of Technology. Rescuing dogs, gardening, and interior design are her passions, but she also spends time in her side business of buying, rehabbing, and renting houses in the Pittsburgh area.







The Illinois Tech Biomedical Engineering Society (BMES) has named the recipients of the 2016 BMES Alumni Awards. Michael Morley (BME '08) [*left*] and Sean Pitroda, M.D. (BME '06) [*center*] were named Distinguished Undergraduate Alumni. Monica Moya (Ph.D. '09) [*right*] was named a Distinguished Graduate Alumna. Four alumni, Robert Dawe (BME '06, Ph.D. '11), Ashish Tamhane (Ph.D. '09), Zhe Hu (Ph.D. '08), and Christen Deanes (BME '14), were also recognized for their outstanding achievements in the field. These exceptional alumni were recognized at the BME Alumni-Student Gathering on February 25, 2016.

Steven Lenz

(M.B.A. '89), Naperville, Ill., is co-inventor of Sproing Fitness, listed by Conde Nast Traveler as one of the nine "coolest fitness trends in the U.S." Sproing Fitness combines the movements of a treadmill with the benefits of a beach workout. In addition to the Chicago location, Sproing Fitness has gyms in Baltimore and Hollywood.

Jean Rogers

(Ph.D. ENVE '89), Oakland, Calif., is founder of the Sustainability Accounting Standards Board, whose mission is to develop and disseminate sustainability accounting standards that help public corporations disclose material, decision-useful information to investors.

1990s

Daniel Dube

(AE '90), Plainville, Conn., is director of IT project managment and support services at Turner Construction Company.

Frank Naeymi-Rad

(Ph.D. CS '90), Libertyville, Ill., is chairman and chief executive officer of Intelligent Medical Objects, Inc., the market leader in medical terminology services for electronic health record systems.

Stephen Lesavich

(Ph.D. CS '91), Kenosha, Wis., was selected as a business leader and entreprenuer to serve on the Business Community Partnership Committee for Lakeview Technology Academy, in Pleasant Prairie, Wis. The committee is a collaborative partnership of business leaders, government leaders, and parents for discussing issues related to educating high school students in science, technology, engineering, and math (STEM).

Timothy Collins

(M.S. EE '92), Lockport, Ill., was appointed chief technology officer for RF IDeas. He has filed 35 patents and has authored five professional publication pieces within the engineering community.

Ahmed Elmoaty

(M.A.S. CE '93), Cairo, Egypt, is retired after 36 years of working on electromechanical installation projects.

Felicia Rosemond

(EE '93), Douglasville, Ga., is senior software engineer at Sharecare.

Cara Duffy (née Bartley) (BA'94), Arlington Heights,

Ill., and her husband, **Rob Duffy** (MATH '95), have

two children, ages 8 and

11. As a parent she became
passionate about the need
for better education for
preschoolers and began
part-time teaching and
curriculum development.

Duffy then became a substitute teacher for preschool
through 8th grade, and
hopes to create a program
to get early-childhood students excited about math.

Yan Margulis

(M.A.S. MAE '95, M.B.A. '01), Santa Clara, Calif., is vice president of sales at Foxconn Interconnect Technology, Ltd. (FIT). FIT and Photonix Technologies have announced the launch of a joint solutions and collaboration effort on delivering new technologies within the optical access.

Kelly Franznick

(M.DES. '96), Bainbridge Island, Wash., is chief executive officer at Blink UX, an R&D firm specializing in the user experience of digital products that has been named to the list of "The Best Small Companies in America, 2016" by Forbes magazine.

Bipin Sen

(AE '96, M.S. MAE '98), Lansing, Ill., had lunch with Melanie Standish (PSYC 3rd year) after learning about her in the Rewind article from the spring 2016 issue of *IIT Magazine*. Sen, the 1996 Illinois Tech Union Board president, had much to talk about with Standish, who is current Union Board president.

Dierdre White

(LAW '96), Seffner, Fla., senior vice president and general counsel for Grow Financial Federal Credit Union, was named the Tampa Bay Business Journal's 2016 Top Corporate Counsel in Financial Services and Overall for the Tampa Bay community. She was also named by the Florida Diversity Council as one of 10 Most Powerful and Influential Women 2016. White also serves as the chair of the board of directors of PACE Center for Girls-Hillsborough, a statewide community-based prevention and early intervention program for girls who are not excelling in traditional public school settings.

Michael Jansma

(ME '97, M.A.S. MAE '00), Eureka, Mo., facilitated the sale of Enlogic, a high-tech global startup he founded in 2011 to CIS Global, a major original equipment manufacturer supplier of IT data center and consumer appliance industry products. He has become global vice president of technology for the newly combined CIS Global organization.

Robert Brevelle

(CS '98, M.S. '98), Rowlett, Texas, has been appointed managing director and chief operations officer of Tech Wildcatters.

Howard Huntington

(LAW '98), Naperville, Ill., was selected for inclusion in *Illinois Super Lawyers* for civil litigation defense in 2016. He is a partner at Bullaro & Carton, P.C. in Chicago.

Anuradha Rangarajan

(M.S. CSEE '98, M.S. CS '05), Harvard, Ill., is a software engineer/IT consultant.

2000s

Priya Rudradas

(M.S. CS '00), Gainesville, Fla., chief operating officer of Shadow Health, Inc., was named among the Florida High Tech Corridor's 2016 "Faces of Technology."

Andrea Smith (née Gorss)

(CE '00, M.A.S. MAE '01), Chicago, completed training for Project Lead the Way's Introduction to Engineering course, a national curriculum that gives students a chance to experience engineering before getting to college. She also teaches mathematics at the Friedrich W. Von Steuben Metropolitan Science Center, where she has worked since 2005.

Heather Weaver

(PPPS '00), Lansdale, Penn., was promoted to director of student engagement at Philadelphia University in February. She also became Group 4 commander of the Pennsylvania Wing Civil Air Patrol (CAP) in August 2015. Weaver celebrates 25 years with CAP this year.

Hazem Dawani

(CPE '01), Chicago, is chief executive officer of

IIT Magazine

SUMMER 2016



Phoenix Alumni Gathering Adam S. Hock, assistant professor of chemistry at Illinois Tech and assistant scientist at Argonne National Laboratory, spoke to alumni in Phoenix about "Computers to Catalysts, the Chemistry of 21st-Century Materials." *Photo: Tim Trumble Photography*



Mies Birthday Party Mies Society members and friends along with Illinois Tech faculty, staff, and students enjoyed a night of Mies-inspired comedy at the annual Mies Birthday Party with a performance by The Second City. *Photo: Michael Goss*

OptionsCity Software, a provider of futures and options trading and analytics solutions. The company recently released its cloud-based futures and options trading platform, CityTrader.

Morgan Dugan

(ME '01), St. Louis, was promoted to senior director of supply chain management for The Maschhoffs, LLC. He and his wife, Katie, have two daughters, ages 5 and 3.

Henry Hill

(CE '02), New Lenox, Ill., is chief executive officer of Lenox Hill Construction, a premier Chicago-area construction company within the senior health care, retail, and municipal markets.

Elizabeth Kalin

(ARCH '02), Minneapolis, has been appointed associate by the global design firm Gensler. A registered Minnesota architect, she is working on the Margaret A.
Cargill Philanthropies
Headquarters, providing
sustainable solutions to
bring the project to LEED
Platinum status. Kalin
was also selected
as a member of the
2016 AIA Minnesota
Leadership Forum.

Rania Mousa

(M.B.A. '02), Evansville, Ind., completed a Ph.D. in accounting information systems from the University of Birmingham in England in 2010. She is an associate professor of accounting at Schroeder School of Business, University of Evansville, Indiana.

Jason Sposeep

(LAW '03), Oak Park, Ill., married **Kristen Carey** (LAW '10) in August 2014; moved to Oak Park; and had a son, Griffin Louis Sposeep, in November 2015. Both Carey and Sposeep are divorce lawyers, working at Kamerlink, Stark, Powers, & McNicholas, LLC and Schiller DuCanto & Fleck LLP, respectively.

Chip Herro

(M.S. ENVE '04), Phoenix, was featured in the article "Meritage Homes V.P.: Adding Solar While Building Home Helps Save Money" in February in the Orlando Sentinel.

Vivek Jain

(M.S. EE '04), Haryana, India, was appointed chief executive officer of CA Media Digital India Private Limited, the digital business of CA Media.

Lindsay Anderson (née Hansen)

(LAW '05), Chicago, recently left McGuireWoods to join the University of Illinois system as executive director of the Office of Governmental Relations. The office serves as the university's liaison to

members of the Illinois congressional delegation, the Illinois General Assembly, the governor's office, federal and state agencies, key local officials, and major highereducation associations.

Anahita Wadia

(M.S. MCOM '05), Mumbai, India, leads the business-to-business group in Sikich's Marketing and Public Relations Practice and was recently elected a partner at the firm.

Amanda Kastern

(M.P.A. '06), Hillsborough, N.J., and **Steven Beitzel** (CS '00, M.S. '01, Ph.D. '06) are the proud parents of Samuel Patrick Beitzel, born in March. Samuel, at 8 lb. 13 oz., and 21 in., joins Abby, 5, and Nate, 2.

Dhairya Mehta

(M.A.S. MAE '06), Baroda, India, employed in principal device development at Shire, was a featured speaker at the Pre-Filled Syringes West Coast Conference and Exhibition in June in San Diego.

Justin Odom

(ARCH '06, M.A.S. PWR '15), Chicago, a general engineer at ComEd, is a member of the New Business Design Team and has designed primary power-distribution systems for multiple buildings within the Chicago area. He is a member of Cigre, an

SPOTLIGHT



Pattie Piotrowski (M.B.A. '07)

Lockport, III., vice president/president-elect of the Illinois Library Association

From offering smart phone help for seniors to lap sits for toddlers to teen media education, the public library of the twenty-first century is busier than ever.

"Libraries are still about building a community and not just about being a community building," says Pattie Piotrowski, assistant dean for public services at Illinois Tech's Paul V. Galvin Library.

According to the "State of America's Libraries Report 2016," today's libraries are transformative centers that provide users of all ages with opportunities to learn, create, and share as branches shift resources and services in response to patrons' digital needs. Galvin is even part makerspace, providing students access to 3-D printers, a button-making machine, and other tools in its Exploration Space.

Such high-tech offerings paired with a "warm, welcoming, and friendly" environment at Galvin Library has contributed to a 3–6 percent gate count increase over the past eight years, Piotrowski notes. — Emma Macmillan



New York Alumni Gathering Alumni explored the architectural intrigue of the home and studio of David Ling (ARCH '83) before hearing from College of Architecture Dean Wiel Arets in New York City. *Photo: Char Smullyan*



Engineers Week Alumni Breakfast Alumni and families enjoyed breakfast before exploring a variety of engineering concepts at the 32nd Annual Engineers Week Expo at the Daniel F. and Ada L. Rice Campus. *Photo: Bonnie Robinson*

international electrical-engineering professional group, and is one of two Americans on an international Cigre working group studying issues related to large surpluses and deficits of renewable energy resources on the electrical grid.

Colleen Platt

(LAW '06, M.A.S. BIOL '06), Reno, Nev., left the Nevada Attorney General's Office in July 2015 and opened a law practice. She specializes in administrative law and sits as general counsel to a handful of Nevada licensing boards and state agencies. Platt has four children.

Jaime Aubry

(ARCH '08), Chicago, and Curtis Aubry (AE '09) married in October 2010 and moved to Colorado. They welcomed their son, Jackson Aubry, into the family in November 2014.

Timothy Nunes

(M.S. MCOM '09), Lisle, Ill., had his short story "Smart Bomb" featured in the literary journal Foliate Oak.

Nastasja Terry

(ME '09), Chicago, is field service manager at UTC Aerospace Systems in San Diego and the customer representative for Alaska Airlines. She also flies to different airlines around the world to train mechanics on their newly delivered aircraft.

2010s

Carmen Aguilar-Wedge

(CE '10), San Francisco, co-founded the Hyphen-Labs interaction studio. The company's interactive installation Prismatic_NYC constructed at the High Line in New York City responds to environmental data.

SPOTLIGHT



Bryan Tillman (M.B.A., M.S. EMS '12) Chicago, co-founder of the car-sharing

company E-RIVE

What's E-RIVE about and what makes it different?

E-RIVE is a car-sharing company that focuses on renting cars that are more sustainable, such as

hybrids and electric. What makes E-RIVE different is our exclusive partnership with Uber. We are the first and largest electric fleet for Uber drivers.

What kinds of cars does your company feature?

We carry Prius, Camry, and Build Your Dreams (BYD) e6. BYD is the largest electric-vehicle manufacturer in the world that focuses on electric vehicles and some that can be used for taxi, limousine, and Uber-type service as well as electric buses. Our cars are being utilized 75 percent of the time and are driving up to 70,000 miles per year, which would be almost impossible for an individual to achieve.

How did you come up with this idea?

When we looked at sustainable mobility, we saw that there were no electric-vehicle fleets of any substantial size. Additionally, no one had a car-sharing service for Uber drivers. — Emma Macmillan



Houston Alumni Gathering Illinois Tech President Alan W. Cramb [center] presented Golden Society medallions to Jay Fischman (CHE '66) [left] and Richard Gillette (EE '66) [right] at an alumni gathering in Houston.



Chicago Alumni Gathering Madhavan Nayar (M.S. IE '68) and his family, creators of the Nayar Prize—a \$1 million award to encourage faculty, staff, and students to develop breakthrough projects with a societal impact—look on as the finalists present their ideas to alumni at a gathering at gravitytank headquarters in Chicago.

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

Elena Buhay

(CPE '12), Houston, is an IT manager at NASA Johnson Space Center. Last November she married Adam Naids, a space center project manager.

Michael Mastriano

(M.A.R. ARC3 '13), Hillsborough, N.J., is employed at the New York office of EYP Architecture and Engineering. He and his fiancée, Sarah Cunningham, are planning a spring 2017 wedding.

Jodi Watson

(M.D.M. '13), Grand Rapids, Mich., is senior vice president at Petco Direct, responsible for leading the company's multi-banner e-commerce businesses.

Tameka Flowers

(M.P.A. '14), Los Angeles, and her teenaged children relocated to California. She works in a leadership role for Goodwill Industries.

Dane Christianson

(ME '15), Batavia, Ill., the inventor of the X-Cube "shape-shifting logic puzzle," enlisted a new team member to help with business development. They scaled production of the X-Cube, landed several large customers, including Barnes & Noble, and resurrected a logic puzzle collectors item called the "Boob Cube," which features just three shiftable parts.

Lucas Dahlin

(LAW '15), East Palo Alto, Calif., represented Radware Ltd., an Israeli networking company, in a high-stakes patent litigation trial in the Northern District of California. The jury returned a multi-million dollar verdict in favor of Radware on all counts, inding that Radware's patents were valid and willfully infringed.

Saba Dasadawala

(M.S. CS '15), Chicago, is a software engineer at Cerner Corporation, which provides intelligent solutions for the health care industry.

Katrina Errant (née Clifford) (INTM '15, M.ITO. '15), Bedford Park, Ill., works for Patrick Engineering and is contracted out to Argonne National Laboratory as a site floor manager for the installation of two new supercomputers, Aurora and Theta.

Sara Glade

(CHE 15, M.A.S. ENVE 15), Sleepy Hollow, Ill., received a National Science Foundation Graduate Research Fellowship for her work at the University of California, Berkeley.

Michael Johannsen

(EMGT '15), Stickney, Ill., developed BarTap, a mobile app that allows users to order a drink, pay for, and know when a drink is ready as well as buy someone else a drink at the bar. BarTap placed second at the TechNexus StartUpIIT competition and was a semifinalist in the Future Founders 2015 U. Pitch Competition & Showcase.

Cynthia Mendes

(EMGT '15), Chicago, is employed at Rubinos and Mesia Engineers, Inc.

Kevin Roemer

(ITM '15), Franklin Park, Ill., runs the creative agency Brandless Group, which offers services such as web design, brand identity, and mobileapplication development. In addition, he helped start the FUND Conference, a thought-leadership event that pairs small startups with early stage investors.

Fariha Wajid

(ARCH '15), Villa Park, Ill., launched the startup INKMADE from an idea to use laser-cut wood-block print designs that she developed in an Illinois Tech product design course. She runs the business producing paper products and scarves with her husband. Afroz.

Sunny Patel

(AE '16, M.E. MAE '16), Pittsburgh, is in a two-year rotational engineering program at Eaton Corporation, a power management company.

ALUMNI EVENTS

For information about the upcoming events listed here and other alumni activities, please visit **alumni.iit.edu/events** or contact the Office of Alumni Relations at alumni@iit.edu or 800.IIT.ALUM.

BLOCK CITY 2016

Saturday, July 23, 2016

Hermann Hall, Mies Campus Chicago

Families are invited to create LEGO® structures of their own imaginations! This event is free of charge, but **advance registration is required**. Alumni are welcome to join us for breakfast and early LEGO® building beginning at 8 a.m.

ILLINOIS TECH IS COMING YOUR WAY

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

Bay Area New York City
Chicago Phoenix
Houston Seattle

Los Angeles Area Washington, D.C.

London

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

HOMECOMING, GOLDEN SOCIETY REUNION, AND SPIRIT DAY

Friday and Saturday, September 16-17, 2016

Plan to come back to campus for Homecoming Weekend! With special events for Golden Society alumni, the 25th reunion class, young alumni, and other affinity groups—along with athletics events, tours, and the new all-alumni party—there is sure to be something for everyone. Visit alumni.iit.edu/homecoming for full details and to register.

Spirit Day

Can't make it to campus for Homecoming this year? Don't worry—Spirit Day is coming to you! The second annual Spirit Day will take place on Saturday, September 17. Alumni chapters will host local alumni gatherings throughout the country and around the world. Don't miss out!



CONNECT TODAY!

Are you connected to the Alumni Association? When you update your mailing address, phone number, and email you ensure that you receive up-to-date information from your alma mater, including event invitations, networking opportunities, and university news. Visit alumni.iit.edu/information-update to update your contact information today!

Members of the alumni online community enjoy extra perks such as access to the alumni directory—perfect for networking!

Visit ${\bf alumni.iit.edu/sign-up}$ to join today.

Alumni News CHAPTER NEWS



Members of 4A pose at the 2015 Scarlet Affair [*left to right*]: Ron Andre, Fred Jones, Robert Ersery (MGT '80), Andrea Berry (CS '84), Lester McCarroll Jr. (EE '83), Antonio Darden (MET '85), Kenny Mason (CHE '00, M.A.S. FPE '02), and Trustee Harold Singleton III (CHE '83).

Connecting With Illinois Tech: It's Personal

Michael Hill (CS'82) has made his connection with his alma mater personal by establishing an affinity group: the African American Alumni Association, or 4A. He and Andrea Berry (CS'82), who is now chair of the Alumni Association Board of Directors and a member of the Board of Trustees, co-founded the organization in 2011 following a successful event they planned together to honor Nate Thomas, whose work helped to set the bar for STEM education at Illinois Tech. They became reengaged with the university through the Alumni Association, and 4A



Nate Thomas [left] and Michael Hill (CS '82)

The group's mission is to mentor the current generation of Illinois Tech students and to ensure that future generations have the same opportunities they received. For its annual meeting in 2015, the group held a fundraiser called the Scarlet Affair in conjunction with Spirit Day. Members wanted to raise money to establish a scholarship in Thomas's name, and they needed \$25,000 to do it.

"Going into it, I told myself I would be ecstatic if we raised \$5,000. By the end of the night, we had \$17,000 (in cash and pledges)," says Hill, adding that he was shocked and humbled by the generosity and commitment of his fellow alumni. To keep 4A on the right track, Hill is always looking to the future.

"We hope to finish funding this scholarship; our next step is to make an endowment," he says, which will fund the scholarship in perpetuity. "I know it's a big goal, but we blew the first one out of the water, and I know that collectively, these people always come through. I think we can do it."

Hill's advice to alumni hoping to start an affinity group? Just do it!

"It all starts with an idea. Get your group together, even if it's just four of you, and work from there," he says. "You need to have the desire to do it and the dedication to follow through more than anything. When we did it, we didn't have a touchstone in the Alumni Relations office to help with things like this, and now there's a role for that. Illinois Tech wants to help you."

Visit bit.ly/Illinois-Tech-4A to follow the African American Alumni Association on Facebook.

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

ALUMNI AWARDS Alumni News

ALUMNI AWARDS 2016





The annual Alumni Awards luncheon and ceremony recognizes some of Illinois Tech's most accomplished, innovative, and influential alumni. *Photos: Bonnie Robinson*



World-renowned photographer Barbara Crane (M.S. PHOT '66) was among the Professional Achievement Award winners feted at the annual Alumni Awards. *Photo: Bonnie Robinson*



The 2016 Alumni Awards recipients were honored at a special luncheon held on April 29. *Photo: Bonnie Robinson*



Bud Wendorf (ME '71), chairman of the Illinois Institute of Technology Board of Trustees, addresses the audience after being presented with the 2016 Alumni Medal at the annual Alumni Awards Iuncheon. *Photo: Bonnie Robinson*

2016 ALUMNI AWARDS WINNERS

Alumni Medal

Alan "Bud" Wendorf (ME '71)

Alumni Service Award

Vasudevan "Raj" Rajaram (LAW '91)

Collens Merit Award

Ronald Hochsprung (CS '72)

Galvin Award

Jules Knapp

International Award of Merit

Akihisa "Aki" Miwa (M.S. OR '83)

John J. Schommer Honor I Award

Ted Erikson (CHE '52, M.S. CHEM '59)

Lifetime Achievement Award

Robert Bonthron (ME '44, M.S. MECH '52,

Ph.D. MECH '62)

Howard Kehrl (ME '44)

Outstanding Young Alumnus/ Alumna Award

Patrick Bourbon (M.S. FIN '00) Derek Tarnow (M.DES. '12) and

Zahra Tashakorinia (M.DES. '12)

Professional Achievement Award Barbara Crane (M.S. PHOT '66) Michael Graff (CHE '77)

James Lemke (PHYS '59)

OBITUARIES

Norman N. Breyer

Ph.D. MET '63 Professor and Chair Emeritus Arlington Heights, Illinois

One year after graduating from Illinois Institute of Technology, Norman N. Breyer began his longtime academic and administrative career with the university. He initially joined the Armour College of Engineering faculty and then served as chair of the Department of Metallurgical and Materials Engineering from 1976–1984. In 1977 Breyer was elected a fellow of the American Society for Metals, now ASM International. He was named professor emeritus in 1991. Breyer was known for his expertise in liquid metal embrittlement, the heat treatment of steel, and failure analysis.

William "Bill" J. Grimshaw

Associate Professor and Chair Emeritus Riverside, Illinois

A key strategist in Harold Washington's successful bid to become Chicago's mayor in 1983, William "Bill" J. Grimshaw was renowned for his expert knowledge of urban politics at both the theoretical and practical levels. After earning his Ph.D. from the University of Illinois at Urbana-Champaign in 1978, Grimshaw began his longtime academic career at Illinois Tech, where he taught until his retirement in 2008. He also served as chair of the Department of Social Sciences from 1990–2002. His thesis became the subject of his first book, *Union Rule in the Schools: Big-City Politics in Transformation*; his highly acclaimed second book, *Bitter Fruit: Black Politics and the Chicago Machine* 1931–1991, was published in 1992.

Robert "Bob" L. Growney (ME '74, M.B.A. '82)

Life Trustee

34

South Barrington, Illinois

A 36-year veteran of Motorola, Robert "Bob" L. Growney joined the company as an engineer in its research laboratories before holding a variety of managerial positions of increasing responsibility. He served as president and chief operating officer, then vice chairman, before retiring in 2002. Growney then became a partner with The Edgewater Funds, a private-equity firm, and remained there until his death.

Growney was a strong advocate of Illinois Tech, providing the university with scholarship and volunteer support. Among the many roles he held was member of the Executive Committee of the Illinois Tech Board of Trustees, chairman of the Oversight Board of Stuart School of Business, and chairman of the Downtown Campus Task Force. In 2003 Growney delivered the Stuart School commencement keynote address and in 2007 was presented with the university's Alumni Service Award.

Geoffrey Higgins

Professor and Dean Emeritus Winnetka, Illinois

A native of England, Geoffrey Higgins came to the United States with his family in 1969 to work at Armour College of Engineering for three years; instead, the family decided to make this country their new home. Higgins served on the faculty of the Department of Mechanical, Materials, and Aerospace Engineering, and then went on to become dean of the School of Advanced Studies. He was known for his physical metallurgy work and research on phase-coarsening phenomena. In 1979 Higgins shared in the Literary Award from the American Nuclear Society.

Edwin F. Stueben

MATH '58, M.S. '60, Ph.D. '63 Professor and Vice President Emeritus Chicago

After earning three degrees at Illinois Institute of Technology, Edwin F. Stueben went on to devote nearly his entire career to the university. He served on the applied mathematics faculty for many years and was presented with the IIT Excellence in Teaching Award in both 1972 and 2005. Stueben led pioneering projects in the 1970s and 1980s such as IIT/V (a telecast of IIT credit courses) and was active in the university's interdisciplinary research and training program E3.

On the administrative side, Stueben was responsible for the development of the Daniel F. and Ada L. Rice Campus, serving as its first vice president from 1989–1993. In 1992 Stueben became vice president for admissions, financial aid, and student affairs. He retired from the university in 2006 and was honored with the Illinois Tech Alumni Service Award in 2008.

Vivian Weil

CSEP Director Emerita Evanston, Illinois

Vivian Weil was passionate about ethics and dedicated much of her career to working on theoretical problems of human action and responsibility. A philosopher by training, her specialty area focused on issues of professional responsibility, primarily in the fields of engineering and science. As such, Weil served Illinois Tech for more than 40 years both as a member of the faculty as well as director of the Center for the Study of Ethics in the Professions before retiring in 2014. She was a founding member of CSEP, which was established in 1976 to promote the research and teaching of moral and ethical quandaries in the professions.

In 2013 Weil received the Sterling Olmsted Award from the American Society for Engineering Education for her contributions to the development and teaching of ethics in engineering education.

IN MEMORIAM

Herman Tachau CE '42 Santa Fe, N.M.

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Margaret Wu MATH '56 Ballwin, Mo.

Elaine Hersey HE '57, M.S. '61 Hot Springs, Ark.

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Robert Koblesky ME '58 Rockford, III.

Robert McDow CE '58 North Palm Beach, Fla.

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John Gatto PSYC '59 Orland Park, III. Gytis Kriksciunas EE '59

Chula Vista, Calif.

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John Trutwin EE '59 Mount Prospect, III.

Jack Meesit EE '60 Punta Gorda, Fla.

Allan Nader CHEM '60 Northbrook, III.

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Milda Trimakas BIOL '60 New Buffalo, Mich.

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Joseph Roddy LAW '62 Chicago

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Gael "Bill" Matthews PHYS '63 Clarkston, Mich.

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Roger Shannon BE '71 Oak Lawn, III.

Donald Willson EE '71 Round Rock, Texas

John Barr MAE '72 Sarasota, Fla.

Phyllis Morgan M.S. SOCT '72 El Paso, Texas

Michael Konieczka LAW '73 Chicago

Marc Herrington DSGN '75 Brick, N.J.

Carol Dorge M.S. ENVE '77 Lake Bluff, III.

Geraldine Brauneis LAW '78

Oak Park, III.

John North

LAW '78 Downers Grove, III.

Ronald Cappitelli M.A.S. CRP '80 Wood Dale, III. **Gary Atkinson** M.S. CS '84 Topeka, Kan.

Dennis Beckley Ph.D. CS '85 Westmont, III.

Larry Davis M.S. CE '87 Fenton, Mich.

Bijan Saeedi M.A.S. CHE '88 Wheeling, III.

Tarshwa Carter BA '91 Olympia Fields, III.

Ewa Lang M.S. BIOL '94 Wauconda, III.

Stephen Sato M.DES. '94 Camas, Wash.

Lorinne Cunningham-Hajek LAW '96 Third Lake, III.

Robert Cleary M.P.A. PA '98 South Dennis, Mass.

William Thomas LAW '01, LL.M. '06 Evanston, III.

James Maly ME '15 Oro Valley, Ariz.

Attendee/Non-Degreed

Emil Bandovich Waukegan, III.

Gerhard Cless Skokie, III.

Robert Hauwiller Palos Park, III.

Kenneth Koch Washington, III. Gerald Neyer

Hartford, Conn. **Louise Safron**Kalamazoo, Mich.

Mark Tucker Springfield, III.

Kenneth Wilson Rochester, Minn.

Edward Wolak Kittery, Maine



Historic Main to Rise Again

By Marcia Faye

MAIN BUILDING-THE FORMER PRINCIPAL

classroom facility of Armour Institute—has been vacant since 2012, when the last university offices it housed were relocated to other Mies Campus spaces. Five larger-than-life figures, however, continue to keep vigil with the 123-year-old structure as the rising sun shines bright on their ghostly glass faces and the setting sun reflects the jewel tones of the foliage that frames them. Comprising the Philip Danforth Armour Memorial windows, the female figures represent heat, light, gravity, and motion while the lone male represents success.

The three-paneled stained-glass piece, designed by Louis Tiffany associate Edwin P. Sperry, was created in memory of benefactor Philip Danforth Armour's youngest of two sons, who died at age 31. Set into a lintel of Carrara marble on the front landing between the first and second floors of Main, the windows will soon win over a new legion of admirers—urban dwellers. Illinois Tech is partnering

with MCM Company Inc. to restore and convert Main Building into apartments. Based in Cleveland, MCM specializes in preservation and adaptive historic re-use projects. In the early planning stages, the project is awaiting city zoning approval, says Bruce Watts, Illinois Tech vice president for facilities and public safety.

"This will be a vibrant improvement to our campus, further establishing the university and its tech park as a growth engine on Chicago's South Side and spurring other positive development in the Bronzeville community," he notes.

Editor's Note: Please share your memories of Main Building by sending a note to iitmagazine@iit.edu. We may edit your submission for content and clarity.

MORE ONLINE

IIT Magazine Video Extra: Listen to University Archivist Ralph Pugh talk about the history of Main Building and see historic photos over the years.

MCM Company Inc.: mcmcompanyinc.com/index120615.php



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- Grateful for opportunities Illinois Tech afforded them

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P.S. Classes of 2005 and later—visit alumni.iit.edu/triple to triple your impact!



10 West 35th Street, Suite 4D7-1 Chicago, IL 60616

Homecoming Weekend 2016 September 16–17, 2016

Join us for a weekend of celebrations on Mies Campus!













GOLDEN SOCIETY

All alumni who graduated 50 years ago and prior are invited to the annual Golden Society reunion celebration! Members of the Class of 1966 will celebrate their 50th reunion, and President Alan W. Cramb will present Golden Society medallions to all first-time attendees.

25th, 10th, AND 1st REUNIONS

Members of the Classes of 1991, 2006, and 2015 will also celebrate reunions at Homecoming! Come back to reminisce with friends during your Reunion Barbecue and other fun events.

SPIRIT DAY

Celebrate the second-annual Spirit Day during alumni activities around the world and on Mies Campus, including Saturday's All-Alumni Party!

...AND MUCH MORE!

Soccer and volleyball games, college open houses, tours, an outdoor dessert reception—don't miss out on these and many more activities during Homecoming Weekend 2016. Visit alumni.iit.edu/homecoming for a full schedule and registration.

