

FALL 2020

ILLINOIS TECH

Magazine

Chowbus Drives Delivery Success



Breaking the Recidivism Cycle
Combating Cancer with Antibodies
Pass the Pepper

Letter from the President

THE CHALLENGES of mitigating the COVID-19 pandemic on a thriving urban campus are immense, and the Illinois Institute of Technology community has responded with a level of commitment and grace befitting a world-class university. On September 8 we welcomed students for the fall 2020 semester, nearly six months after the pandemic shifted our courses online. Many of our students moved into Mies Campus housing during the week of August 17, and our student body began two weeks of online coursework before beginning a hybrid academic program of on-campus and online studies. This semester we enrolled 514 new first-year students hailing from 33 states and 22 countries, with 32 percent of the class coming from underrepresented groups, 31 percent female, and 10 percent international.

Our dedicated faculty are teaching and conducting research remotely and in person, and the university has invested heavily in advanced learning platforms to make the educational experience seamless for students. While many of our essential employees who provide student services have been on campus throughout the pandemic, we have implemented a staggered return to campus for remaining staff that follows the state- and city-recommended occupancy rate. We have enacted random testing for COVID-19 within our community, and a robust COVID-19 educational program—including signage across campus, videos, a COVID-19 website, and regular university communication. We also optimized the building mechanical systems to ensure fresh air intake and circulation. As Illinois Tech is averaging a 1 percent infection rate since the start of the fall term, it is clear that we are taking this situation seriously.

Members of our community played an important role in fighting COVID-19. When Illinois faced a major shortage of viral transport medium for COVID-19 tests, officials turned to Illinois Tech to help secure the state's testing supply. Faculty members joined together to donate to South Side food pantries that were in need of assistance. Also, alumni with the Illinois National Guard, Ford Motor Company,



PHOTO: DAVID ETTINGER

and a new startup, Opal, worked on projects to provide Chicago's first drive-thru community-based testing site for COVID-19, personal protective equipment for first responders, and improved handwashing essentials.

I'm also pleased to share that in October, the Board of Trustees, led by Chairman Michael P. Galvin (LAW '78), voted unanimously on our \$500 million fundraising campaign goal, which will become the most substantial campaign in our university's history. To date, our community of alumni and friends has already committed more than \$300 million during the leadership phase of this campaign. For this to happen at a time when so many institutions are struggling is more affirmation that our strategic goals are clear and strong, and that our community is ready to pitch in and support our vision for Chicago's tech rise. Even as our world continues to experience unprecedented times, what has also continued here at Illinois Tech is our sense of community and "we are all in this together" attitude. I am proud of our university community for rallying together to continue teaching, learning, researching, working, and persevering despite the special challenges we have been facing. Through our alumni, faculty, and staff, we inspire students, and through our commitment to quality education, we chart a positive course for the future.

Sincerely,

A handwritten signature in dark ink that reads "Alan W. Cramb". The signature is written in a cursive, slightly slanted style.

Alan W. Cramb

Vice President for External Affairs

Jess Goode

Managing Editor

Marcia Faye

Director of Content

Chelsea Kalberloh Jackson

Editorial Contributors

Andrew Connor
Joseph Giovannetti
Steve Hendershot
Scott Lewis
Linsey Maughan
Casey Moffitt

Art Direction & Design

Scott Benbrook

Photography

Olivia Dimmer
David Ettinger
Scott Murry

Copyeditor/Writer

Andrew Wyder

Web Edition

Brian Bailey
Peter Beltemacchi
Abbey Vargas

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Office of Marketing and Communications
10 West 35th Street, 13th Floor
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or email illinoistechmagazine@iit.edu

Send alumni news to alumni@iit.edu

Illinois Institute of Technology, also known as Illinois Tech, is a private, technology-focused research university. Based in the global metropolis of Chicago, Illinois Tech is the only university of its kind in the city. It offers undergraduate and graduate degrees in engineering, science, architecture, business, design, human sciences, applied technology, and law.

One of 21 institutions that comprise the Association of Independent Technological Universities (AITU), Illinois Tech provides an exceptional education centered on active learning, and its graduates lead the state and much of the nation in economic prosperity. At Illinois Tech students are empowered to discover, create, and solve, and thus uniquely prepared to succeed in professions that require technological sophistication, an innovative mindset, and an entrepreneurial spirit.

Mission Statement

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

Armour College of Engineering
Chicago-Kent College of Law
College of Architecture
College of Computing

Institute of Design
Lewis College of Science and Letters
Stuart School of Business

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Stuart alumnus **Linxin Wen's** Chowbus travels the tastebuds by offering delivery, pick-up, and dine-in restaurant services from hand-picked Chicago establishments.

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You may think you have intimate knowledge of *Salmonella*, but food scientist **Xiangyu Deng** (Ph.D. BIOL '11) is getting deep into the bacteria's genomes.

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At the Safer Foundation, **Sodiqa Williams** (LAW '11), general counsel and vice president of external affairs, creates opportunities to help reduce recidivism.

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Susan Altschuller (Ph.D. BME '07), ImmunoGen chief financial officer, is taking the established cancer drug company in new marketing directions.

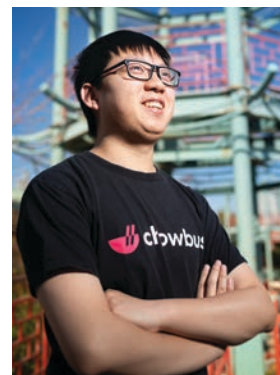
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Brothers **Andrei** (M.Des.+ M.B.A. '18) and **Mihai Hoge** (M.D.M. '18) plan to add more than spice to today's kitchens with their smart device, Pepper.

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

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**On the Cover:**

Food entrepreneur Linxin Wen (M.P.A. '15) visits one of his favorite Chicago destinations—Chinatown

Photos: Olivia Dimmer and David Ettinger



1. Associate Professor of Biology Nick Menhart lectures to socially distanced students. **2.** Boundary lines are drawn to denote the correct placement of tables and chairs in the Robert A. Pritzker Science Center. **3.** Colorful signage reminding the Illinois Tech community of best health practices can be found all around Mies Campus.



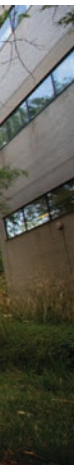
Maneuvering the New Normal in the New Academic Year

“PARTY AT ROSA’S” SOUNDS LIKE A FUN SATURDAY night happening. But for an Illinois Institute of Technology student, or faculty or staff member in need of a COVID-19 face mask, that whimsical descriptive represents just one of 24 lively patterned fabrics that volunteer sewers fashioned into free masks, courtesy of the Idea Shop and Operation #MaskIT. The project allows sewers to work remotely to make two different types of masks via a 12-step process depicted on the Idea Shop’s Prototyping Lab webpage. Begun last May, Operation #MaskIT was initially created to assist students and essential staff on Mies Campus during the Illinois shelter-in-place directive. The free mask project, which continues today, is just one way that the Illinois Tech community has worked to minimize the risk and spread of COVID-19.

Following State of Illinois, City of Chicago, and Centers for Disease Control and Prevention guidelines, the university welcomed students to the start of the 2020–21 academic year on August 17 for move-in to Mies Campus housing including the newly renovated George J. Kacek Hall, named after George J. Kacek (EE ’54, M.S. ’55). Online-only courses were held for the first two weeks, after which students adjusted to the new norm of socially distanced classroom setups, intramural sports, and dining facilities.



PHOTOS: OLIVIA DIMMER AND DAVID ETINGER



4. Sarah Stephens (ARCH 3rd Year) relaxes in her room at the Jeanne and John Rowe Village residence on State Street. **5.** A masked Saurabh Saluja (CE 3rd Year) studies in a brightly painted room in George J. Kacek Hall. **6.** Zoe Kyle-Di Pietropaolo (ME 3rd Year) creates a personal protective device in the Idea Shop as part of Operation #MaskIt. **7.** A student transports his belongings to Mies Campus housing wearing summer clothing and his all-important protective mask.

Illinois Tech Headliners



“We’re already used to being tracked online. Now it’s bleeding into the real world.”

Distinguished Professor of Law Emerita **Lori B. Andrews**, in a column in the *Los Angeles Times* about the use of Clear Channel’s outdoor billboard surveillance technology

“With technology, we are showing our students and the larger community that the adaptive reuse of existing buildings from the modernist era—rather than demolishing and rebuilding—is a successful sustainable option.”

Professor of Architecture **Dirk Denison** (ARCH '83, M.B.A. '85), design lead of Illinois Tech’s George J. Kacek Hall renovation, in an article about the project in *The Architect’s Newspaper*



“There’s been a few times where there’s some pushback and there seems to be a real conversation happening, and then it just kind of fizzles.”

Carly Kocurek, associate professor of digital humanities and media studies, commenting on sexist behavior and abuse in the male-dominated video gaming industry in a *New York Times* article

“Think about the advent of the pandemic. It has turned businesses around and everyone has to find a new way to survive. The skill set that comes with an entrepreneurial mindset [is] relevant for everyone.”

Maryam Saleh, new executive director of the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, in a news interview on WTTW



Architecture students Daniel Allen [top photo] and Jeisson Rodriguez-Arias

New Meaning to Eating Out in Style

Diners at the Original Soul Vegetarian restaurant in Chicago’s Chatham neighborhood enjoyed eating out in style and in socially distanced safety this summer in a prototype pavilion-style shelter built by College of Architecture Adjunct Professor Vladimir Radutny and his fourth-year students Daniel Allen and Jeisson Rodriguez-Arias. The trio took part in a city task force co-founded by College of Architecture Board of Advisors

member Mark Sexton (ARCH '80) that is working to provide new infrastructures and resources to West Side and South Side businesses impacted by the COVID-19 pandemic. Besides the restaurant shelter, smaller dining shelters called “Nests” were built and erected along the 75th Street business district. Sang-hyo Kim (ARCH '19) and Boram Oh (ARCH '20) of Krueck Sexton Partners Architects both contributed to the Nest project.



Maryam Saleh to Lead Kaplan Institute

Chicago-based computational neuroscientist and startup veteran Maryam Saleh is the new executive director of Illinois Institute of Technology's Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship.

Saleh comes to Illinois Tech from Machinify, a venture-backed startup that applies artificial intelligence

technology to re-tool health care payer operations, and was a founding member of the startup Cyberkinetics Neurotechnology Systems. She currently serves as an adviser at MATTER, a business development hub, and co-founded the Chicago Women in Bio 3.8 Initiative, an effort aimed at placing influential female executives on boards of Chicago-area life sciences startups.

"Maryam's entrepreneurial spirit and her passionate curiosity in innovation are exactly what we are looking for to lead the Kaplan Institute into the next phase of its growth," says Illinois Tech Trustee Ed Kaplan (ME '65). "Under Maryam's leadership, the Kaplan Institute will inspire the next generation of innovators and entrepreneurs to develop breakthroughs that will go on to change lives."



Maryam Saleh

Illinois Tech Welcomes New Faculty

New faculty joining Illinois Tech in 2020–21 include researchers and scholars in Armour College of Engineering, Chicago-Kent College of Law, the College of Computing, and Lewis College of Science and Letters.

Kenneth T. Christensen

Carol and Ed Kaplan Dean
Armour College of Engineering

Yue Duan

Assistant Professor of Computer Science
Gladwin Development Chair
College of Computing

Jamie Franklin

Assistant Clinical Professor
Director of the Employment Law/Civil Litigation Clinic
Chicago-Kent College of Law

Tim Hobbs

Research Assistant Professor of Physics
Lewis College of Science and Letters

Rakshya Khatiwada

Assistant Professor of Physics
Lewis College of Science and Letters

David J. Lampert

Assistant Professor of Environmental Engineering
Armour College of Engineering

Gaowen Liu (spring 2021)

Senior Lecturer of Computer Science
College of Computing

Stefan Muller

Assistant Professor of Computer Science
Gladwin Development Chair
College of Computing

John Mulligan

Visiting Assistant Professor in Legal Writing
Chicago-Kent College of Law

Mary Nagel

Visiting Assistant Professor in Legal Writing
Chicago-Kent College of Law

Kai Shu

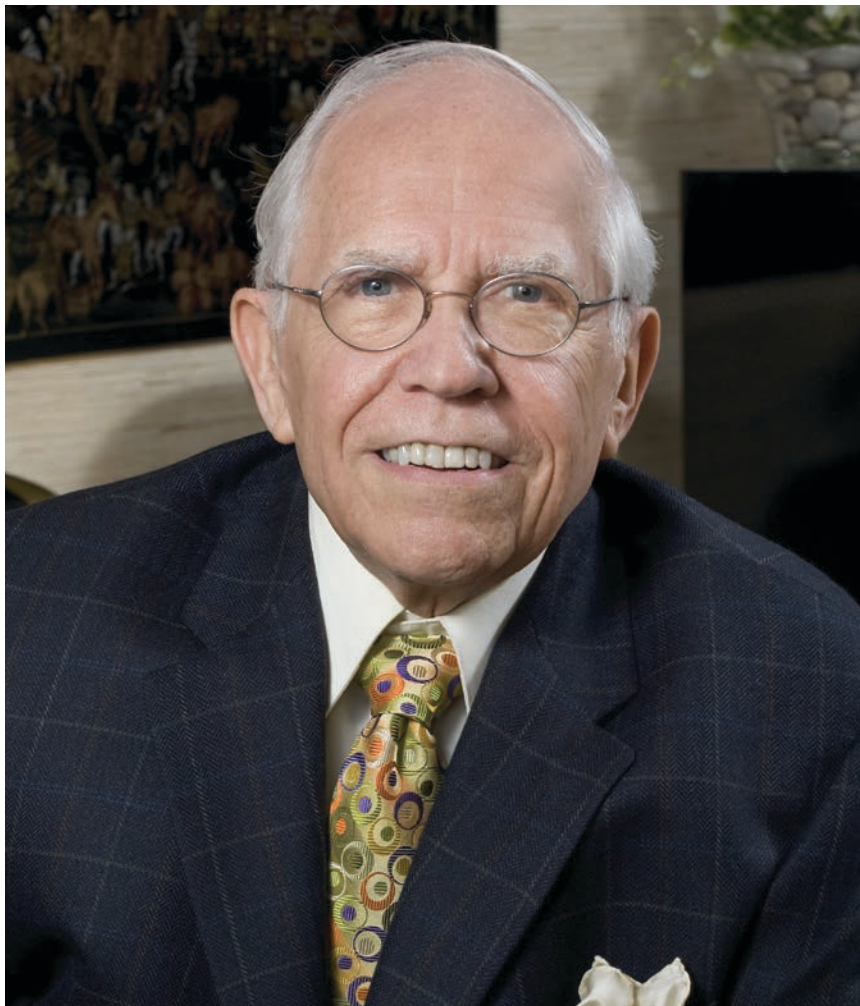
Assistant Professor of Computer Science
Gladwin Development Chair
College of Computing

Noah Smith-Drelich

Assistant Professor of Law
Chicago-Kent College of Law

Yan Yan (spring 2021)

Assistant Professor of Computer Science
Gladwin Development Chair
College of Computing



The Collective Genius at Work

FOR JIM ALBRECHT (FE '53, M.S. '55), it all started with an article in *Illinois Tech Magazine*. In fact, Albrecht keeps a few copies of the winter 2012 issue on hand because the vertical-farming article “The Plant” proved to be so important to his support for Illinois Institute of Technology’s IPRO Scholarship Fund over the last eight years.

“All my career, I’ve been a big believer in a multifunctional approach to solving business problems,” says Albrecht. “I’ve always tried to avail myself of meetings where all the business functions are involved. Well, along comes IPRO, and it’s kind of a cousin of what I’ve just described.”

Albrecht spent his entire career in the food industry, working for big-name brands such as Coca-Cola, Nestlé, and McCormick, so he was well aware that the vertical-farming project he read about in the alumni magazine was a major innovation for agribusiness. Inspired by IPRO’s unique approach, Albrecht began regularly supporting the program and taking biannual trips to Mies Campus from his home in Baltimore to meet with students and to hear about the problems they were tackling with their IPRO projects.

“I love the multidisciplinary approach that IPRO uses to solve problems that are future-thinking. These are real-world problems, and not science for science’s sake alone,” he explains. “And it’s exciting to see, for example, the kind of input an Institute of Design student

might have when working with an engineer or a biologist. Students from different disciplines tend to think outside of the box in these problem-solving situations.”

Albrecht dedicates most of his philanthropic efforts to supporting and mentoring young people. In 2019 he was so inspired by an IPRO project that he invited Sadie Meunier (BCHM 4th Year) to visit the Institute of Marine and Environmental Technology (IMET) in Baltimore.

“Sadie’s IPRO team has been working with *Synechococcus* bacteria, which may have a unique ability to reduce marine microplastic pollution through a degradation process. When you talk to Sadie, she’ll give you a great explanation of her IPRO project,” says Albrecht, noting that she had the chance to meet with IMET researchers who were working on very similar technology.

Albrecht’s enthusiasm for the IPRO Program is born of his own concern with the future of life on Earth, and he appreciates the way his support powers big, real-world solutions to major challenges. He also notes that Illinois Tech has a small student population relative to other universities but has a wide variety of disciplines, backgrounds, and attractive selling points.

“Students aren’t locked into a box that says, ‘I’m an electrical engineer, I can only think about electrical engineering.’ If someone comes up with a hare-brained idea about zinc batteries for cars, an electrical engineering student might say, ‘Wait a minute, I have a bunch of questions. And if I like the answers, I might work with you on the project,’” explains Albrecht, concluding with what he finds so exciting about projects such as The Plant. “Collective genius is at work in these multidisciplinary IPRO groups.” —**Joseph Giovannetti**

MORE ONLINE

“Eating Away an Ocean Disaster”: iit.edu/news/eating-away-plastic-disaster

“The Plant”: magazine.iit.edu/winter-2012/plant



An Illinois Tech men's basketball player goes up for a dunk during workouts in the fall.



While the pandemic suspended all game action until at least January 1, 2021, Scarlet Hawks student-athletes began socially distanced workouts in the fall—while wearing a mask and working out in smaller groups.

Motivation in Motion

The Illinois Institute of Technology Department of Athletics has not been immune from the unprecedented level of change that 2020 has brought as the COVID-19 pandemic uprooted college athletics across the United States, canceling the 2020 spring and fall seasons for Scarlet Hawks athletes.

The year has also brought change to Keating Sports Center, with Director of Athletics Joe Hakes retiring in July 2020 after nearly six years in charge. Hakes deftly led the athletics program, shepherding it through the transition to National Collegiate Athletic Association (NCAA) Division III membership and expanding the varsity program offerings with the addition of men's volleyball, men's lacrosse, women's tennis, and men's tennis.

A gift from Illinois Tech Trustee and varsity basketball player John Olin (ME '61) in honor of Hakes served as inspiration to name the center's court after the athletics director. Olin also created and endowed a scholarship in Hakes's honor for a student who displays strong leadership qualities.



While no games will be played on the court until at least January 2021—the Northern Athletics Collegiate Conference, in which Illinois Tech plays, has suspended all games through December 31—student-athletes are pushing forward.

The university's Student-Athlete Advisory Committee (SAAC) handed out "goody bags" and registered student-athletes to vote during an event on September 10. Partnering with the athletics department, the committee filled the bags with a jump rope, training bands, and an Illinois Tech Athletics mask, among other items.

"We wanted to help the athletics department get in touch with its athletes and hand out all these goody bags, but we also wanted to get athletes in front of athletes, even if we weren't allowed to congregate," says SAAC President Justine Bracco (BENG 4th Year), a member of the Scarlet Hawks women's volleyball team.

Student-athletes began working out with some members of their teams in October, with the hope for a return to game action in spring 2021.

"We're working in pods, so you see the same 10 people for about an hour; no intermingling of your pod and the other pod on your team," Bracco says. "I think we're excited to be doing something. While we're understanding limitations, I think it's just nice to be around athletes again. I think everyone kind of feels the same way." —Andrew Wyder

OLIVIA DIMMER, DAVID ETINGER, AND THE DEPARTMENT OF ATHLETICS



Gamification at School or Work a Win-Win

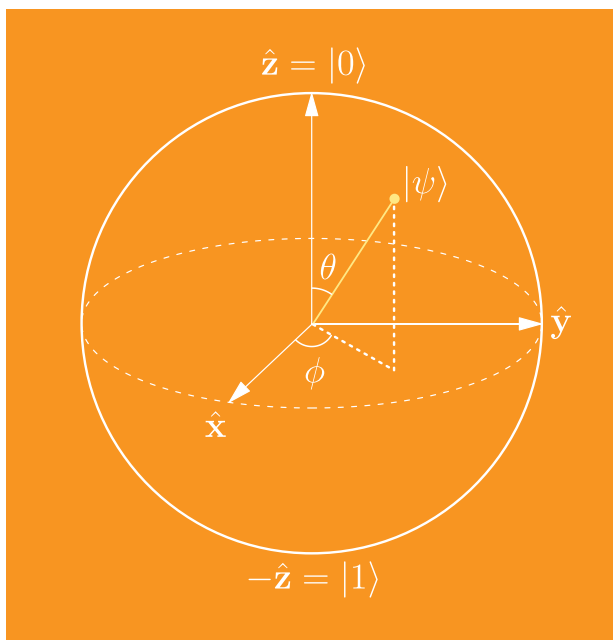
INCORPORATING elements of gaming into learning environments and workplaces is proving not just trendy, but also effective in producing positive learning outcomes, according to new research from Assistant Professor of Psychology Kristina Bauer and industrial-organizational

psychology Ph.D. students Danny Gandara and Caribay Garcia-Marquez.

Bauer has been studying “gamification,” or the application of gaming elements in non-game contexts, for several years. This fall, two new studies she co-authored were published. One of the new publications is a book chapter, “Teaching with Games and Gamification: Best Practices and Future Research Needs,” which appears in the *Handbook of Teaching with Technology in Management, Leadership, and Business*, published by Edward Elgar Publishing. The chapter is a combination of literature reviews Bauer co-authored with Gandara and Garcia-Marquez, whose research on their dissertation and thesis, respectively, contributed to this chapter.

Bauer’s second collaborative paper, “An Examination and Extension of the Theory of Gamified Learning: The Moderating Role of Goal Orientation,” was published in *Simulation and Gaming* and culled from Garcia-Marquez’s thesis, with Bauer co-authoring. This study found evidence suggesting that receiving virtual badges within a learning context could help motivate individuals who otherwise tend to avoid situations where they fear they may demonstrate incompetence.

—Linsey Maughan



Move Aside, Bit. It’s Qubit’s Time to Shine

THE QUBIT is rightfully claiming its stake in twenty-first century computing. Much like the bit that comprises the binary language of standard computers, the qubit is the basic unit of communication of quantum computers. John Zasadzinski, Paul and Suzi Schutt Endowed Chair and Illinois Institute of Technology professor of physics, and new faculty member Rakshya Khatiwada, assistant professor of physics, are representing the university in a partnership with Fermi National Accelerator Laboratory on a \$575 million multi-institution initiative to develop a quantum computer that is millions of times more powerful than today’s supercomputers. Zasadzinski is exploring the use of superconducting tunneling spectroscopy to help determine sources of decoherence—a process in which the environment interacts with the qubits—and how to mitigate the problem. Khatiwada, who is also a Fermilab associate scientist, is investigating and fabricating novel quantum sensors and devices that will be controlled through highly multiplexed readout electronics. —Casey Moffitt

Seeing with the Brain

A GROUNDBREAKING artificial vision system that bypasses the optic nerve and instead, transmits image information to a special pair of eyeglasses via a camera and a wireless implant on the visual cortex of the brain has advanced to the clinical trial stage this year. The National Institutes of Health awarded \$2.5 million for the first year of the three-year project developed by a multi-institutional team led by Philip R. Troyk, executive director of the Pritzker Institute of Biomedical Science and Engineering.

The funding is provided as part of the NIH's The Brain Research through Advancing Innovative Neurotechnologies® Initiative. Troyk, who is also a professor of biomedical engineering at Armour College of Engineering and an affiliate professor at Stuart School of Business, began working on the project in 1983, when he attended his first meeting on neuroprosthesis research at the NIH. —**Marcia Faye**

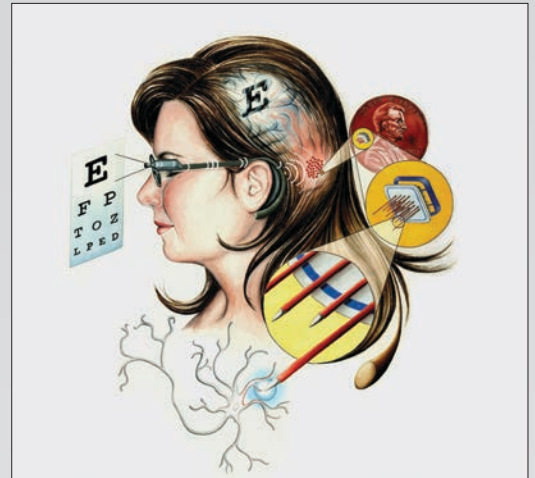
MORE ONLINE

"\$2.5 Million Award Will Move First-of-Its-Kind Visual Prosthesis Brain Implant to a Clinical Trial": iit.edu/news/25-million-award-will-move-first-of-its-kind-visual-prosthesis-brain-implant-clinical-trial

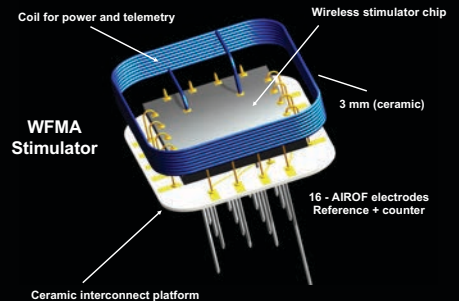
"The Holy Grail": magazine.iit.edu/spring-2002/holy-grail-iit-leads-quest-electronic-system-restore-vision-blind

How It Works

Artist's concept of the ICVP system. The vision regions of the brain are stimulated by electrodes contained within Wireless Floating Microelectrode Arrays (WFMA) electronic modules.

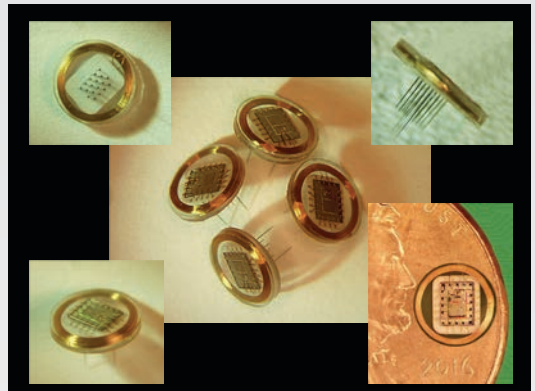


Wireless Floating Microelectrode Array (WFMA)

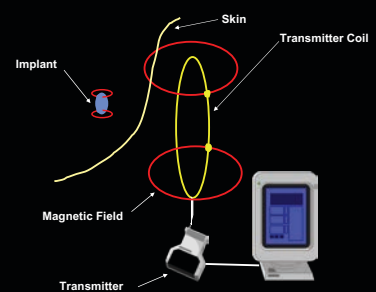


A group of WFMA's acts like an implanted cell-phone network for communicating vision information directly to the brain.

Each WFMA electronic module is 5 millimeters in diameter with 18 electrode tips smaller than the width of a human hair. The electrodes penetrate the brain and the WFMA communicates artificial visual information via a wireless magnetic link. The internal electronic chip processes the wireless commands to produce small electrical currents that stimulate the brain cells.



Transcutaneous Magnetic Coupling



Stimulation patterns derived from the camera image are communicated to the implant via a transcutaneous link with no wires that cross the scalp to produce the perception of artificial vision.

Photo: Olivia Dimmer

A young man with short black hair and glasses is smiling and leaning against a light blue wall. He is wearing a black t-shirt with the Chowbus logo, which consists of a red stylized bowl icon followed by the word "chowbus" in white lowercase letters with a trademark symbol. The background is a blurred outdoor setting with trees and buildings.

 chowbus™

Delivering on a Tasty Idea

By Scott Lewis

One day, when he was a graduate student, Linxin Wen (M.P.A. '15) started knocking on doors in Chicago's Chinatown. All he had to sell was an idea, born of his own frustration that many of his favorite "mom and pop" restaurants weren't listed on mobile food-delivery platforms. What was Wen's idea? He would deliver the food himself.

"I just went and pitched to about 20 or 30 restaurants," he recalls. "Only one restaurant agreed to do it. The others just said 'Go away.'"

For Wen, one was enough, and he asked his friends—and their friends, as word spread—to text their food orders to him. Then he would call the restaurant, place the orders, and make the deliveries. "They loved the service," he says, "and it just keeps going."

Going through the roof, that is. Seven years after arriving in the United States to begin the Master of Public Administration program at Illinois Institute of Technology's Stuart School of Business, Wen has built his idea into Chowbus, a third-party food-delivery platform that has seen explosive growth since Wen and co-founder Suyu Zhang launched it in 2016. Chowbus now operates in more than two dozen cities in the U.S., Canada, and Australia, and in recent months made headlines in the business news circuit by raising a total of \$63 million in two rounds of funding from investors.

Growing up in a small town in China, Wen dreamed of starting his own business.

"I was told that being a boss means you are rich," he says. "But when you start a company, that's not true. You barely make money. Then I realized that being the boss means

that you can do something according to your vision. You can benefit more people than you thought. So that has kept me motivated."

Chowbus has carved out space in the crowded food-delivery marketplace with its curated, dish-centric approach. Staff handpick the best dishes from each restaurant to showcase on the app, and customers can bundle dishes from different restaurants in one order without extra fees.

As Chowbus has picked up speed, Wen has maintained his close connection with owners of authentic, independent Asian restaurants. "Our passion is to help small business owners," he says. "I always say if they succeed, we succeed."


In early 2020 Wen saw that Chinese restaurants were among the first affected by public reaction to the COVID-19 pandemic, suffering large drops in business even before the first cases showed up in the U.S. Chowbus shifted into gear to soften the blow by lowering the commissions they charge their partner restaurants, adding perks for customers such as free masks and appetizers, and even hiring a bi-

lingual consultant to help restaurant owners apply for small business Paycheck Protection Program loans.

"As long as we can do it and as long as the restaurants need help, we'll be there," Wen says.

Da Mao Jia in Chicago is new to the Chowbus fold, but the restaurant's chief executive officer, Heng Shi, is already seeing results with increased delivery sales.

"They are helping me push advertisements through email, Instagram, Facebook, and WeChat [to] gain visibility," he notes. As another plus, Shi points to the company's sales representatives, who are local, speak Chinese, and check in "almost daily" to talk about marketing strategies.

With new funding and plans for scaling up, Wen says the focus at Chowbus is on building a long-term sustainable business. "Some people ask me, 'How did you get here today?'" he says. "I don't feel like I'm successful yet, there are so many things to do." 

MORE ONLINE

Chowbus: chowbus.com

What's in a Name?

Catchy, though not literal (don't expect to see an actual bus roll up to your door with your food), the company's name was delivered to Linxin Wen by an unexpected source.

"I was thinking about the name for the business, and one of my customers said, 'Why don't you use Chowbus?'" Wen says. "Chow means eat, bus means delivery. It's two syllables, very easy to pronounce and remember."

The name had another big factor in its favor for a startup on a shoestring budget—the Chowbus.com domain was available.

"We didn't have to spend money to buy it," says Wen. "It was perfect."



Photo: Rena Naltsas/Chicago Lawyer

Break -ing the Cycle

By Andrew Wyder

These are the issues that have been at the forefront of Sodiqa Williams's mind for more than a decade, things that have intersected through her personal and professional lives:

Mass incarceration. Race in the United States. Equity. They have driven Williams (LAW '11) hard since her undergraduate days at Princeton University. They are also the reasons that when she was ready for a career change in 2014, the Safer Foundation was a logical landing spot.

"I am of community," says Williams, who is the foundation's general counsel and vice president of external affairs. "I've lived in all parts of the city. While I wasn't born in the city of Chicago, I've been here most of my adult life, and I spent part of my childhood here because my father is a retired Chicago police officer. I've had all kinds of experiences that weren't necessarily good with police. The father of my kids? He's incarcerated. He was a high school sweetheart. We had been together for 13 years. I saw the challenges that he faced."

More than six years into her tenure at Safer—a nonprofit founded in 1972 that aims to end the cycle of recidivism through training and assisting those with arrest or conviction records learn the skills to find careers—it is evident that Williams's passion remains as strong as ever.

Talking over a video chat late this past summer, Williams seemed to emanate frustration as she recited two sobering statistics. One in three U.S. citizens has an arrest or criminal record—110 million as of the end of 2016, according to the Bureau of Justice Statistics. And in Illinois more than 4 million people, or roughly a third of the population, living in the state have been arrested or have a conviction, according to Safer.

"It's ridiculous!" Williams says. "When you think about that, it starts making sense why we see all these symptoms in our community, the violence and all these other things, because you have people trapped in this cycle of justice involvement. Then their kids are a part of it, and it keeps on going and keeps on going."

From the moment she started at Safer, Williams got to the task of ending the cycle of incarceration by creating opportunities.

She began by trying to create an inclusive environment in the health care industry, a sector that has grown consistently over the last decade and is one of the few projected by the Bureau of Labor Statistics to continue growing.

Williams set up forums with key players in the industry and government and then helped create a pilot program to fill jobs in a sector that constantly has unfilled positions by hiring people with records to work at local hospitals. Ultimately, it led to her writing a tool kit in partnership with the National Employment Law Project for health care systems nationwide about hiring people with records.

The initiative, started in 2016, has already resulted in Safer placing 150 people with records in clinical and non-clinical positions within the health care industry.

"We still are primarily focused on employment, but what [Williams] has brought and created in our organization has done two things: pulling down barriers for people seeking employment, education, and housing, and also in creating

"If someone doesn't start prying the door open, it will never be open."

—Sodiqa Williams

new opportunities," Safer President and Chief Executive Officer Victor B. Dickson says. "It has taken our work to another level. It has expanded our mission."

The efforts of Williams and her external affairs team have resulted in tangible results, not only nationally with the health care tool kit or with the version she is working to develop with JPMorgan Chase to create similar pathways in the banking industry, but also for those in Illinois and, specifically, Cook County.

They helped a Just Housing Ordinance pass in Cook County in 2019, while also playing a key role in occupational licensing reform in Illinois. By ensuring that individuals with records are able to be licensed without judgment, these individuals can

pursue new career opportunities.

Dickson says that the reform efforts—which required licensing agencies and boards to consider rehabilitation before a denial; prohibit the consideration of arrests, sealed, and expunged records in decisions; and ensures that individuals are not automatically disqualified from getting a license solely on the basis of having a conviction on the grounds of good moral character—opened up more than 100 occupations to people with records in Illinois.


"Those are the living-wage jobs," Williams says, "whether it's nursing, real estate, insurance producers, social workers. We covered barbering and cosmetologists."

While she remains focused and is moving forward on her work at Safer, Williams has started to think about what her future will hold—by looking back. Her time at Princeton led to a goal of, ultimately, running for the U.S. Senate. Real-world experience eventually drove away that idea. Buoyed by the advice of her late father, who passed away over the summer and who had been involved in the civil rights movement, and energized by the recent protests of Black Americans calling for equity, she has started to reconsider the possibility of running for office.

"[My father] always taught me, do what you set your mind to, and that if you will it you can make it happen. That is the approach I take to everything. The systemic reform that I've done, everyone's always said it's not possible. I say to them, 'Yes, it is. Let's make it happen.' You put a plan into action with a time frame, figure out who you need to talk to and the will you need to build up to get it to happen, and you push it," says Williams.

"If someone doesn't start prying the door open, it will never be open." 🗨️

MORE ONLINE
Safer Foundation: saferfoundation.org



How Does a Class Project Become a Startup?

Ask the Hogeas Brothers

By Andrew Connor

The Pepper smart kitchen scale, the brainchild of brothers Andrei (M.Des.+ M.B.A. '18) and Mihai Hogeas (M.D.M. '18), started with a simple sketch of a scale, a carrot, and the Amazon logo, which Andrei had drawn for a course at Illinois Institute of Technology's Institute of Design (ID) after he was assigned to come up with an idea for a Kickstarter campaign. A water sport accident that resulted in nerve damage to Andrei's right leg also served as personal inspiration.

"I remember trying to use nutrition logging apps to stay healthy since I wasn't able to work out anymore, but I kept falling off," Andrei explains. "That stuck with me when I was working on this class project."

His solution, Pepper, uses a database to provide detailed nutrition information for approximately 10,000 ingredients by weight. It also uses Amazon Alexa voice activation to retrieve dietary information for each ingredient, streamlining the cooking process for people with special dietary needs. Users can reference recipes on the device, and the dietary information for their meals is automatically logged onto their phones.

"Normally, you have to guess the amount [of food], pull out your phone, type in a text search field, then choose from hundreds of options. That entire process is about nine clicks from what I've mapped out, which takes anywhere from 15 to 45 minutes per meal," says Andrei.

Both Andrei and Mihai came to ID to pursue master's degrees after feeling stuck in their previous careers.

Andrei worked in medical sales and wanted more creativity; Mihai was a trained industrial designer but was seeing "the ceiling" of the profession. Andrei began his dual-degree program in 2015, while Mihai began his design program two years later.

"Before I came to ID, Andrei would make a little prototype; I would build and print a housing and ship it to him, and he would put it all together," recalls Mihai.

They both took the course Observing Users, which informed a research-driven and human-centered approach to the development of their hardware and software. The pair created a stockpile of physically rough but functional prototypes in a space they affectionately nicknamed Nerd Corner. Some of the prototypes were used by people during the brothers' research phase, which consisted of visiting users' homes to understand their cooking and nutrition behaviors to determine how Pepper could meet or surpass their needs.

"I remember trying to use nutrition logging apps to stay healthy since I wasn't able to work out anymore, but I kept falling off."

—Andrei Hogeas




Photos: courtesy of the Hogeas brothers

The Hogeas' research reinforced that a hands-free approach to their device was crucial. It also informed their decision to add an LED ring around the scale that visualizes when a user has met the dietary goal for an ingredient, which makes seemingly opaque measurements much easier to understand.

"When people come home with a meal plan, they might be told to use a cup of this or 200 grams of that, or even 300 calories of something," says Mihai. "With our technology a dietitian could upload a recipe to our device; there's almost no measurement or thought that goes into it at all."

By the time the brothers graduated in spring 2018 Pepper was a fleshed-out idea with functioning prototypes behind it. Though the brothers initially had difficulty finding funding, a trip to the Consumer Electronics Show in Las Vegas the following year was helpful in gaining them project exposure and getting the Hogeas into two tech accelerator programs.

Andrei and Mihai have since created 10 alpha prototypes, which are as close to a final, marketable scale as possible. They will undergo user testing at Illinois Tech's Institute for Food Safety and Health, among other places, which the brothers are optimistic will bring Pepper closer to launch.

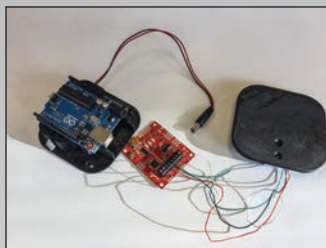
"It still amazes me how far Andrei and I have pushed this over the last two years without hiring or overextending our resources," says Mihai. "These prototypes represent a huge development milestone for us, as we can finally get them into the hands of the right people. To me, Pepper has never been a means to an end. It's an ongoing experiment, a mechanism for learning, and an opportunity to build something cool with my brother." 

MORE ONLINE

Pepper: www.pepper.cooking/product

From Prototype to Product

The journey from a sketch to a fully realized product is not a simple one. Designers such as Andrei and Mihai Hogeas must take a long, iterative approach to create useful and relevant products. In the process of creating Pepper, the brothers designed several prototypes to test with users during their time at the Institute of Design. Many of these were functioning and roughly made to test the performance of different functions, though there were non-functional foam prototypes representing different physical manifestations of what the end product could look like.



Prototype 1 Built to understand scale sensors, its function was simply to record and display weight values.



Prototype 3 Able to take scale sensor data and weight values, this device sent the information to the internet. A phone was placed in a plastic housing that served as the display or hub for the scale. The weight of an object placed on the black box would be sent over the internet and appear on the hub.



Prototype 5 This device integrated Amazon Alexa and was the first attempt at a voice-first nutrition database.



Prototype 6 This was the "looks-like, works-like" device that went to the Consumer Electronics Show. It was hand-soldered and featured a redesign of the voice-interaction model.



Food Scientist at Work:

Playing with Food

By Marcia Faye

They may be lurking in your vacuum cleaner bag, your child's pet turtle droppings, or in the fresh onions you just sliced to garnish your cheeseburger. They might be in your burger, too. While they are naturally found in the intestinal tract of food livestock such as cows, pigs, or chickens, when they exhibit signs of being in your intestinal tract, you may find that for a few days your body feels as though it has been taken over by an alien lifeform. They are *Salmonella*, rod-shaped, nearly always pathogenic bacteria that, according to the Centers for Disease Control and Prevention, account for about 1.35 million infections, 26,500 hospitalizations, and 420 deaths each year in the United States alone. Learn what one Illinois Institute of Technology alumnus is doing to decrease those numbers.

WHO: Xiangyu Deng (Ph.D. BIOL '11), associate professor, University of Georgia and food microbiologist, University of Georgia Center for Food Safety

WHAT HE DOES: Deng investigates *Salmonella* bacteria, a leading cause of food poisoning, typically found in livestock. *Salmonella* often infect people when the excrement of cows, pigs, or chickens carrying the microorganisms enters the food chain.

WHY HE CAME TO ILLINOIS TECH: Deng, who was born in China, says that he wanted to pursue a scientific field in which he could produce tangible results. He was drawn to Chicago and to the National Center for Food Safety and Technology (now a part of Illinois Tech's

Photo: courtesy of University of Georgia



Institute for Food Safety and Health), especially because of its government and industry collaborations.

NOTABLE ACCOMPLISHMENTS: In 2015 Deng and his team created SeqSero, a bioinformatics software tool that identifies more than 2,000 different serotypes of *Salmonella* from humans, animals, foods, and the environment within seconds by using whole genome [an organism's complete set of DNA] sequencing. Whole genome sequencing offers a detailed and highly precise method of identifying strains of microorganisms by determining the order of the bases that comprise the bacterial DNA, thereby providing a unique fingerprinting analysis. According to Deng, the tool has been adopted routinely by more than 60 government, academic, and

private institutions worldwide, including PulseNet, a national laboratory network for tracking foodborne pathogens, the Centers for Disease Control and Prevention, the United States Food and Drug Administration, and the U.S. Department of Agriculture. The team has analyzed more than 50,000 genomes, which are available for free on the Deng Laboratory website.

The team was most recently recognized for using machine learning techniques to predict the livestock sources of *S. enterica* Typhimurium infections, one of the most prevalent serotypes of the pathogen. They trained a machine learning classifier known as “random forest” with more than 1,300 *S. enterica* Typhimurium genomes from livestock and other sources, then used the algorithm to predict the livestock sources of the pathogen. The model averaged an accuracy rate of 83 percent and successfully predicted the root cause of seven out of eight major outbreaks that occurred in the U.S. from 1998 to 2013. Their approach helped to identify some 50 genetic prediction markers from entire genomes of the pathogen that are close to five million bases.

GREATEST CHALLENGE: “We don’t really know much about the mechanism behind the association of particular *Salmonella* strains to particular sources, for example, animal hosts such as poultry or pigs. That’s why we apply machine-learning techniques; we know little about food exposure and contamination sources of 95 percent of human infections of *Salmonella* in the U.S., but we do have a lot of genomic data. It’s a challenge to explain what we have found. We may be able to identify the genetic determinants of *Salmonella*-host association, if we can tease out mechanistic causation from coincidental correlation.”

WHAT’S NEXT: Deng’s lab recently received an FDA award to further develop and expand its source-attribution tool, expanding into more serotypes and more foods. The team is also exploring how the food microbiome—the entire community of microorganisms on a food sample—informs food safety, food quality, and the microbial ecology of overall food production environments. A piece of chicken, for example, may harbor more than 1 billion bacterial cells. 🍗

MORE ONLINE
Deng Laboratory: denglab.site

University of Georgia Center for Food Safety:
cfs.caes.uga.edu



Betting on a Targeted Therapy

By Steve Hendershot

Photo: Scott Murry

This sounds like a startup story: an innovative company is preparing to bring a product to market for the first time and hires a fast-rising young executive to help make it happen.

Except in this case, the company is 40 years old.

This past summer, 39-year-old Susan Altschuller (Ph.D. BME '07) joined Waltham, Massachusetts-based ImmunoGen as its chief financial officer. Altschuller is a member of a leadership team tasked with preparing the company to bring a drug to market for the first time: an ovarian cancer therapy called mirvetuximab soravtansine, or “Mirv” for short.

“This company has been through a lot. And now it’s on the precipice of launching a product that makes a difference for cancer patients,” says Altschuller.

ImmunoGen has spent the last four decades developing antibody-drug conjugates (ADCs), toxins that attach to specific antibodies that lead them directly to cancer cells that they then attack. Mirv isn’t the company’s first ADC breakthrough; its technology has been licensed to

“This company has been through a lot. And now it’s on the precipice of launching a product that makes a difference for cancer patients.”

—Susan Altschuller

other drug makers and successfully brought to market. But ImmunoGen has never brought one of its own products to market, something that will likely change if Mirv passes its stage 3 clinical trial. Mirv’s fast-track status from the United States Food and Drug Administration suggests there’s reason for optimism.

Altschuller’s rapid ascent to life sciences CFO began at Illinois Institute of Technology, where she studied biomedical engineering under Vincent Turitto, emeritus professor and first director of the Pritzker Institute of Biomedical Science and Engineering, and also grew interested in the business side of biotech. A native of the Chicago suburb of Western Springs, Altschuller came home to attend graduate school after earning her bachelor’s degree at Tulane University in New Orleans. While at Illinois Tech, she participated in a life-sciences incubator sponsored by the Illinois Biotechnology Innovation Organization, and “I realized that I wanted to be at the intersection of science and business,” she says.

After completing her doctorate, Altschuller moved to Boston and earned an M.B.A. at Massachusetts Institute of Technology. She stayed in the area after graduation, working in investor relations at a series of biotech firms, while setting her sights on a CFO role at a company she believed was poised for success. ImmunoGen checked all the boxes, in terms of both science and also corporate structure. She even looked into Mirv, relying on

her biomedical engineering chops to satisfy herself that a 2019 clinical trial setback was just a speedbump, and that the kinks had been worked out. Her ability to evaluate Mirv’s status also impressed the ImmunoGen team.

“That scientific curiosity and aptitude is very helpful,” says Audrey Bergan, senior vice president at ImmunoGen. “For a CFO to have that genuine interest in the science will only make her more understanding of the business.”

The timing of Altschuller’s hire, however, has made for a challenging transition. She joined ImmunoGen in July, in the midst of the COVID-19 pandemic, making it difficult to build rapport with her new team.

“You don’t have the same hallway conversations that you would normally have, so I’ve been trying to be more proactive about informal outreach—texting people, calling people,” Altschuller says, noting that one of her go-to strategies for quarantine leadership is what she calls the “walk and talk,” meetings where

she ditches video calling in favor of heading outside for a conversation and a stroll around the block.

Altschuller is acclimating while also trying to position her team for a critical 2021. ImmunoGen expects results on Mirv’s phase 3 trial in the third quarter of next year, results that will set the course for ImmunoGen’s future.

“As a leader, I need to be thoughtful about how we build the business for the long term, whether that’s in the context of [Mirv’s] success or failure,” Altschuller says. “In the face of failure, we have other great assets we could use to build the company. But the options before us in the face of success are profound—we could build a great oncology company here, and that’s what I think is going to happen.” **E**

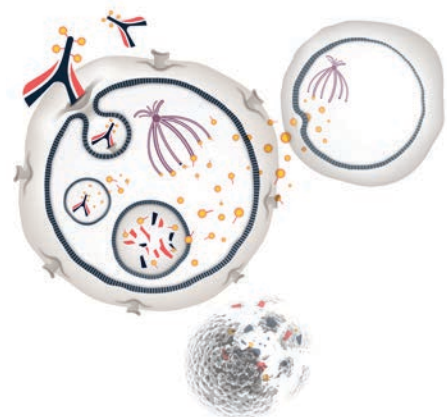
MORE ONLINE

“Antibody-Drug Conjugates: Possibilities and Challenges”: ncbi.nlm.nih.gov/pmc/articles/PMC6359697
ImmunoGen: immunogen.com

What’s an ADC, and How Does It Work?

Antibodies are proteins in the immune system that recognize and attack hostile or foreign substances in the blood—including cancer cells. An antibody-drug conjugate, or ADC, is a package that attaches a cancer-killing toxin to an antibody to generate a more effective attack on the cancer cell.

The toxins, which ImmunoGen says are much more potent than traditional chemotherapy, are attached to the antibodies using biodegradable linkers. The linkers also are designed to break apart once inside cancer cells, and once split, can attack more than one cancer cell.



Class Notes

1950s

W. Ronald Johnson

(FPE '56) Ormond Beach, Fla., and James Johnson (FPE '58), Clearwater, Fla., both followed similar paths in life: both received four-year scholarships to Illinois Tech from the Western Acturial Bureau, both became automatic sprinkler engineers, both obtained the same professional certifications, and, after years working in the insurance industry, both retired with their families to Florida.

1970s

Michael Kassner

(M.S. METE '77), Pasadena, Calif., received the Professional Achievement Award from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

1980s

Michael Rogers

(CE '83), Arvada, Colo., received the International Award of Merit from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26, 2020.

Stanley Schachne

(ARCH '83), Davie, Fla., has been appointed to serve on the Florida Foundation for Architecture Board of Directors. The foundation is affiliated with the Florida chapter of the American Institute of Architects.

Anne Alonzo

(LAW '84), Park Ridge, Ill., joined Corteva Agriscience as senior vice president, external affairs and chief sustainability officer.

John Kerin

(EE '84, M.B.A. '90), Park Ridge, Ill., received the Professional Achievement Award from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

Amy Campanelli

(LAW '87), La Grange, Ill., received the Professional Achievement Award from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

David Bishop

(Ph.D. Experimental Physics '89), Decorah, Iowa, retired in May after teaching at Luther College in Decorah for 34 years. During his tenure at the college he served as the head of the Department of Psychology, founded and directed the Soviet-American Psychology Seminars, and directed the Evolutionary and Developmental Science Research Laboratory.

Amy Blumenfeld Bogost

(LAW '89), Madison, Wis., was appointed to the University of Wisconsin System Board of Regents.

Laurence Landsman

(LAW '89), Chicago, joined Latimer LeVay Fyock as a partner.



Golden Society members celebrate alongside family and friends at the 2020 Homecoming Reunion Brunch. The event featured memories from the Class of 1970 and the induction of new members into the Golden Society, which honors individuals who graduated from Illinois Tech 50 or more years ago.



From the 2020 Alumni Awards Ceremony, President Alan W. Cramb [left] and this year's Alumni Medal winner, David Crowell (ARCH '79) [right]

Scott Zhang

(M.S. MAE '89, Ph.D CHE '92), Beijing, received the International Award of Merit from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

1990s

Eric Plourde

(ME '91), Frankfort, Ill., was inducted into the Illinois Tool Works Patent Society Hall of Fame.

Jamal Burki

(EE '92, M.S. CPE '94), Bloomington, Ill., joined the Illinois Institute of Technology Alumni Association Board of Directors.

Frances Kao

(LAW '92), Chicago, was elected to the Cornell College Board of Trustees.

Len Anderson IV

(Science and Technology in Context '93), Memphis, Tenn., received the Professional Achievement Award from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

2010s

Udit Goyal

(M.S. MAE '11), Chicago, recently moved back to Chicago to help execute large renewable-energy projects on a global team for Orsted—a group ranked as the world's most sustainable company by *Corporate Knights*.

Katherine Jahnke Dale

(LAW '11), Chicago, was promoted to partner with DLA Piper.

Erick Michel

(LAW '11), Wilmette, Ill., was elevated to shareholder with McAndrews, Held & Malloy.

Sivonnia Debarros

(LAW '13), Woodstock, Ill., started a new podcast titled *What Are You Sporting About?*

Kun Li

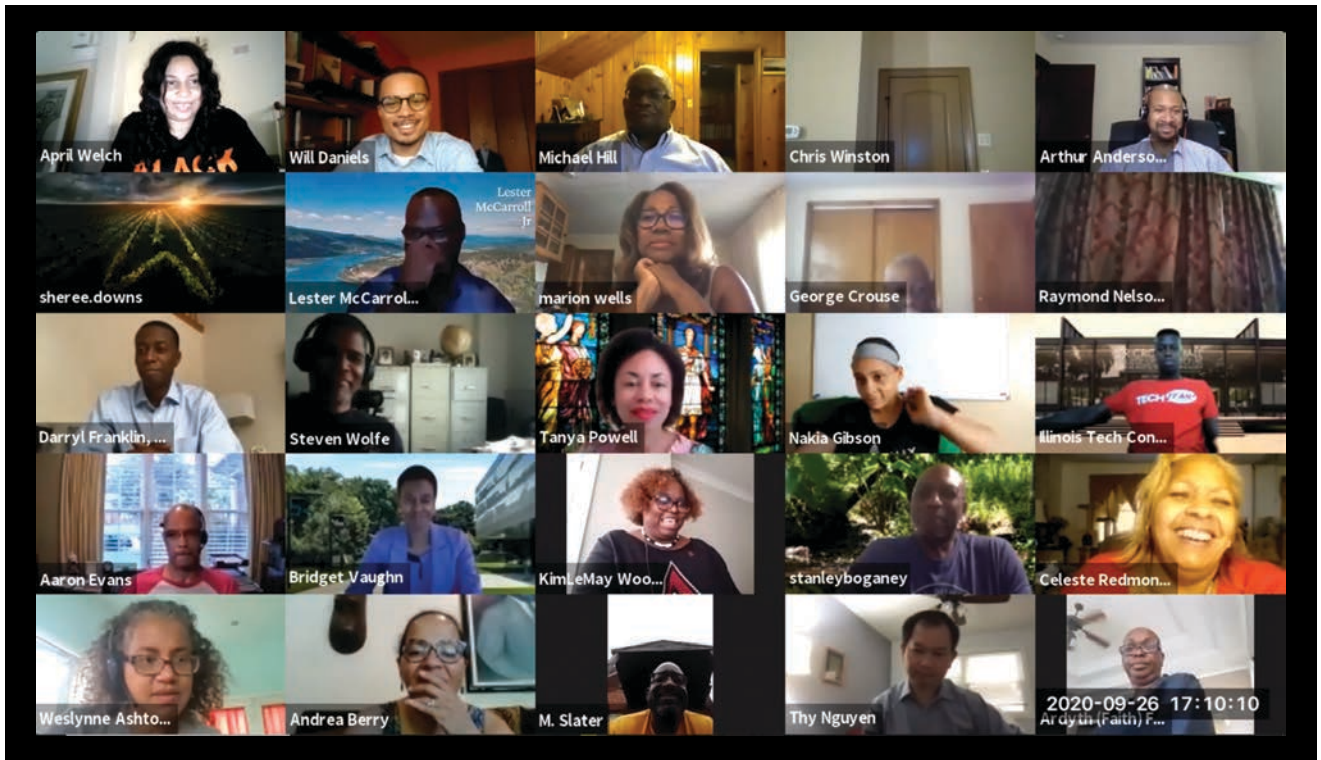
(Ph.D. FIN '15), Beijing, received the Outstanding Young Alumnus Award from Illinois Institute of Technology during the 2020 Alumni Awards Ceremony on September 26.

Martin Missaiel

(ARCH '15), Chicago, published his debut novel, *An Alternative History of the Decline and Fall of the Roman Empire*, this past summer.



During a special Homecoming event, speed painter Evan Struck shows off his skills by painting portraits of Gloria Ray Karlmark (CHEM, MATH '65) and Illinois Tech's own Talon, the Scarlet Hawk.



Members of the African American Alumni Association participate in a “Zoom Social” as part of Illinois Tech’s Virtual Homecoming 2020.

Kenneth Matuszewski

(LAW '16), Westchester, Ill., joined Neal, Gerber & Eisenberg LLP as an associate counsel in the firm’s Intellectual Property and Technology Transactions practice group.

Bryce Hensley

(LAW '17), Chicago, was featured in this year’s *Crain’s Chicago Business* 20 in Their Twenties listing.

Tiffany Tran

(LAW '18), Chicago, joined Barnes and Thornburg LLP as an associate.

Taylor Brewer

(LAW '19), Chicago, joined Morici, Longo & Associates as an associate. He also recently won a \$93,000 verdict in a personal injury case.

Wisul Sul

(LAW '19), Chicago, joined Dinsmore & Shohl LLP as an associate attorney in the firm’s Intellectual Property practice.



Here is a taste of Alumni Trivia Night, Class of 1970-style, played during this year’s virtual Homecoming event. Do you remember the name of the event pictured above? (Hint: It was held in the fall, but don’t let that fool you!) (See answer on the bottom of page 25.)

ALUMNI AWARDS 2020



Since 1946 the Alumni Awards have been presented to Illinois Institute of Technology's most accomplished, innovative, and influential alumni. Alumni Award winners add to the university's rich history of visionaries who make the Illinois Tech community proud.

This year the Alumni Awards took place during Illinois Tech's virtual Homecoming & Alumni Awards Weekend on September 25 and 26.

The 2020 honorees are:

Alumni Medal

David Crowell (ARCH '79)

Collens Merit Award

Helmut Jahn

Galvin Award

S. Christopher Gladwin

International Award of Merit

Michael Rogers (CE '83)
Scott Zhang (M.S. MAE '89, Ph.D. CHE '92)

John J. Schommer Honor I Award

Patrick Rush (FMT '97, M.B.A. '98)

Lifetime Achievement Award

Sidney Jeffe (ME '50)
Syed "Zaheer" Zaheeruddin (M.S. IE '75)

Outstanding Young Alumnus/Young Alumna Award

Len F. Anderson IV (Science and Technology
in Context '93)
Kun Li (Ph.D. FIN '15)
Ricardo Vinuesa Motilva (M.S. MAE '09, Ph.D. '13)

Professional Achievement Award

Amy Campanelli (LAW '87)
Michael Kassner (M.S. METE '77)
John Kerin (EE '84, M.B.A. '90)

To learn more about each of the 2020 Alumni Award honorees, visit iit.edu/alumniawards



Gunsaulus | SOCIETY

The Gunsaulus Society is named after Frank Gunsaulus, the first president of Armour Institute of Technology and orator of the famed “million dollar sermon,” which led to Armour’s founding and eventually, the establishment of Illinois Institute of Technology. The guiding principles set forth by Frank Gunsaulus continue to resonate: belief in the advancement of knowledge, the cultivation of invention, and the importance of preparing students for a life of achievement, service, and fulfillment.

An estate gift to Illinois Tech demonstrates your commitment to the values that were instilled at our founding, which is why we recognize your gift with induction into the Gunsaulus Society, a highly respected group of individuals who, like Frank Gunsaulus, put their beliefs into action for a better future.

**Joining the
Gunsaulus Society
is easy**

Let us know of your intentions to leave Illinois Institute of Technology in your will or if you have named the university as a beneficiary of an asset including your IRA. Did you know that the IRS regards any remaining balance left in your IRA to be untaxed income? There are significant tax advantages to making charitable gifts with your IRA.

If you intend to name Illinois Institute of Technology as a beneficiary of your IRA, notify us, and we will share wire transfer or mail instructions for your plan administrator.



The SECURE Act changes the required age that you begin to take your required minimum distribution to 72. If you leave your IRA to most non-spousal heirs, they are required to receive the funds over 10 years and to pay income tax.

If you are age 70½ or older, you may transfer up to \$100,000 annually from your IRAs directly to Illinois Institute of Technology without being subject to income taxes on the distribution. When you reach age 72, it will count toward your required minimum distributions.

For more information, please contact Marian Quirk at 312.567.5017 or giftplanning@iit.edu

Mies van der Rohe Society Director Cynthia Vranas Olsen (M.ARCH. '01, Ph.D. '17) introduces a video tour of Mies Campus, which was followed by a Q&A moderated by College of Architecture Dean Reed Kroloff, featuring Lewis College of Science and Letters Professor Emeritus Kevin Harrington alongside Mies Society board members Dirk Lohan and Jong-Soung Kimm (ARCH '61, M.S. '64).



Spring Thing, a once-annual celebration held in fall 1970, demonstrates that Illinois Tech students have always thought outside the box.

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

Immerse Yourself in Illinois Tech

Stay in touch with Illinois Institute of Technology through the Illinois Tech Alumni Association or by volunteering your time, making a contribution, or networking in the following ways:

Host a Virtual Event

You can help Illinois Tech lead the way by hosting a virtual event for donors, potential students, or alumni. Support the admissions staff by leading a workshop or panel, or support the Office of Advancement by organizing special networking opportunities.

Serve on a Board or Committee

The Alumni Board is actively seeking new members who are committed to advancing Illinois Tech's mission and vision. You can become involved by serving on committees in several areas of interest from admission and career opportunities to nominations.

Connect and Mentor

Join The Bridge, Illinois Tech's online networking and mentorship platform. Connect with current students and fellow alumni, offer job advice, or find a mentee. Register for The Bridge at iit.wisr.io.

Volunteer with Admission or Career Services

Greet students and alumni, offer your expertise, or volunteer at events ranging from advice panels to career fairs through the admission or career services offices.

To sign up, visit alumni.iit.edu/volunteer-signup

Spotlight

A Remarkable Life

Lewis Thigpen (M.S. MECH '67, Ph.D. '70)

Lewis Thigpen (M.S. MECH '67, Ph.D. '70), who hails from Sawdust, a dot on the Florida map about 30 miles west of Tallahassee, says that one of his most-loved poems is "If" by Rudyard Kipling, because it imparts valuable lessons. Fond of southern food, Thigpen also enjoys New Mexican cuisine, soft shell blue crabs sautéed in butter, and fried quail. And while he jokingly admits that he doesn't follow the adage too well nowadays in retirement, "Don't put off until tomorrow what you can do today" is a Thigpen family favorite.

As a Black man born in the segregated United States in 1938, Thigpen can relate other bits of information about himself that comprise the fabric of his life. During the 1960 presidential election, Thigpen had to rescue his brother Amos from bullies who accosted him outside the polling place for having the audacity to vote. Thigpen was not served in many clubs and restaurants, and was sometimes turned down for apartments, all while he was employed at Sandia National Laboratories and Lawrence Livermore National Laboratory, and did contract work for Texas A&M University. And Thigpen has a special place in his heart for blues music, noting that the song "Black, Brown, and White" by Big Bill Broonzy was a kind of anthem to Thigpen's life in what he had "observed and experienced in racial relationships—not only in the Jim Crow South but throughout my journey around the world."

Keeping another family adage in mind—"Any job worth doing is a job worth doing well to the best of your ability"—Thigpen focused on educating himself and rose above circumstances to excel as an industry engineer and scientist at national laboratories for nearly 20 years. Among his many accomplishments was performing the first computations showing that earth materials could be modeled with simple constitutive equations to simulate projectile penetration into rock, which led to proposals for updating coal mining techniques, and obtaining a patent for an Air-Deliverable, Ice-Penetrating Sonobuoy. In 1988 Thigpen transitioned into academia, becoming chair and professor in the Department of Mechanical Engineering at Howard University, where he remained until his retirement in 2008. In 2007 Thigpen was one of a five-member faculty team from institutions around the world that received the XCaliber Award from Virginia Polytechnic Institute and State University for Excellence

in Technology-Assisted Teaching and Learning for a Global Team. Among Thigpen's other honors was an Illinois Tech's Professional Achievement Award (2006) and the 2019 Albert Nelson Marquis Lifetime Achievement Award.

Thigpen's former Sawdust barber, the late Franklin Jones, gave Thigpen the idea to pen his autobiography, which was published in 2019. *Born and Raised in Sawdust: My Journey Around the World in Eighty Years* is a story of family, race, and achievement.

You begin your preface with "I have had a life filled with challenges, which I had to overcome to become successful." What were your greatest challenges?

Systemic racism and limited resources were my greatest challenges to overcome to be successful. I grew up in a poor family on a farm in the Jim Crow South faced with racism, few opportunities, and limited resources, and for most of my early teen years, I didn't even have an idea what to do with my life or how to figure it out. Yet, through respect for others, honesty, resourcefulness, respect for hard work, courage to fight racism head on, encouragement from family and friends, a belief in what's possible, a stint in the army, and plenty of travel, I made my mark in science and education.

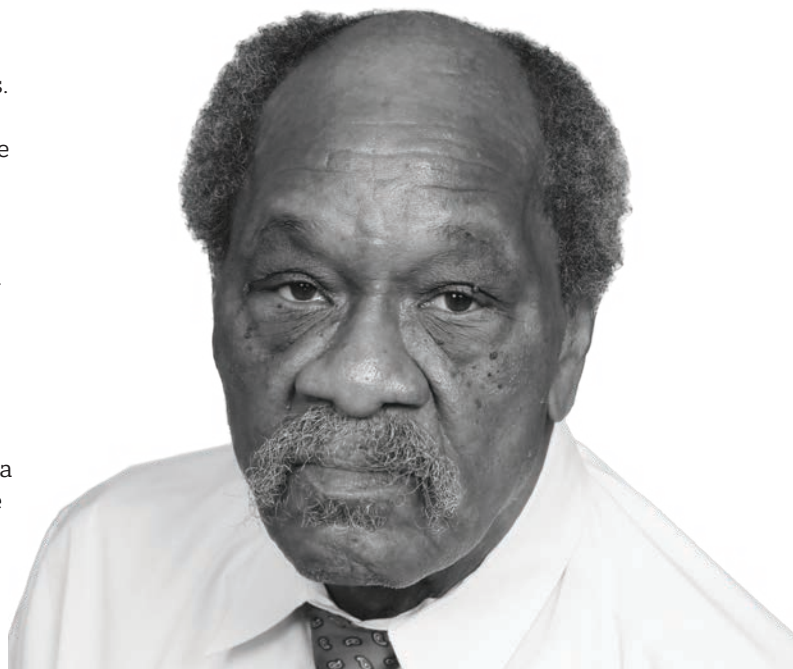


PHOTO. COURTESY OF LEWIS THIGPEN



The Sawdust, Florida, house where Lewis Thigpen was born, as painted by Thigpen's brother James Woodrow Thigpen

What did you gain most from your Illinois Tech years?

I saw the results of the Chicago riots in April 1968 that were partially sparked by the assassination of Martin Luther King Jr. And I witnessed the protests at the August 1968 Democratic National Convention; thousands of Vietnam War protesters battled in the streets while the Democratic Party fell apart over an internal disagreement concerning its stance on Vietnam. All of that happened during my years at IIT. It was an educational experience that was more than technical work on campus. The streets and the International Amphitheatre where the convention took place were research laboratories to get a unique learning experiment on the state of the nation and its aspirations. As one of my colleagues from IIT during those years stated recently, "The alumni whom I have met over the years seem to have a deeper understanding of a foundational world that only being in Chicago in those years could give."

Throughout the duration of your career, what was the one highlight that stood out the most?

The highlight of my career was serving as a member of the American Society of Mechanical Engineering (ASME) Center for Education Board of Directors over a period of more than 10 years (1999–2010). I was the first and probably still the only African American to chair the ASME National Department Heads Committee and to serve two terms as chair of the Committee on Engineering Accreditation.

Based on your life experiences as well as what you see happening in the world today, what message would you have for readers regarding inclusion, equality, and diversity?

I ask each of us to find our voices so that all of us will rise. And our communities will be transformed from sawdust into giant, solid oak trees. —Marcia Faye

Spotlight

Dedicated Advocacy Despite the Pandemic

Rachel O’Konis Ruttenberg (LAW ’11)



PHOTO: OLIVIA DIMMER

Rachel Ruttenberg (LAW ’11) has served as director of policy at Heartland Alliance since she joined the staff in 2019. A Chicago-based nonprofit that works with individuals who are homeless, living in poverty, or seeking safety, it provides a comprehensive array of services in health, housing, jobs, and justice. While the how and what of her job changed when the COVID-19 pandemic uprooted life in the United States, Ruttenberg remains steadfast in her Heartland Alliance advocacy efforts.

How do you create change through advocacy?

We identify issues that people in poverty are facing or opportunities to make people’s lives better, we work with

partner organizations within coalitions to develop policy solutions, and we lobby for legislative and administrative changes. The legislative calendar drives a lot of the flow of my work over a year. I came in well before the spring [2020] Illinois legislative session was set to start in January. That was nice because it let me get to know the team, start to understand our priorities, and start to connect with the Heartland Alliance programs and their subject matter leads to understand the pain points for some of our program participants and the acute challenges that folks are facing right now.

What issues have 2020 brought into clearer focus?

You can’t separate the work to help people who struggle to make ends meet and the work to end systemic racism. They’re just too intersectional. I’m thinking specifically of the awful, disparate impact of the pandemic on people of color. The pandemic has put us through a collective trauma in some ways, where there’s not just an opening for bold policy solutions that could be game-changers, but there’s also an opportunity for the public consciousness to just be raised and to have increased compassion for people who face specific challenges and systemic barriers. —Andrew Wyder

MORE ONLINE

Heartland Alliance: heartlandalliance.org

The Blue Flame Rises Again

Fifty years ago this past October 23, The Blue Flame—an innovative, aerodynamic, rocket-powered version of the ultimate dragster—broke the land-speed record at the Bonneville Salt Flats in Wendover, Utah, at 630.388 miles per hour. That momentous event shared its beginnings at Illinois Institute of Technology thanks, in part, to a legacy roster of fuel-inspired automotive and energy luminaries that includes Ray Dausman and Richard “Dick” Keller, IIT Research Institute technologists; Henry R. Linden (Ph.D. CHE ’52), president of the Institute of Gas Technology; Thomas Morel (M.S. ME ’69, Ph.D. ’72); and faculty members Andrew Fejer, T. Paul Torda, and Sarunas C. Uzgiris (M.S. ME ’63, Ph.D. MAE ’66). To commemorate that record and the team’s derring-do, Keller recently published the memoir *Speedquest*:



PHOTO: COURTESY OF DICK KELLER

Inside The Blue Flame, with motor-racing journalist David Tremayne. October 23, 2020, was also proclaimed Blue Flame Day in Illinois, Utah, and Wisconsin.

MORE ONLINE

“Driving with One Hand”: magazine.iit.edu/media/driving-with-one-hand

“It Was One Gas of a Ride, Baby”: magazine.iit.edu/fall-2015/it-was-one-gas-ride-baby



An Update from the Alumni Board Chair Sherrie Littlejohn

Greetings, Fellow Alumni,

This summer I wrote to you about our community's response to ongoing national conversations around systemic racial justice. Since then, many new initiatives are already underway. You can read President Alan W. Cramb's most recent statement in its entirety.* I hope that you will be encouraged by these key developments:

- The newly created position of vice president for diversity, equity, and inclusion has been announced, and a search is underway to fill this crucial role.
- Mike Gosz, vice president for enrollment and senior vice provost, is working to build partnerships with Chicago Public Schools, especially on the South Side and in our neighborhood of Bronzeville, to increase the number of African-American students at Illinois Institute of Technology.
- Our Office of Advancement is developing new scholarship opportunities, specifically for students from Chicago's South Side and our surrounding neighborhoods, ensuring a continuing support that gives students new opportunities for success.

These initiatives do not mark the end of our community's work on diversity, equity, and inclusion. Rather, this is the beginning of an ongoing process and marks the beginning of a new chapter with new opportunities for alumni to think about how their backgrounds and skill sets might be tapped to support our current students.

In addition to this important work, and in spite of the challenges of this year, Illinois Tech's strategic goals are each moving toward full fruition. The creation of the College of Computing sets us apart as a university uniquely poised to cross industries and think about big problems in collaborative ways. Our world-class faculty continues to impress, and appointments such as architecture photographer, writer, and critic Lee Bey in the College of Architecture and Maryam Saleh to lead the Kaplan Institute expand our ability to offer our students unparalleled instruction. On top of that, our fundraising efforts are proving now more than ever that our partners, friends, and more and more of our alumni see that giving to Illinois Tech is a smart investment in the future.

Last fall I addressed my fellow alumni in these pages and said that I believe that we all have a part to play in helping to make Illinois Tech the beating heart of Chicago's technology sector. This is a lofty goal, but it is my belief that we achieve greatness through expansive expectations.

I am grateful for the opportunity to represent my fellow Scarlet Hawks, more than 80,000 strong across the globe. I believe that our diversity is a source of power as we support current students toward graduation, career success, and the opportunity to join our ranks.

To find out how you can get involved, contact alumni@iit.edu.

Sincerely,

A handwritten signature in black ink, appearing to read "Sherrie Littlejohn".

Sherrie Littlejohn (M.S. CS '82)

*Chair, Alumni Association Board of Directors
Trustee, Board of Trustees
Illinois Institute of Technology*

*Commitment to Diversity and Inclusion: iit.edu/president/commitment-diversity-and-inclusion

Obituaries

Arthur W. Hill

(CHE '71), Chicago, had a long career as an engineer in the food-processing industry, retiring from Bestfoods Inc. (now part of Unilever). After serving in the United States Army, Hill began working and enrolled in night courses at Illinois Tech, eventually leaving his job to devote his time to earning his undergraduate degree. He also became a successful investor. A member of the Armour Society, Hill was a key donor to the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, and established the George and Dorothy Hill Endowed Scholarship and the Robert Milton Hill Endowed Scholarship.

Jules F. Knapp

Glencoe, Ill., founded the Stuart School of Business Jules F. Knapp Entrepreneurship Center in 2004. The center focuses on helping launch, expand, and strengthen businesses created by students, faculty, alumni, and the community at large. Knapp was drawn to business and entrepreneurship as a child, selling newspapers, shoes, and paintbrushes before founding United Coatings Inc. with his brother. They grew the company to become the largest private-label paint manufacturer in the United States; it was ultimately sold to The Sherwin-Williams Company in 1996. Knapp also purchased Grisham Manufacturing and sold that company in 2014. A noted philanthropist, Knapp mentored startups, served on the Stuart School Board of Advisors and the Illinois Institute of Technology Board of Trustees, and made substantial gifts to various nonprofits. In 2016 Illinois Tech presented Knapp with the Galvin Award for advancements to the university.

George D. Kraft

Naperville, Ill., was a member of the Illinois Institute of Technology faculty from 1968 until his retirement in 2004. He became a tenured professor in 1980 and taught at both Armour College of Engineering and Stuart School of Business. For 15 years Kraft was a research scientist at AT&T Bell Laboratories. With degrees from Massachusetts Institute of Technology and Case Institute of Technology, he was a member of Sigma Xi: The Scientific Research Honor Society and Eta Kappa Nu, the international honor society of the Institute of the Electronics and Electrical Engineers.

Peter D. Land

Chicago, was on the faculty of the College of Architecture for 42 years and received an Excellence in Teaching Award in both 1977 and 2015. He is known for his collaboration with Yale University as field director of an inter-American graduate program in urban and regional planning at the National University of Engineering in Lima, Peru. Land also directed the United Nations Experimental Housing Project from 1968–1973 and was awarded the Order of the Sun,

the highest civil decoration then issued by the Peruvian government. Born in England, Land credited his paternal grandfather, a stone mason, with influencing him to enter the field of architecture. He was an associate of the Royal Institute of British Architects who completed his graduate studies at Yale University and Carnegie Mellon School of Architecture.

James A. Schoke

(PHYS '48), Delray Beach, Fla., served in the Special Engineering Detachment of the Army Corps of Engineers as well as in the historic Manhattan Project's Instrument Section. As such, he was responsible for inventing instruments to detect uranium and alpha emitters and for training scientists to use and maintain these instruments. In 1946 he began a successful entrepreneurial career by founding the Instrument Development Laboratory, a company that developed and manufactured specialized radiation detection instruments and radioactive chemicals for medicine, industry, research, and the military. It ultimately became the Nuclear-Chicago Corporation and was subsequently merged with Abbott Laboratories.

David C. Sharpe

(ARCH '60, M.S. ARCH '62), Chicago, served as the first Black professor at the College of Architecture, where he was a member of the faculty for nearly a half-century. A champion of inclusion and diversity, Sharpe inspired professionals and students alike as a long-time architect at Skidmore, Owings & Merrill (1967–1985) and as an academic. He left SOM to teach full-time and to direct the college's graduate thesis program. Sharpe brought an applied research direction to the curriculum and contributed to tall-building development. He retired in 2010 and received a Distinguished Service Award from the Chicago chapter of the American Institute of Architects.

Stephen Skaper

(CHEM '69), Padua, Italy, performed research on the role of immune cells and their interactions in neuroinflammation, in particular in neuropathic pain and autoimmune demyelinating diseases. From 1998–2008 he was a senior group leader for the Neurodegeneration Research, Neurology and GI Centre of Excellence for Drug Discovery, GlaxoSmithKline Research and Development Ltd., in the United Kingdom. Prior to that he held academic research positions at the University of California, San Diego. A prolific writer, Skaper was also editor-in-chief of *CNS & Neurological Disorders-Drug Targets* and the associate editor of the *American Journal of Neuroprotection and Neuroregeneration*.

In Memoriam

Elizabeth Lawson A&S '36
Carl Strodman ME '43
Woodrow Tichy ME '44
William Windham CHEM '46
Charles Putz EE '48
Henry Voss ME '48
Louis Tyma Jr. ME '49
Hugh Wood EE '49
Gildo Fato CHE '50
Joan (née Robinson) Grierson
M.S. DSGN '51
Paul Leo CHE '51, M.S. '53
John Schomaker M.S. ME '51
Edward Akins ME '52
William Atkins EE '52
Donald McCollam CHE '52
John Odegaard DSGN '52
William Penland Jr. M.S. DSGN '52
Joseph Stemler ME '52
William Drury EE '53
Robert Grove EE, M.S. '53
Henry Karplus M.S. PHYS '53
Heman Woodbury EE '53
Frederick Forsyth EE '56
Ching Lee M.S. '56, Ph.D. MECH '58
Michael Pado ARCH '56
Herbert Riedl M.S. B&E '56
Paul Tarman Sr. CHE '56, M.S. '58
Chandra Jha M.S. CE '57
Theodore Pethes Jr. PSYC '57
Thomas Kolar CE '58
James Carlson IE '59
Suresh Gulati M.S. ME '59
James Leyerle CHE '59
Peter Pagratis IE '59
Ali Fararoui M.S. CHE '60
Wilhelm Loeffler IE '60

Melvin Shore CE '60
Harold Anderson CHE '61
Robert Crawford EE '61
James Davidson ME '61
John LaPlante CE '61
Edwin Lawson B&E '61
Marvin Luckman LAW '61
Gordon McCluskey CE '61
Margaret (née Pracko) Redman
UNK '61
Ted Abbott PHYS '62
Duane Anderson ARCH '62
Edward Pozniak BIOL '63
Randy Wortman ED '63,
M.S. SOFTWARE ENG '68
Jurgen Scharpenberg EE '64
Randall Swenson FPE '64
Quinlan Halbeisen EE '65
John Marshall LAW '65
Gonzalo Martinez EE '66
Lawrence Poltrock LAW '66
Matthew Rodina Jr. B&E '66, M.S. '68
Joseph Lichamer MTLE '67
Friedrich Weinkopf LAW '67
Lawrence Johnson
M.S. MATH [for Teachers] '68
Richard Kulik M.S. '68, Ph.D. CHE '76
Carol Mauch M.S. DSGN '68
Leonard Larson CHEM '69
Michael Fontana EE '70
Steven Kammeyer BIOL '70
Thomas Lalagos PS '70
Bruce Leonard B&E '70
Robert Rampetsreiter Ph.D. '70
Edward Briesch CHE '71
Curtis Craddock MGT '72
Ran Stearns M.S. CHE '73
Michael Griffin LAW '74

Leon Knorps MSC '74
Peter Theis LAW '74
Virginia (née Sepanski) Dorenbos
M.S. CS '75
Mary Lloyd Estrin M.S. DSGN '75
Arvid Tessing M.S. DSGN '75
Raymond Cachares M.P.A. '77
Dennis Griffin MAE '77
Robert Vihon LAW '77
Robin (née Swerdling) Greenfield
LAW '79
Henry Voss ARCH '80, M.S. CS '94
Mary Healy Fong CHE '81
Susan Gordy LAW '81
Donald Fricker M.B.A. '84
Yimin Chen M.S. CS '89
Howard Hymen M.B.A. '89
Terrence Leibham M.S. CS '91
Timothy Bulger DSGN '98
Jean Goze M.S. ANALY CHEM '98

Attendee/Non-Degree

Hayward Blake
Samuel Godelas

Faculty and Staff

Joel Asprooth
Angela Jarka COM '16

The 27th president of the United States, William Howard Taft, in academic regalia at his 1912 visit to campus in celebration of the 20th anniversary of Armour Institute of Technology



TAFT IMAGES. 1912 SENIOR CLASS YEARBOOK (ARMOUR INSTITUTE OF TECHNOLOGY)

IMAGE: LIBRARY OF CONGRESS



U.S. President William Howard Taft in a top hat and overcoat as he leaves Armour Institute of Technology after addressing the student body

Booker T. Washington

Twentieth-Century Celebrities Come to Campus

Frank Wakeley Gunsaulus (1856–1921), the Chicago minister whose “million-dollar sermon” resulted in the establishment of Armour Institute of Technology, a predecessor to Illinois Institute of Technology, was described as being a skilled orator and influential leader. A charismatic figure, he formed relationships with people in government, industry, and business from around the world.

As Armour Institute’s first president, Gunsaulus thought it important for students to have a strong campus social life; as such, he arranged for newsmakers of the day to deliver impromptu morning assemblies in the auditorium of Armour Mission. As noted in the book *The Heritage of Illinois Institute of Technology* (1975) by Irene Macauley, among the headlining guests were Harvard University President Charles W. Eliot, Grover Cleveland (United States president from 1885–89 and 1893–97), William Jennings Bryan, Jane Addams, and then-President William Howard Taft, who came to campus on March 9, 1912, to help celebrate Armour Institute’s 20th anniversary.

Another illustrious student assembly speaker was educator, author, and presidential adviser Booker T. Washington, who reportedly visited campus three times, in 1895, 1903, and 1907. In his 1907 campus presentation, Washington asked students to lend their support to solving what he described as being “the Negro problem.” That term was also the title of a 1903 book of essays on race relations from notable Black Americans, which Washington edited.

“The problem does not concern the Black man alone,” he said. “As we rise, you rise. As we fall, you fall. You can’t harm us without harming yourself, and the deeper you reach down to lift up another, the stronger you will be for it.” —**Marcia Faye**



Illinois Institute of Technology would like to thank its alumni, faculty, staff, and students for their inspiration, resilience, and courage throughout 2020, a year unlike any other.

Images: Olivia Dimmer and David Ettinger Design: Marty Schalm

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Office of Marketing and Communication
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Chicago, IL 60616-3717

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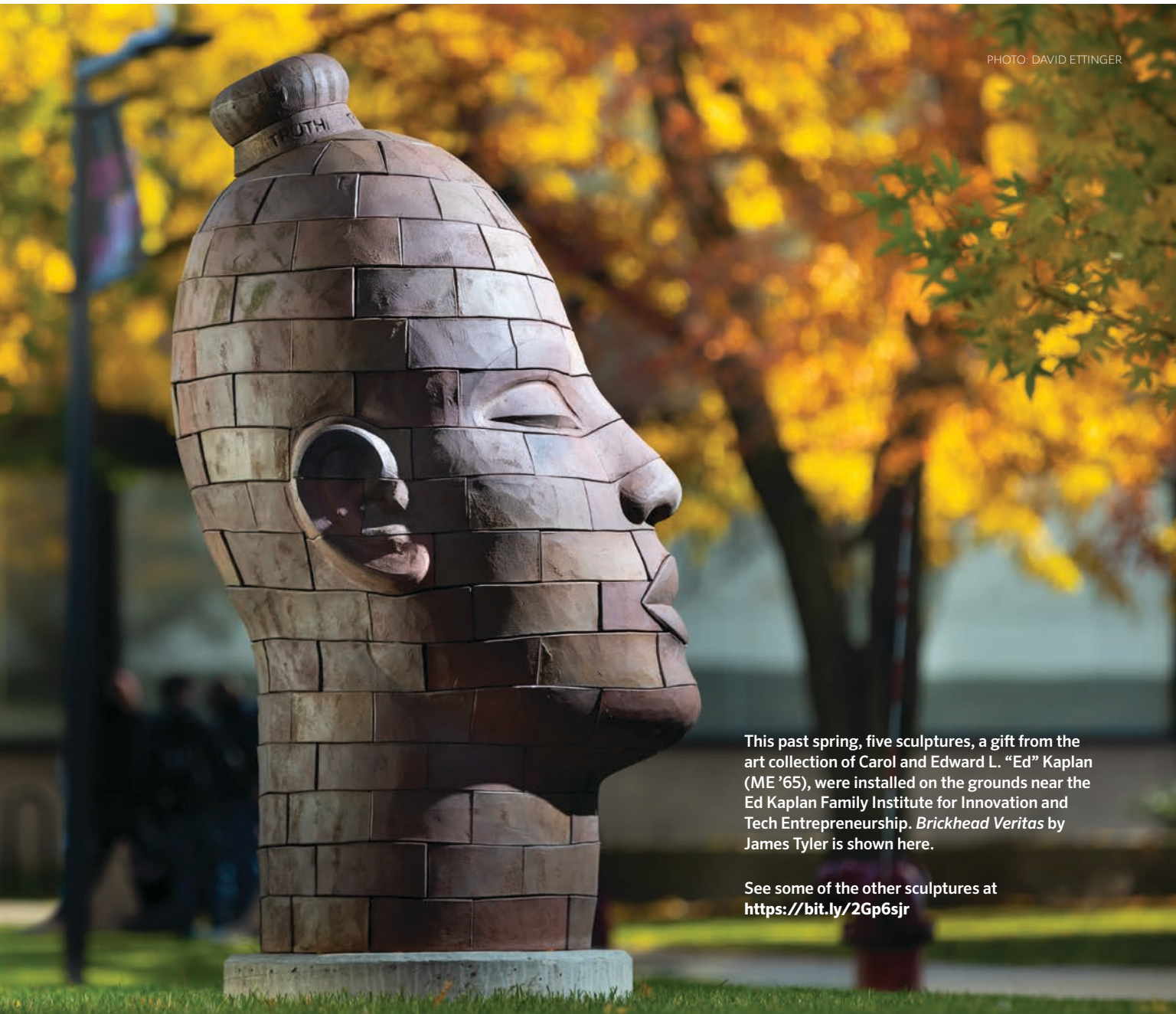


PHOTO: DAVID ETINGER

This past spring, five sculptures, a gift from the art collection of Carol and Edward L. “Ed” Kaplan (ME ’65), were installed on the grounds near the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship. *Brickhead Veritas* by James Tyler is shown here.

See some of the other sculptures at
<https://bit.ly/2Gp6sjr>