

A Mother's Drive

Swapna Sasidharan (M.A.S. ITM '10) refused to give in when her son was diagnosed with a rare genetic disease. She's trying to fund what drug companies won't.

Labor's Loudest Voice
Board Game Breakout
A Teacher's Presidential Plaudit



FROM THE
PRESIDENT

A Letter from Raj Echambadi

AS THE WORLDS OF RESEARCH AND technology change at an ever more rapid pace, some may only wonder what the future will bring.

But those of us who are part of the Illinois Tech community are able to look at the accomplishments of not only our talented learners, faculty, and staff, but also our growing number of alumni, and conclude that the future does indeed look bright.

A continued growth in research, alongside our commitment to expanding technology and innovation for all, directly fuels new highly qualified STEM-educated graduates—critical for national competitiveness—and ensures that Illinois Tech remains a vital source of the skilled workforce required to drive growth and prosperity. Indeed, Illinois Tech experienced a nearly 30 percent increase in overall student enrollment over the last three years.

Just as important, we remain steadfastly committed to upholding our

founding mission set forth in 1890: to act as an opportunity engine for all, and to advance science, technology, and human understanding in service of the common good.

This issue of *Illinois Tech Magazine* includes multiple alumni who exemplify our founding mission: graduates who came from humble or modest backgrounds who have gone on to achieve inspiring results.

Swapna Sasidharan (M.A.S. ITM '10) discovered that her young son had a rare genetic disorder, so she created a foundation to try to find a cure. Araceli Garza (ARCH '98) found a way to not just offer her clients architectural plans for their projects, but to offer the whole project package, from community outreach to financial planning. Bob Reiter (LAW '03), as the longtime president of the Chicago Federation of Labor, is arguably one of the most powerful labor voices in a city and state that has long served as cornerstones of

the movement. Anita Debarlaben (CS '90) recently received the Presidential Award for Excellence in Mathematics and Science Teaching from the United States government after discovering teaching as a second career. And Evan Duda (Game and Interactive Media Design '21) turned the board game that was his Illinois Tech capstone project into a published product and secured hundreds of thousands of dollars in funding from strangers to do it.

These achievements inspire profound optimism about Illinois Tech's future and for the future of our graduates, who continue to impress us with their ingenuity and ability to lead in their fields. I look forward to reading more inspiring stories of success, and thank you for your continued engagement with the Illinois Tech community.

Sincerely,
Raj Echambadi
President

Vice President for Enrollment Management and Student Affairs
Mallik Sundharam

Associate Vice President for Marketing and Communications
Chelsea Kalberloh Jackson

Content Director
Andrew Wyder

Managing Editor
Tad Vezner

Editorial Contributors
Lauren Brennan
Scott Lewis
Tom Linder
Casey Moffitt

Art Direction and Design
Scott Benbrook

Photography
Vincent Alban
Jamie Ceaser
Tim Klein

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or email illinoistechmagazine@iit.edu
Send alumni news to alumni@illinoistech.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 22 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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resources, contact the Illinois Tech Center for Disability Resources
at disabilities@iit.edu.



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Bob Reiter (LAW '03) travels between three state capitals as one of the most listened to voices in the Midwest labor movement. His drive to help workers came to him early as the child of a union steward and a midnight shift nurse.

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Anita Debarlaben (CS '90) quit her lucrative job as a software engineer to take up teaching. She did well enough to get the attention of President Joe Biden's administration, which presented her with the Presidential Award for Excellence in Mathematics and Science Teaching.

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Araceli Garza (ARCH '98) didn't just want to be an architect. She wanted to tackle building projects from start to finish—helping nonprofits with planning and financing, as well as the build itself.

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When **Evan Duda** (Game and Interactive Media Design '21) sat down with a family acquaintance for a friendly session of a board game that he created, he didn't realize it would lead to that game getting published.



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LEADERSHIP

Changing of the Guard

Four of Illinois Tech's colleges will have new deans to begin the 2025–26 academic year.



Louis N. Cattafesta III will serve as the new dean of Armour College of Engineering, beginning at the start of the 2025–26 academic year. Cattafesta currently serves as the inaugural John G. and Jane E. Olin Endowed Department Chair in Mechanical, Materials, and Aerospace Engineering at Illinois Tech.



Rich Klein was appointed as the new dean of Stuart School of Business and took on his new role on January 1, 2025. Klein joined Illinois Tech from the University of Nebraska at Omaha, where he most recently served as vice chancellor of institutional effectiveness and student success.



Nicole L. Beebe has been selected as the new dean of the College of Computing. She will take over July 1, 2025. Beebe joins Illinois Tech from the University of Texas at San Antonio, where she serves as assistant vice president in the Office of Research, the Melvin Lachman Endowed Chair, and professor of information systems and cybersecurity.



Jason J. Czarnezki will take over as the new dean of Chicago-Kent College of Law on June 1, 2025. Czarnezki comes from Pace University's Elisabeth Haub School of Law, where he serves as associate dean of environmental law programs and strategic initiatives, the Gilbert and Sarah Kerlin Distinguished Professor of Environmental Law, and faculty director of the Sustainable Business Law Hub.

Learn more about all four of the new deans at iit.edu/university-news.

HONORS

Presidential Acclaim

Illinois Tech alumnus, former professor, and university Life Trustee **Marty Cooper** (EE '50, M.S. '57)—a pioneering visionary in the field of mobile communications who's considered the "Father of the Cell Phone"—was awarded the prestigious National Medal of Technology and Innovation in a ceremony held at the White House in January 2025.

The award is the nation's highest honor for technological achievement and recognizes leaders who have made lasting contributions to America's competitiveness, standard of living, and quality of life through innovation.

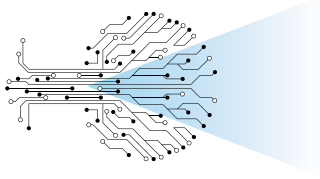
Cooper developed an early version of the mobile handheld cellphone while working as a senior engineer at Motorola in the 1960s, responding to a Chicago police superintendent's request for a device that would help keep officers connected. By the early 1970s, Cooper and his team developed not only the first handheld phone, but also a system to support it.

Ballooning Innovation

While Chicago grappled with sub-zero temperatures in mid-February, 13 students from the Master of Tall Buildings and Vertical Urbanism program at Illinois Tech's College of Architecture spent 280 hours creating a colorful ice tower out of balloons filled with food coloring and frozen water, attracting much local attention.



“Headliners



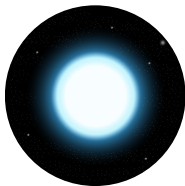
“The question we’re asking is how can an artificial interface be used to provide useful sensory information for someone who has blindness?...We do have the interface and we are now answering the questions.”

—Robert A. Pritzker Endowed Chair in Engineering **Philip R. Troyk** on the NOVA series “Building Stuff” discussing how brain implants are stimulating vision for the blind



“Whenever you see a lot of allegations that say ‘upon information and belief,’ you call BS, because that means we can’t put anybody under oath, get them in front of a judge, and support that statement.”

—Chicago-Kent College of Law Professor Emeritus **Douglas Godfrey** responding to a report of an Illinois sheriff saying that Illinois laws and sanctuary status hinders immigration law enforcement on ABC 7



“This is one of the only triple systems where we can tell a story this detailed about how it evolved. Triples are emerging as potentially very important to creating interesting, explosive end products.”

—Assistant Professor of Physics **Emily Leiner** on *The Debrief* explaining how NASA’s discovery of an unusual “Blue Lurker” star during the collapse of a triple-star system sheds light on the evolution of those systems

HONORS

Kosovo Cred

The Republic of Kosovo awarded its Presidential Medal of Merits to Chicago-Kent College of Law for its “contribution and dedication to academic growth in Kosovo.”

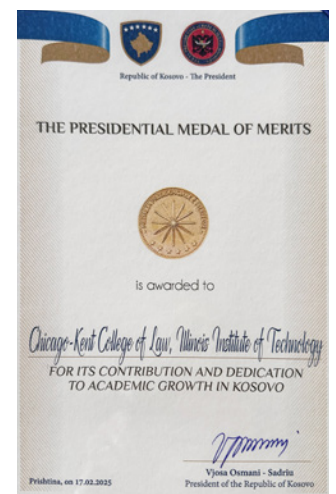
Kosovo President Vjosa Osmani Sadriu presented the medal to Chicago-Kent Dean Anita K. Krug at a ceremony in Prishtina, Kosovo, on February 18, 2025.

Before Kosovo earned its independence, former Chicago-Kent Dean Henry H. Perritt Jr. launched Operation Kosovo, a nation-building initiative to help the new government find its footing, in 1997. As part of the initiative, Chicago-Kent students traveled to the country to help with economic development projects and war crime tribunals, among other things.

Kosovo gained its freedom in 1999, and over the next 12–13 years, Perritt visited the country twice a year, always bringing a handful of students with him. Even after Operation Kosovo ended, Chicago-Kent continued a scholarship program for Kosovo students to pursue their LL.M. degrees. —*Kayla Molander*



Chicago-Kent Dean Anita K. Krug accepts medal from Kosovo President Vjosa Osmani Sadriu in Prishtina, Kosovo, on February 18, 2025.



Presidential Medal of Merits



Flying High

When Olivia Jameson (ARCH 3rd Year) broke Illinois Tech's outdoor women's track and field high jump record during her first year in 2023 with a personal-best jump of 1.68 meters, her coaches had high hopes for her.

And they were just as excited when she broke the indoor record again earlier this year.

During a Northern Athletics Collegiate Conference meet on February 7, 2025, at Illinois Wesleyan University's Shirk Center in Bloomington, Illinois, Jameson jumped 1.72 meters—breaking her previous NACC women's indoor record and leading to her being named the NACC's student athlete of the week.

"The meet was the first time we solidly recorded [that height]. I wanted to keep jumping, so I was trying to not freak out too much. I didn't want to jinx it. I was having a really good run that day, I wanted to push it as far as I could," Jameson says of the record-breaking jump.

The jump also qualified Jameson for the NCAA Division III Indoor Championships at the Golisano Training Center in Rochester, New York, in March. There, she cleared a jump of 1.65 meters and placed 10th overall in a field of 20 competitors, the highest placement by any Scarlet Hawk in the Division III era. She earned the second team All-American honors from the United

States Track and Field and Cross Country Coaches Association for the accomplishment.

"I am very proud of Olivia and all of her hard work to get to this point. As an architecture student and athlete, she has to consistently balance the needs of the two, and she embodies all that NCAA Division III represents: dedication, perseverance, and a true passion for both academics and athletics," says head Illinois Tech women's track and field coach Tyler McQuality.

Jameson started competing in high jump as an eighth grader in Cloquet, Minnesota, joining the track and field team so that she could hang out with her soccer league teammates. At 5 feet, 8 inches, she was one of the taller girls on her team, and broke her high school's high jump record with a jump of 5 foot, 6 inches.

During her career at Illinois Tech, Jameson has won the high jump at both 2023 and 2024 NACC indoor and outdoor track and field championships and has qualified for the Division III Track and Field Championships three times. She tied for 10th place at the 2024 indoor championship.

Jameson is pursuing a degree in architecture, she says, because she sees it as "a good middle ground between full-blown engineering versus something really creative."

—*Tad Vezner*



COMPUTING

Getting a Handle on Data

Illinois Tech researchers have received a \$4 million National Science Foundation grant to explore a new vision in managing the increasing complexity and scale of data in modern scientific pursuits.

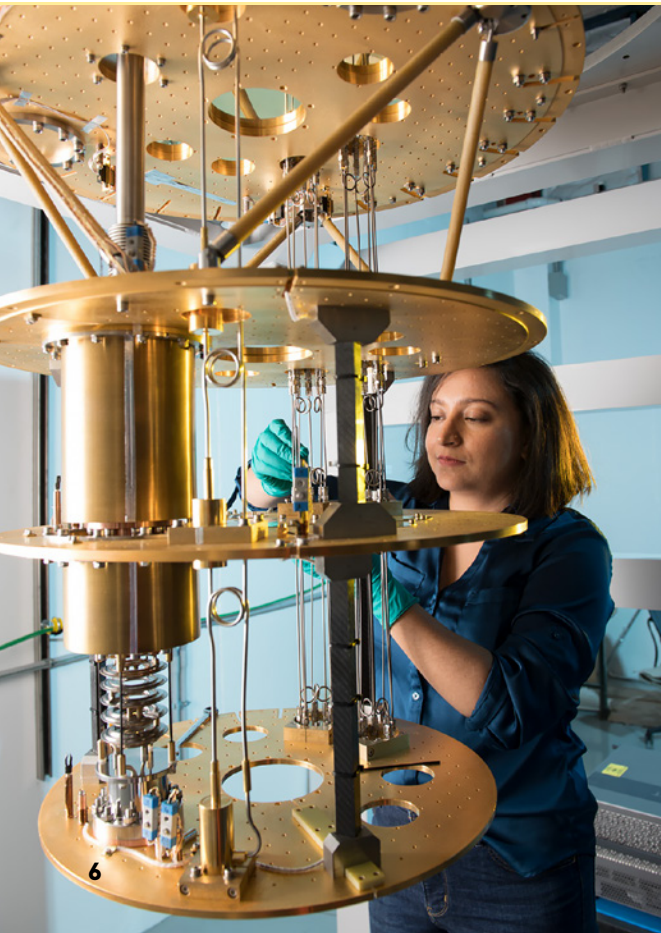
Ron Hochsprung Endowed Chair of Computer Science **Xian-He Sun** and **Antonios Kougkas**, assistant research professor of computer science, are pursuing IO Warp, which aims to reduce the amount of data that needs to be transferred through optimization techniques and data transformation. It will also provide a unified platform that can handle a wide range of data sources and formats, simplifying data management for scientists.

“When I think about how IO Warp could accelerate breakthrough discoveries in fields ranging from atmospheric science to biomedical research by streamlining how researchers work with complex datasets, it’s hard not to be enthusiastic about the impact this could have on scientific progress as a whole,” Kougkas says.

—Casey Moffitt



Xian-He Sun



PHYSICS

On Qubits and Quantum Quandaries

In the field of physics, scientists have long been puzzled by dark matter. Though it is five times more abundant throughout our universe than the ordinary matter that makes up all that we can see, dark matter rarely interacts with ordinary matter, making its detection a challenge.

Thanks to a three-year, \$750,000 grant from the United States Department of Energy, Illinois Tech Assistant Professor of Physics **Rakshya Khatiwada** is working to build a highly sensitive dark matter detector utilizing the unique properties of crystalline sapphire. More specifically, Khatiwada will utilize a sapphire crystal that is part of a qubit (quantum bit, the building block of quantum computers) to sense the tiny lattice vibrations when a dark matter particle interacts with the qubit.

Khatiwada’s new detector may also have broader implications for quantum computing.

“Quantum computers have the same architecture as the particle detector that I’m trying to build,” says Khatiwada.

—Tom Linder

Rakshya Khatiwada works on a qubit-based quantum sensor experiment, which will be developed into a future generation of a dark matter detector.
Photo: Reidar Hahn, Fermilab



The Solitary Search *for a Cure*

By Tad Vezner

PHOTOS BY VINCENT ALBAN



Swapna Sasidharan (M.A.S. ITM '10) sits in her home office in the Chicago suburb of Schaumburg, Illinois.

When her son was a toddler, **Swapna Sasidharan** (M.A.S. ITM '10) grew increasingly concerned with his development. He did not crawl until he was three and a half years old, and was delayed in many other aspects.

“We have tested every single organ in his body—from his brain to his stomach to his liver to his heart—to see if we could get a diagnosis,” Sasidharan says. “And we did not find anything.”

Sasidharan’s journey of self-education in health care, genetics, and drug development became extensive as she devoted all her free hours—those not spent during her day job as a senior director in information technology program management—toward solving the mystery of what might be wrong with her child.

“She knows everything in the field. She knows things that aren’t even published yet,” says Dr. Elizabeth Berry-Kravis, a doctor and professor of pediatrics and neurological sciences who is also the director of the RUSH Pediatric Neurosciences F.A.S.T. Center for Translational Research at Rush University Medical Center in Chicago.

Berry-Kravis became the pediatric neurologist for Sasidharan’s now nine-year-old son, Ved Nambiar, in early 2024 after Sasidharan began focusing on gene therapy—and finally getting some answers.

As Nambiar grew older, his symptoms persisted: He requires daily care for his bodily functions, does not speak, and sometimes has bouts of vomiting. But Sasidharan says he recognizes her, smiles, and is able to indicate some needs, such as when he’s hungry.

She started testing Nambiar’s genes to see if he had any mutations, and an RNA sequencing test at last turned up the answer: Her son has an extremely rare genetic disorder called POGZ Syndrome, or White-Sutton Syndrome, caused by a mutation in a specific gene called POGZ.

But her euphoria of discovery was muted: Only a few hundred people in the world had been documented with the disease, for which there was no known treatment.

And with so few prospective patients, it wasn’t likely that there would be a treatment, at least one created by the mainstream medical community.

“There’s no pharmaceutical company that would ever take it up,” Berry-Kravis says, “because there’s only 500 other patients in the world, so they can’t get money for it.”

A cure, Sasidharan soon found out from the multiple support forums she joined, would have to come from families and private benefactors. Those same forums were filled with the parents of other children with rare, unfunded genetic disorders, often tied to specific genes such as ZTTK, KCNT1, KCNH1, and SLC6A1.

There are 23,000 genes and about 10,000 known rare diseases. “But less than 5 percent have a [United States Food and Drug Administration-approved] treatment,” Sasidharan says. “If you have a rare disease, you’re kind of trapped. Nobody’s going to do anything for you; you have to run your battle.”

Sasidharan has been running her battle for three years now—and has achieved some success. In 2024 she founded the Cure POGZ Disorders Foundation and built a board of scientific and medical professionals, including a Cornell University researcher who is studying the POGZ gene.

“If you have a rare disease, you’re kind of trapped. Nobody’s going to do anything for you; you have to run your battle.”—Swapna Sasidharan

Perhaps most importantly, she was able to secure funding from the Jackson Laboratory through its precision genetics grant to build a “mouse model,” which means breeding a mouse with the POGZ gene for genetic testing.

It’s the first step in a multi-million-dollar process that other families have taken to try to produce a rare-disease treatment.

“The speed she’s set all this up is very fast; she’s very tenacious,” says Berry-Kravis, who knows other families of rare disease patients who are also pursuing treatments. “There’s a group [of families] that are the real pushers and movers, where it has a chance of it actually happening. And she’s definitely in that group. I think we’re entering a whole new age for this kind of thing, and there’s no real precedent for it. There’s no way for them to fix their kid without doing it on their own. They learn everything about it; it’s really pretty amazing actually.”

For now the hard part is the fundraising, for which Sasidharan has netted \$50,000 so far. But she says she is now focused on that in earnest.

“We [families] strongly believe that if you invest in rare diseases, that can be applied to more common conditions. It could have groundbreaking potential to improve Alzheimer’s, autism,”

Sasidharan says, pointing out that the POGZ gene is one of the top 10 genes for autism risk. “In solving this, we may also be solving for a portion of autism.”

The efficiency with which Sasidharan created her foundation might not come as a surprise to those familiar with her professional career, which started out in software engineering but soon branched into program management as both a consultant and full-time team lead.

Born and raised in the southern India district of Kozhikode, Sasidharan received a software engineering degree from India’s LBS College of Engineering and went onto work in Technopark Trivandrum, a technology district that serves as south India’s Silicon Valley. After working for four years as a software engineer for Tata Elxsi, she got married and moved to the Chicago area.

Wanting to get into IT project management, she received her Illinois Tech degree and secured a job as an IT project manager for R. R. Donnelley, where she worked for years before starting work as a consultant for several companies. She is now vice president of the enterprise program management office at APCO Holdings, an automotive finance and insurance product provider.

But her second job, as soon as she returns home to her son, remains her primary passion.

“I believe this will be the future of health care,” Sasidharan says. “Who’s driving every step of this process? Patients are. For rare conditions, you have to create your own pathway. All the problems in developing the drug, it’s the patient’s problem.

“It’s all on us.”●

The Costly Path to a Potential Treatment

Diseases or conditions that don’t have a large patient pool rarely attract the attention and funding of pharmaceutical companies—leaving families to fund such efforts on their own. Here is the path that patients and their benefactors typically must traverse to develop a drug, as well as typical estimated costs:



Genetically breed a mouse with the condition or disease
(conventional novel mouse modeling)

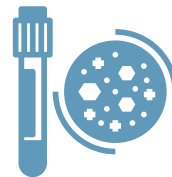
\$10,000 up to \$50,000



“Proof of concept” study on the mouse
Approximately \$600,000



Preclinical study
\$1 million



Toxicology studies and filing with the United States Food and Drug Administration
\$1.5 million



Manufacturing a dose of the drug and conducting clinical trials on humans
\$2 million

Hard Labor



By Tad Vezner

PHOTOS BY VINCENT ALBAN

“Labor law impacts people every day. The majority of people in this country are workers in one way, shape, or form.”—Bob Reiter

When he was growing up, **Bob Reiter** (LAW '03) got some early exposure to unions—and the need for them.

His father was a heavy equipment operator who dug sewer lines and worked on deep tunnel projects, while his mother pulled numerous midnight shifts as an emergency room nurse.

“If my dad wasn’t a union member, I wouldn’t have had that support to go to college,” Reiter says. “As a person exposed to a variety of different work environments, I became passionate about pursuing a job working in labor to help people like my dad and my mom.”

Now Reiter is arguably one of the most powerful and ubiquitous voices for labor in a city and state that has long served as cornerstones of the movement.

As the longtime president of the Chicago Federation of Labor—the third-largest central labor council in the country, representing 300 unions and roughly half a million working people—Reiter has successfully fought for labor legislation across the Midwest. In his time that is not spent advocating for public policy and working to elect labor-friendly candidates, he serves on numerous boards representing labor issues.

Reiter attributes his passion for labor law to the way he was raised.

He learned the trade early, with his father being an active steward in the International Union of Operating Engineers Local 150. After graduating from law school and spending a couple years working at labor firms in the Chicago area, Reiter received a call from a not-so-old Chicago-Kent College of Law classmate who asked him to come work for his dad’s outfit. Local 150’s labor management cooperation committee, otherwise known as the Indiana/Illinois/Iowa Foundation for Fair Contracting, needed help with legislation not only in Springfield, Illinois, but in Des Moines, Iowa, and Indianapolis as well.

Being a labor attorney turned out to require a lot of labor.

“Bob and I would literally leave at 3 a.m. for a 9 a.m. meeting [in Des Moines] and drive back in the evening. And sometimes we’d do it the next day,” says that classmate, Marc Poulos (LAW '04), who is the executive director of the Indiana-Illinois-Iowa Foundation for Fair Contracting.

While in the car, the two would spend their travel time crafting legislation that could be introduced in other states as well.

Poulos was able to witness firsthand why Reiter was so effective at connecting with people, not only across the political spectrum but from all walks of life.

“People say to Bob, ‘Boy, you don’t sound like a lawyer.’ That’s not to say he isn’t as smart as a lawyer—he’s a genuine

guy who’s able to talk to working-class people in working-class-people terms,” Poulos says.

Reiter later worked as a field attorney and organizer for Local 150, before being elected by the Chicago Federation of Labor as its secretary-treasurer in 2008.

The work intensified, and Reiter knew he’d found a home.

In 2018 he became president of the organization, and he says over the years he has seen the impact of his work on people like his parents.

Reiter’s proudest accomplishments include his efforts to help pass the 2016 Earned Sick Leave Ordinance (later updated in 2023 to the Chicago Paid Leave and Paid Sick and Safe Leave Ordinance), which guaranteed paid leave and sick time for most Chicago workers; the 2019 Chicago Fair Workweek Ordinance, which requires many employers to provide advance notice of work schedules; and the 2022 Illinois Worker’s Rights Amendment, which offered numerous labor protections.

“The biggest things are passing ordinances and laws that protect/give workers the ability to take time off and get sick leave, the ability to have predictable scheduling so they have balance in their personal lives,” Reiter says. “My dad had the benefit of a union contract, but not everybody in my family had that benefit. And in my high school days I worked in fast food alongside people much older than me that had families and didn’t have any type of leave benefits.”

In his “downtime,” Reiter represents labor on a number of significant boards, including the Cook County Health and Hospital System, where he serves as finance chair; Choose Chicago, the region’s primary tourism and marketing agency; and nonprofits including United Way and the Chicago Cook Workforce Partnership.

“Labor law impacts people every day. The majority of people in this country are workers in one way, shape, or form,” Reiter says. “Our network of labor laws and the institutions that support them are critically important to civilization and maintaining civil society, where workers get a shot at the American dream.” ●



Bob Reiter (LAW '03) sits in front of the Haymarket Memorial—a sculpture that symbolizes the labor groups involved in the Haymarket affair of 1889—located in Chicago’s Fulton River District.

The STEM Storyteller

By Tad Vezner

When **Anita Debarlaben** (CS '90) mentioned to her high school guidance counselor that she wanted to be a scientist or engineer, she was told she had zero chance of making it. Students from her inner-city Cleveland high school, she remembers the counselor saying, rarely achieved that type of professional success.

"Well, I'm going to try it anyway," Debarlaben remembers replying.

And so she did. After encouragement from a high school science fair judge, she attained an engineering degree, worked for years in industry as a software engineer, and—later in her career—branched into teaching to encourage others to follow her path.

Succeeding in a third career can be difficult. Yet in January 2025, Debarlaben received the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) from President Joe Biden.

According to the National Science Foundation, the award represents the "top honors bestowed by the U.S. government to K-12 STEM teachers...demonstrating deep content knowledge of the subjects they teach and the ability to motivate and enable student success."

"She really embodies the hashtag #CSForAll," says Steven Svetlik, co-founder and chapter advocacy lead of the Computer Science Teaching Association of Illinois, referencing a common abbreviation for computer science. "She has tremendous raw intelligence and wisdom, combined instinctively, and has a deep knowledge base in the field."

Debarlaben, Svetlik, and others founded CSTA Illinois, which now represents 852 Illinois school districts that exist outside of Chicago, in 2023. They elected Debarlaben to be its first president.

"It really is her ability to help people connect with one another. Most computer science teachers work in a silo. She brought a very caring, empathic [tone of], 'Let's talk to each other about how to make students talk about a subject that's very intimidating,'" says Svetlik, who teaches computer science at Ridgewood High School in Norridge, Illinois.

After high school, Debarlaben became the only African-American woman in her 1985 electrical engineering graduating cohort at Ohio State University. She went on to work at General Electric, where she wrote software for electrical components for submarines and developed enough interest in the computer science portion to study it at Illinois Tech.

"I love developing code. Programming languages, it's like English, it's like any language to me: syntax, learning algorithms. Whereas with electrical engineering, with currents and power, it's magical, it's abstract, you don't see it," Debarlaben says.

Debarlaben has always gravitated toward language and communication—a valuable trait in her field.

"I'm a talker," she says. "That's one of the pluses that I have as an engineer, I can communicate really well and I can document really well. That's how you really excel in STEM areas. We forget to push that in our field, how to express how things work."

After graduating from Illinois Tech, Debarlaben spent seven years as a senior software engineer writing software for Northrop Grumman, specifically for countermeasures for F-15e fighter aircraft.

She gained renown as a troubleshooter who could communicate well with clients, particularly for training fighter pilots on the new software. For one of her first projects, she took an assignment that another engineer had spent nine months on without success.

"We got it done in a month," she says.

But after later taking a job at Lucent Technologies to work on cell phone technology, Debarlaben felt less of a connection to the corporate environment. She felt an ever-increasing urge to teach, to connect with young students.

And so Debarlaben earned a teaching certificate and immediately started her teaching career with alternative schools in the Chicago area.

"It was tough. Several students had discipline issues but were dedicated students and eager to learn," she says, noting that she could relate to a lot of her students' life stories because they reflected her own. Debarlaben sparked notable student enthusiasm by creating a math bingo game to address basic skills deficiencies; she subsequently heard from a parole officer that one of her students had taken his math book to jail just so he could complete the math bingo card.

She later accepted a job at Loyola Academy in Wilmette, Illinois. She taught advanced placement classes as the school's only computer science teacher for five years, before leaving in 2021.

It was there that she became a finalist for and ultimately received the PAEMST award. The most recent announcement of winners were for 2021, 2022, and 2023 honorees (Debarlaben's was for 2021) as the award system was delayed during the COVID-19 pandemic.

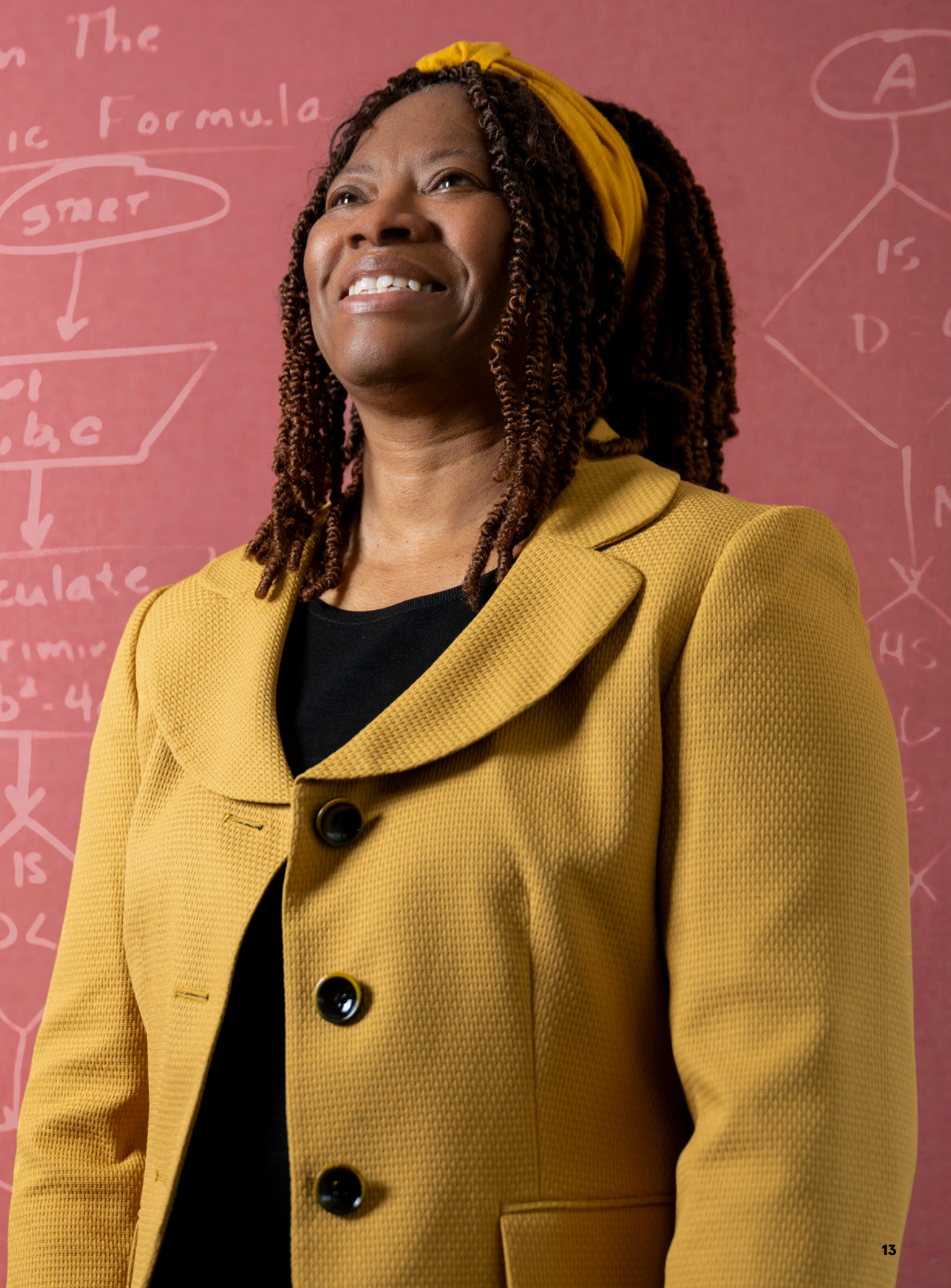
What is her secret to teaching?

"You need to teach them more than just book knowledge. You need to give examples. You have to teach soft skills and not just software skills—be willing to explain things to others. Push how important it is to be able to communicate, how to write," Debarlaben says.

She required students to make videos of themselves describing software and even held training sessions for other teachers and administrators. Debarlaben is now also an adjunct computer science professor at Illinois Tech.

"One of the things my kids loved hearing me say was I was a 'RAPPER' in college. That was my acronym for resources, attitude, perseverance. That's how I got through school. That had to be coupled with a growth mindset. Failure is not the end. You know how many baskets Michael Jordan missed?" Debarlaben says.

Adds Svetlik, "She is a hell of a storyteller. She's one of those people that feels like she is a born teacher, and she brings people together. And it's potent and it's real and it's something that you can see almost immediately when you walk into a room."●



Community Builder

By Tad Vezner



PHOTO BY VINCENT ALBAN

After working for years as an architect, **Araceli Garza** (ARCH '98) found herself wanting more: more involvement in the design process, in the community outreach, even in financing, so that she could better understand how projects get done in the first place.

As the first in her family to go to college and as a rarity in the architecture field—just under two percent of all licensed architects across the country are Latina, according to the National Council of Architectural Registration Boards—she already knew she'd accomplished a lot.

But there was something missing.

"Working in the field as an architect, you never truly get to decide what you get to build. Even the most prominent firms, they're meeting a client need. It became clear to me that the way I wanted to build and what I wanted to do, I needed to understand better the how," Garza says.

So she took another step in her career and attained a master's degree in real estate development, which allowed her to learn how projects are planned, pushed, and paid for. She complimented that with a master's degree in advanced architectural design, both from Columbia University.

"Now I get to really impact the decisions that are made before the architect even comes into the project," Garza says. "The traditional divide between architects and developers often creates friction in the building process, but by understanding both languages, I can bridge that gap, ensuring that creative vision and practical implementation work in harmony rather than opposition."

Garza's firm, Obra Real Estate Services, which she founded in 2020, works with nonprofits and governmental organizations that don't have the in-house expertise to plan and execute projects on their own. She meets with them in the early stages of those projects to help with planning and possible grant financing before tackling the design.

"Organizations with growth plans, those are my largest clients," she says.

When asked about a project she's particularly proud of, Garza notes, "The current one has overcome so many challenges—especially overcoming a pandemic."

That current project is the conversion of a 130-year-old cigar factory in Kentucky into offices and therapy rooms for a local nonprofit mental health service provider. Making a cigar factory healthy held a particular appeal—and saving a historic building that most people wouldn't bother converting "makes me incredibly proud," she says. "I launched Obra so I could pursue those projects that are significant to me and align with my own values

of helping people and making community impact palpable. To transform an old building into a community beacon that offers mental health services is poetic. The building that has healed now in turn heals a community."

Garza also seeks projects that bring investment and development to areas inhabited by communities of color, such as the Little Village neighborhood of Chicago that she grew up in.

"I think there's a lot of disinvestment and a lot of lack of resources in our communities. If there isn't a person that can relate to that experience, I want to be the person that brings in a lot of those resources....I think the only way I can do that is at the helm," Garza says.

In addition to her own firm's work, Garza was appointed last fall to the Illinois Capital Development Board, the body that oversees all buildings owned by the state. Prior to starting her firm, she worked as deputy chief operating officer for the Illinois Department of Central Management Service, overseeing smaller rehabilitation projects throughout the state.

"It was very obvious from day one she was a renaissance woman," says Patricia Saldaña Natke, who as a principal and founding partner of Chicago's UrbanWorks hired Garza fresh out of college to train as an architect. "She's a talented designer, but now she's focused on the economics of the project and positively revitalizing these communities."

Saldaña Natke remembers serving as a sounding board for Garza's decision to pursue a real estate degree.

"In order to move the needle forward in underserved communities, it's equally as powerful to be on the real estate side and make the projects happen," says Saldaña Natke. "It's extremely rare to find someone who can understand the architecture from macro to micro. And one of my favorite things about her is she's very persistent—perseverance with a positive spirit."

Born and initially raised in Chicago's Little Village, Garza moved to Mexico to live with her grandparents at the age of nine and returned to the Windy City after high school to pursue college. She attained a full-ride scholarship at Wright College, one of the City Colleges of Chicago, before transferring to Illinois Tech.

"I knew I wanted to build. That was very clear to me from a very young age," she says. "I loved coloring books, crayons, and blank sheets of paper; those were my most prized possessions. I drew a lot of houses when I was a kid. I imagined the families that would live in them and the memories they created."

Her desire to do more kicked in after working at UrbanWorks and, later, at a boutique high-end residential firm.

"A lot of the decisions of what gets made in our cities is not reflective of who is living there," Garza says. "Now I am that bridge that understands that we don't build in a vacuum. We build to serve communities."

Regarding communities of color in particular, she adds, "they are geographically shifting, and I want to be a part in the shaping of them. Architecture and development, when applied with cultural awareness and community engagement, can be powerful tools for social equity." ●

“
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I am that bridge that
understands that we
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We build to serve
communities.”

—Araceli Garza

Keeping To The Creative Path

By Tad Vezner

Right after graduating from Illinois Tech, **Evan Duda** (Game and Interactive Media Design '21) met up with a friend of his brother's from church—someone he'd heard was "crazy about board games."

Duda knew the type: He was just as geeked about board games, and had spent countless hours designing, crafting, and tweaking his own, called *The Waste of Parts*. Sure, he wasn't an artist and his pieces were just basic cardstock with hand-written text. But the game was solid—the math, the interactive dynamics, the numerous other variables had all been play-tested. Much of the testing was done by Duda himself, sequestered in his room during the COVID-19 pandemic—but also with friends and at local gaming conventions once the world started to open back up. The game had even been his capstone project at Illinois Tech.

He played the game one night with his brother's friend. They talked for two hours afterward. At some point in that conversation, it became clear that the friend, Eric Bittermann, was the owner and founder of a small but well-regarded board game publishing company, Sky Kingdom Games, located in the Chicago area.

"I didn't know he had a publishing company," Duda laughs. "I just knew he was a guy who was crazy about board games."

"I brought the game over to our team. We do play-testing for different game designs, but mostly they come internally. We don't typically take outside designs and publish them. So this was a unique situation," says Bittermann. "But the game was a hit pretty much from the get-go. You can tell he took a lot of time to iron out the math to balance it out."

After several more months of internal testing and blind play-testing, Bittermann offered Duda a contract for his game. Duda made a counteroffer to intern with the company in exchange for a higher percentage of the game's revenues. Bittermann accepted.

Still, the question remained: How well would the game be received?

With the details ironed out, they launched an online fundraising campaign through an online Kickstarter-esque platform called Gamefound.

PHOTO BY TIM KLEIN



“Kickstarting board games, specifically for new titles, that’s how it’s done for a majority of these titles,” Duda says. “You’re raising the immediate funds for the production, but also it really informs you whether there’s an audience.”

Bittermann says he wasn’t quite sure what to expect.

“We had some data from our community, a certain number of followers. But it’s a brand-new IP, completely different from what we’d done before, so we didn’t have a lot of variables to go off of,” he says. “It’s a really unique theme.”

He was a bit relieved when the campaign netted about \$200,000 from roughly 1,500 backers, with additional money expected by the time the game launches later in 2025.

“Anything more than \$150,000 would be a pretty sizable success,” Bittermann says.

Still, Duda’s game is a bit of a departure for the company in other ways. Sky Kingdom typically publishes fantasy board games, where players cooperate on an epic adventure that can take many nights to complete.

The Waste of Parts isn’t that.

In Duda’s game, players take on the role of the crew members of a ramshackle mechanical ship walking across an irradiated, post-apocalyptic wasteland, searching for sanctuary. Once residents of a dying village, the crew members had little time to ready the ship before their dire situation became clear: the voyage was now or never.

The game board displays the various compartments of the ship, which is soon assailed by monsters that the crew scrambles to repel. As they do, the ship picks up salvage from the wrecks of travelers that weren’t as lucky, and players upgrade their crew members as well as the ship’s components, replacing them with new board pieces.

The game’s voyage—for better or worse—typically takes about two hours to complete.

“I’ve always loved that kind of storytelling in a board game. It’s unique in a genre that can’t be replicated in a movie. Crafting your story in a low-stakes environment, just creating a story with people you love and enjoy time with,” Duda says.

But regardless of the story, Duda says most of his mental power went toward the game’s mechanics.

“Especially for my first game, I wanted a gameplay loop that’s repeatable and fun and you could play over and over again, and no game would be the same twice,” Duda says. “I was shooting for a 60 percent success rate, influenced by player knowledge and how they choose. You’re always in a balancing act of trying not to be overwhelmed by enemies.”

“The strength was it played fast,” Bittermann agrees. “The tension of the game rises as the game goes on. You’re trying to figure out how to survive, there’s too many enemies; there’s a lot of co-op action.”

Duda says the countless hours he put into the game became worth it months before even meeting Bittermann—when he played it with his own friend group of lifelong board gamers.

“It was one of the best nights of my life,” Duda says. “They loved it so much. They played it twice, and I said, ‘OK, there’s something here.’...That was my drive to work on it for something more than a college grade.” ●



THE WASTE OF PARTS AN EXPLAINER

Evan Duda’s game, *The Waste of Parts*, is a post-apocalyptic cooperative strategy game for one to five players. The players control the crew of a giant, ramshackle machine attempting to make its way across a nightmarish wasteland. Each crew member has asymmetric abilities, and all must work together to defend their walking “mech” from enemies as they journey toward the mythical sanctuary. The crew members use their abilities and various actions to defend the ship each round, while also moving between rooms and repairing damage. At the end of each round, new enemies are spawned, the ship moves closer to its goal, and players have the opportunity to draw new cards to equip themselves or upgrade their mech through its salvaging crane. Enemies grow more powerful and numerous as the game goes on, leading to a race for the finish that’s different each time you play.

Class Notes

1960s

ROGER M. COOPER (M.S. MATH '63, PH.D. '69), Menlo Park, Calif., was included in the 2025 edition of *Marquis Who's Who* for his research in cognitive psychology. *Marquis Who's Who* biographical volumes highlight individuals who are selected on the basis of their current reference value.

LEWIS THIGPEN (M.S. ME '67, PH.D. '70), Alexandria, Va., published a second book, titled *Mechanical Engineering at Howard University 1911–2023*, which chronicles the history of mechanical engineering at Howard University across more than a century.

1970s

KENNETH ETTEN (ARCH '71), Lake Geneva, Wis., officially retired after 50 years as a licensed architect and closed his practice, McCormack Etten Architects LLC. He looks forward to serving on local commissions and rotary clubs, as well as spending more time with his grandchildren.

GORDON RAMSEY (M.S. PHYS '72, PH.D. '82), Frankfort, Ill., published *The Physics of Music: Integrating the Technical and Artistic Aspects of Creating Music* with Springer Nature as part of its Undergraduate Lecture Notes in Physics series. Ramsey is an emeritus professor of physics at Loyola University Chicago.

GEORGES BENJAMIN (BIOL '73), Gaithersburg, Md., was interviewed on *The Ongoing Transformation* podcast to discuss racial and ethnic health care inequities in the United States, in addition to the recommendations of a recent National Academies report.

Benjamin is the executive director of the American Public Health Association.

1980s

NICK CRAY (ME '80, M.A.S. '88), Mequon, Wis., was elected as a board member to Habitat for Humanity Ozaukee County. Cray is also a volunteer business mentor for SCORE SE Wisconsin and adjunct professor at Bryant & Stratton College.

DAVID L. FLEENER (ARCH '80), Chicago, has written and published a book, *Not a Woman Architect: The Life and Work of Brigitte Peterhans*. Peterhans (M.A.S. ARCH '61) is an Illinois Tech alumna who studied with Ludwig Mies van der Rohe, married Illinois Tech faculty member Walter Peterhans, and spent her career divided between Skidmore, Owings and Merrill in Chicago and in Germany.

STEVE RYD (LAW '83), Erie, Colo., closed his Oak Brook, Illinois, law practice and moved to Colorado to be closer to his grandkids. Ryd would like his 1983 classmates to know that he is still married to the amazing woman he proposed to during first semester of their first year of law school.

JOHN LOCALLO (LAW '86, LL.M. '92), Chicago, was awarded the Illinois Bar Foundation's 2024 Distinguished Service to Law & Society Award at its annual Champions Breakfast.

PATRICK MCMANAMON (CHEM '86), Freeland, Wash., retired in October 2024 after 37 years with Proctor & Gamble. He moved with his spouse from Chicago to Washington state in November.

TIM CAVANAGH (LAW '87), Chicago, obtained a \$27 million settlement in a tragic wrongful death trucking case, an \$11.1 million settlement in

a product liability case, and a \$50 million settlement in a railroad Federal Employees' Liability Act case. His firm was also named a 2025 Best Law Firm by *Best Lawyers* and he was named a Best Lawyer.

MARY TUDELA (M.A.S. BA '88), Lihue, Hawaii, published a book, *Walking My Faith: A Journey of Faith, Leadership and Success*. Tudela, an Episcopal priest and former executive at a Fortune 500 company, offers practical examples about how the values of love, forgiveness, grace, and acceptance can help anyone succeed in today's challenging and often stressful business environment.

MARK WALLACE (EE '88), Lake Geneva, Wis., retired from his position as senior vice president of global sales at Keysight Technologies Inc. after more than 35 years with the company.

CATHERINE MCMANAMON (ENGL '89), Freeland, Wash., received her second and third Pegasus Awards for songwriting from the Ohio Valley Folk Festival in October 2024. In November she relocated from Chicago to the Pacific Northwest with her spouse, Patrick, who recently retired after 37 years with Proctor & Gamble.

STEVE YOON (EE '89), Carrollton, Texas, was appointed as senior vice president of global sales at Keysight Technologies. Yoon succeeds Mark Wallace (EE '88).

1990s

ANITA DEBARLABEN (M.S. CS '90), Carol Stream, Ill., was awarded the Presidential Award for Excellence in Mathematics and Science Teaching in January 2025. This is the highest award that K-12 math and science teachers can receive from the United States government.

EILEEN O'NEILL BURKE (LAW '90), Chicago, was elected as the Cook County (Illinois) State's Attorney.

MATT WALSH (LAW '92), Indian Head Park, Ill., was selected by his peers for inclusion in the 2025 edition of *The Best Lawyers in America* for construction law.

JOANNA HORSNAIL (LAW '96), River Forest, Ill., was recognized by Corporate Counsel as Managing Partner of the Year as part of its 2024 Women, Influence, and Power in Law Awards.

ABBIE CLARY (M.ARCH. '97), Oak Park, Ill., delivered a TEDx Talk for TEDxChicago titled "How Our Stories Hold the Power to Transform Healthcare." She reflected on how her father's journey through the health care system inspired her advocacy for empathy, dignity, and storytelling in health care design.

2000s

MELISSA DILLENBECK (LAW '01), La Grange, Ill., was promoted to partner at Faegre Drinker.

KAVIN AMMIGAN (ME '04, M.S. MAE '07, PH.D. '12), Naperville, Ill., received the Presidential Early Career Award for Scientists and Engineers from President Joe Biden on January 14, 2025, after being nominated by the United States Department of Energy.

SUSAN ALTSCHULLER (PH.D. BME '07), Somerville, Mass., was appointed as chief financial officer at Dragonfly Therapeutics.

AMEYA PAWAR (M.P.A. '07), Chicago, was selected for the 2025 Cohort of The Daniel Burnham Fellowship through Leadership Greater Chicago. The fellowship is a strategic partnership

The Innovation Upcycle

GROWING UP, DANE CHRISTIANSON

(ME '15) discovered a pair of passions—inventing and environmentalism—that put him on the path to entrepreneurship.

“I always wanted to be an inventor,” he says. He showed his prowess in that arena by coming up with the idea for the X-Cube, an expanded and more challenging version of the Rubik’s Cube. As an engineering student at Illinois Tech, he perfected the toy’s design and took it to market, selling thousands of them to puzzle fans and appearing, X-Cube in hand, on the nationally televised *Steve Harvey Show*.

Meanwhile, Christianson’s deep interest in the environment motivated him to begin recycling his food scraps. “I’d bring it over to Illinois Tech’s brand-new urban farm and dump it in the compost bins,” he says. “I thought, if I’m willing to take my food scrap to compost it, maybe other people will do the same if we have drop-off spots. That was the seed of the idea for where I am now with Block Bins.”

After graduating, Christianson continued his X-Cube business for a time before turning his attention to developing his idea for a compost recycling service. In 2018 he founded Block Bins in Chicago and launched the service the following year. Residents and businesses buy subscriptions, which provide access to locked compost drop-off bins scattered across the city. Block Bins staff regularly pick up the compost and clean the bins multiple times per month. From a modest



Dane Christianson (ME '15)

beginning serving 100 drop-off points on a shoestring budget, with a subcontractor doing all the pickups, the company served 1,000 drop-off points last year, with the pickups done in-house. In 2024 the company was selected as a finalist for the Chicago Innovation Awards.

There’s a demand for composting from people who want to reduce their carbon footprint and simply can’t stand to see their food scraps go to waste, Christianson says. “We’re also seeing a trend of more commercial clients such as grocery stores and restaurants, which can generate literally tons of food. They want to be able to quantify the amount of waste that their company is diverting from landfills,” he says.

Block Bins partners with a company that uses an anaerobic digester to turn

food scraps into soil amendments and methane that will be captured and pumped into the natural gas grid, Christianson notes.

Still, it can be hard to get people to pay for composting when they can throw food scraps into the garbage instead. Christianson points out that the Block Bins model, with its dedicated stream system to handle just one type of recyclable, increases efficiency and lowers costs by eliminating the need for sorting and minimizing contamination of recyclables, compared to the comingled model commonly used by recyclers.

“It’s a simple idea,” he says, “but a new way to think about how we can collect recycling in an urban environment.”

—Scott Lewis



Garrett L. Clark

accelerator that is designed for executives to urgently impact the region's workforce and economic progress in their roles as change leaders and decision makers.

2010S

KEITH BLACK (PH.D. MSC '10), Hendersonville, Tenn., recently published a book titled *Cryptocurrencies and*

Digital Assets: A Guide to Understanding Technologies, Business Models, Due Diligence, and Valuation.

GARRETT L. CLARK (M.A.S. CE '11), Chicago, developed, scaled up, and launched Starburst Goodies, a reduced-sugar, plant-based gummy candy that will be on shelves across the United States in 2025.

CHRISTOPHER SALGADO

(PS '11), Apopka, Fla., was named as a Top Private Investigator 2024 by *PI Magazine* in November. He was a private investigator for 23 years and owns the All Points Investigations, LLC, which is involved in cyber and open-source intelligence investigations.

EMILY CHASE-SOSNOFF

(LAW '13), Tampa, Fla., joined the nationwide employment law firm Jackson Lewis P.C. as a principal in its Tampa office.

SYLVIA BOKYUNG ST. CLAIR

(LAW '13), Santa Clarita, Calif., was promoted to partner at Faegre Drinker.

JEREMY ABRAMS (LAW

'14), Long Grove, Ill., was promoted to senior director of UX at Prosper Marketplace.

2020S

DAVID L. DURÁN (LAW

'24), Chicago, and **MARISA A. GELABERT (LAW '24)**, Chicago, were promoted to associate attorney positions at Salvi, Schostok & Pritchard. They will represent clients in cases involving personal injury, medical negligence, and wrongful death.

GRACE HEIDORN (LAW '24)

Detroit, joined Bodman PLC as an associate in the firm's Litigation and Alternative Dispute Resolution Practice Group.

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Submissions may be edited for style and brevity.

POWER THE DIFFERENCE

OUR CAMPAIGN FOR ILLINOIS TECH



Smart tax planning can help you leave a lasting legacy while reducing your tax burden.

MAKING A TAX PLAN FOR PLANNED GIVING



SKIP THE CASH

Give appreciated assets such as real estate, stocks, mutual funds, or private business interests to eliminate capital gains tax



DAF GIVING

Create or contribute to a donor advised fund, naming Illinois Tech as a recipient, and receive an immediate tax deduction



BUNCH THOSE CONTRIBUTIONS

Combine two plus years of contributions into one tax year to increase itemized deductions above the standard deduction



DON'T FORGET THE QCD

Donors 70½ or older can gift up to \$108,000 tax-free to Illinois Tech from their IRA each year

To speak with a planned giving advisor, visit iitplannedgiving.org or email us at plannedgiving@iit.edu



2025 ALUMNI AWARDS HONOREES

Alumni Medal

Arlington Carter (EE '61)

Alumni Service Award

Matt Walsh (LAW '92)

International Award of Merit

Anna Ninoyu (ARCH '05)

The John J. Schommer Honor I Award

John Abramic (CHE '97, LAW '01)

Lifetime Achievement Award

Arnold Caplan (CHEM '63)

Outstanding Young Alumnus/Alumna Award

Ayokunle Apampa (CHE '11)

Lauren Hensel (PTC '06, M.P.A. '18)

Junjie Zhu (M.S. ENVE '12, Ph.D. '15)

Professional Achievement Award

Eric Burger (Ph.D. CS '06)

Training AI for Human Needs

APPLICATIONS RUNNING ON artificial intelligence can make unexpected shifts in performance, which can lead to inaccurate results for users and create headaches for their creators.

Mike McCourt (AMAT '07) helped to found the AI enterprise testing platform company Distributional and serves as its chief technical officer. In his role, he applies his mathematical knowledge and skills to optimize these apps and help clients ensure their products are performing in the ways that they want.

"Let's say you've built a GenAI platform, you're happy with it, and you're ready to launch. But how do you know that it is going to do what you want it to do?" McCourt asks, referring to generative AI platforms that provide developers with powerful optimization tools. "You've got to be thinking about how to know the system is working the way that you want it to."

Using mathematical tools and examining key statistical data, Distributional can test whether a client's application is going to produce outputs that users will find helpful. Distributional's other mathematical tools also monitor how the applications perform once they've been launched to ensure that they continue to meet users' needs.

The rise of generative AI has made it easy for people with little computing knowledge to use it and rely on it to get questions answered. McCourt says that the ability for the technology to recognize natural language opens it to many more users.

"Large language models using natural



Mike McCourt (AMAT '07)

language are powered by a lot of math," McCourt says.

And that simple fact has earned him a lot of professional acquaintances.

Having advanced skills and knowledge in mathematical concepts, McCourt has been able to collaborate with specialists in fields such as materials science, health care, team management, and electrical engineering throughout his career.

"I didn't have a background in these fields, but I would read journals and learn about these fields," he says. "I was very lucky to meet and work with ambitious people who may have no background in math, and together we could move the field forward."

Now, he is applying his skills in AI as increases in demand, and increases in performance expectations, force these AI systems to produce more reliable and more accurate results.

But keeping up with the rapid gains in performance and expectations is a challenge, McCourt says.

"Just a decade ago, we couldn't feed a computer an image and ask it for a caption," he says. "Now we can give it a caption and get an image."

The trajectory of the technology shows promises in solving big problems, such as developing new, more resilient antibiotics. But McCourt says he is also excited about the technology's ability to solve small problems that can make everyday life a little easier.

"Imagine an Alexa-type device that can tell when you're upset and starts playing calming music or can tell that you have a headache and automatically dims the lights," he says. "Everyday life can be exciting, too."

—Casey Moffitt



A digital image of Scarlet, Illinois Tech's AI fundraiser that has begun autonomously engaging with prospective donors

Illinois Tech a Frontrunner in AI Fundraising

When it comes to the use of artificial intelligence, Illinois Tech strives to be on the forefront of not only research and instruction, but application as well.

"We teach the growing industry of AI in the classroom," says Susan Lewers, Illinois Tech's associate vice president for major and planned gifts. "We should look for ways to implement these practices for university operations, including advancement."

It comes as little surprise, then, that Illinois Tech is part of an inaugural cohort of 13 organizations across the United States that is utilizing an AI fundraiser to help reach out to prospective donors and alumni.

An autonomous "virtual engagement officer" named Scarlet is the newest member of the university's fundraising team. It has already engaged with a portfolio of nearly 850 prospective donors and closed 71 gifts. Appearing as a computer-generated avatar, Scarlet speaks to donors in a colloquial fashion about Illinois Tech.

The virtual engagement officer is being developed to become the world's most experienced fundraiser. It learns from the fundraising industry's best practices and combines that with information from Illinois Tech's channels of content, including the university's website, LinkedIn account, and marketing communications.

Scarlet uses this knowledge and content to bring donors closer to the mission and impact of Illinois Tech. "This marks the first time in history that the nonprofit sector has used fully autonomous fundraising at scale," says Adam Martel, founder and chief executive officer of Givzey, the creator of the AI software. "Scarlet is designed to engage with the same care and responsiveness expected of traditional fundraisers. Scarlet is not an automated or segmented marketing campaign, but autonomous relationship building that adapts in real time

to make donors feel heard and understood," Martel adds.

Scarlet has sent more than 5,000 personalized, individual communications via text, email, and robotic handwritten notes to donors, and is able to engage with more donors than any one fundraiser could. Given real-world staffing limitations, the reality is that many prospects go unassigned and potentially unengaged by a human fundraiser. Scarlet provides the solution with the ability to personally connect with graduates and build a more robust pipeline.

"Illinois Tech is proud to collaborate with Givzey at the cutting edge of innovation in philanthropy. Innovation and entrepreneurship are essential components to an Illinois Tech education, and this partnership brings those elements to how we communicate with alumni," adds Lewers.

Donors are informed that Scarlet is not a real person, and they have the option to connect with a human team member instead. Scarlet can thank individuals, invite them to events, share relevant news and information about the areas of Illinois Tech that matter most to them, and connect them with opportunities to support the university in ways that are meaningful to them.

"Scarlet's ingenuity is incredibly inspiring as we continue discovering new, exciting ways to connect with alumni," says Bob Hoel (BE '70), chair of the Illinois Tech Alumni Association Board of Directors. "There is a positive correlation to both alumni engagement and student success, which allows us to continue on our mission to inspire the next era of innovation that only Illinois Tech can create."

For more information, please contact Susan Lewers at slewers@illinoistech.edu.



SPRING 2025

Letter from the Alumni Board Chair

Bob Hoel (BE '70)

You've probably heard the saying "birds of a feather flock together," but I believe that as Scarlet Hawks, we *soar* together, showcasing the strength we gain in numbers. With each year that comes and goes, the Illinois Tech Alumni Association grows stronger as new graduates band together with those who have come before them to be the difference makers upon which our world calls.

This academic year has certainly been no exception when it comes to that trajectory, especially with Sean Campbell on board as Illinois Tech's new vice president for advancement. Sean is deeply invested in fostering meaningful alumni experiences and opportunities to provide unparalleled student support. His leadership and expertise help to enhance the connection between alumni, students, and the university and to harness the power of our collective difference.

Since joining us in January 2025, Sean has experienced the spirit of our vibrant network of thinkers, doers, and innovators who strive to inspire and improve. Now is the ideal moment for all alumni to reaffirm their commitment to Illinois Tech's mission and to actively contribute by giving back to the university.

While innovation is the heartbeat of Illinois Tech, volunteers are the backbone that support the ingenuity, creativity, and leadership that is born here. There are many ways for you to get involved and elevate the potential of today's students. Whether you would like to hire or find internships for Scarlet Hawks at your company, recruit prospective students to attend Illinois Tech, or serve as an alumni mentor, your

time and talent are essential in keeping our opportunity engine in motion. One generous act of service creates a ripple effect, equipping an Illinois Tech student with the tools and skills that they need to thrive in an ever-evolving world.

There is great camaraderie among alumni volunteers—a group I am proud to be a part of. I participate in on-campus mentorship programs, as well as our virtual programs that have allowed me to connect with international alumni. Speaking from experience, my invested time volunteering at Illinois Tech has left an indelible mark on me; there is truly nothing more fulfilling than having a direct impact on our amazing students. It is a full-circle experience that I greatly wish for each of you to experience.

You can volunteer with Illinois Tech from wherever you are in the world! We offer many programs to help you connect with students, build valuable relationships, and make an immeasurable impact. Visit iit.edu/alumni/volunteer to learn more.

As alumni, it is our duty to be the visionary leaders that our institution needs, and your engagement is crucial to inspire the next era of innovation that only Illinois Tech can create. Individually, we achieve greatness, and together, the sky is the limit.

Bob Hoel (BE '70)

Trustee, Board of Trustees

Chair, Alumni Association Board of Directors

rhoel@iit.edu

Obituaries

Joel Goldhar

Longtime Stuart School of Business faculty member Joel Goldhar passed away February 19, 2025, after a long battle with cancer. Goldhar taught for 42 years at Stuart, including serving as dean from 1983 to 1988 before ending his career as a Distinguished Professor of Operations and Technology Management. Prior to coming to Illinois Tech, Goldhar worked in Washington, D.C., as director of the Manufacturing Studies Board at the National Research Council and for the National Academy of Sciences. He would later serve on the Research and Development Council of the American Management Association. A respected scholar in his field, Goldhar focused his research on computer-integrated manufacturing and the impact of technology on business strategy. Goldhar made significant contributions to the fields of business policy, operations, and technology management.

Sidney Guralnick

Sidney Guralnick, who served Illinois Tech as a provost, dean, vice president, and an accomplished professor of engineering, died in early 2025 at the age of 95. Guralnick joined Armour College of Engineering in 1959 and dedicated his career to the university until retiring in 2005 as the Perlstein Distinguished Professor of Engineering Emeritus. He was appointed provost in 1975 by former Illinois Tech President Thomas L. Martin Jr., and served as dean of the Graduate College, as vice president for academic affairs, and as a member of the Illinois Tech Board of Trustees. Guralnick was considered one of the leading experts on concrete materials, metal fatigue, plastic collapse, incremental collapse, and shakedown of framed structures in steel and reinforced concrete, and he was instrumental in modernizing the structural engineering laboratories in Illinois Tech's Alumni Memorial Hall. He was an active member of the Structural Engineers Association of Illinois and served as its president from 1990–91. He was also named the Civil Engineer of the Year by the Illinois Section of the American Society of Civil Engineers in 1997.

David Grainger

David W. Grainger, a notable industrialist and philanthropist who led both W. W. Grainger Inc.—an international Fortune 300 corporation focused on the sale of maintenance, repair, and operating products—as well as The Grainger Foundation, which has supported Illinois Tech engineering programs for decades, died on January 9, 2025. Grainger served in the United States Army Air Force and once managed the Airborne Radar Tech School at Boca Raton Air Base. After leaving the military in the early 1950s, he joined the family business, Grainger Inc., which was founded by his father. Grainger served as the company's chairman and CEO from 1968 to 1997, during which time he expanded the business to 15,000 employees and \$45 billion in annual revenue. Additionally, from 1979 to 2021, he ran The Grainger Foundation with the help of his wife, Juli. The Grainger Foundation Laboratories at Illinois Tech house the Department of Electrical and Computer Engineering power engineering courses. The Grainger family, W. W. Grainger, and The Grainger Foundation have also supported the university through an endowed chair, scholarships and fellowships, the Grainger Computing Innovation Prize, and other initiatives. The Grainger Foundation was awarded the Illinois Tech Alumni Association's Galvin Award in 2022, which was established for Illinois Tech to honor non-alumni for their leadership and dedication.

Tom Flanagan

Tom Flanagan, who founded a massive national property tax law firm and was honored as one of the Chicago-Kent College of Law's 125 Alumni of Distinction, died December 25, 2024. In 1968 Flanagan founded Flanagan | Bilton LLC, a property tax law firm. The firm, which is based in Chicago, specializes in lowering commercial real estate taxes. Flanagan earned his law degree from Chicago-Kent in 1963, and he was honored as an Alumni of Distinction in 2013.

In Memoriam

Alumni

Warner A. Eliot (EE '47)
Robert M. Lassen (ME '47)
Jay Warshawsky (EE '48)
Ralph W. Bock (ME '49)
Carl R. Anderson (EE '50)
Wayne E. Bessette (BE '50)
Herbert Feitler (CHE '50)
Joseph F. McNerney (BE '50)
Gerhard L. Schultz (ME '50)
James "Jim" N. Siltanen (MET '50)
Catherine F. Williams (DSGN '50)
Louis H. Bluestein (LAW '51)
David J. Buchner (CHE '51)
Werner L. Frank (MATH '51)
James L. Lakemeyer (CHE '51)
Clarence J. Maday (ME '51, M.S. '54)
Richard "Mike" J. Mihalek (MATH '51, M.S. '54, Ph.D. '58)
Hans P. Stein (EE '51)
Sidney I. Meltzner (ME '52)
Joseph "Joe" M. Sandri Sr. (CHEM '52)
Donald R. Adolphson (MET '53)
Paul D. Flynn (Ph.D. ME '54)
John D. Varnes (ME '54)
Robert A. Wegforth (BE '54)
Henry C. Curcio Jr. (CE '55)
Gerald "Jerry" M. Gordon ('55)
Robert S. Bergman (PHYS '56)
Richard H. Snow (Ph.D. CHE '56)
John I. Ykema (M.A.S. EE '56)
James F. Capek III (ME '57)
Susan Soffer (CHEM '57)
Kenneth A. Bracki (ME '58, M.B.A. '66)
Roger D. Ginger (Ph.D. CHEM '58)
Gerald Freedman (IE '59)
Glen E. Oppenheimer (ME '59)
Herbert A. Arnquist (ME '60)
Thomas M. Gallagher (EE '60)
Edward W. King (CHE '60)
Donald A. Nissen (EE '60)
Karl J. Siebers (ME '60)
Alfred T. Swenson (ARCH '60, M.S. '68)
Raymond W. H. Kim (ME '61)
Robert P. Straub (M.S. DSGN '61)
Raymond J. Zwierzycki (ME '61)
Barry P. Hill (FPSE '62)
Edward F. Keuper (ME '62)
Paul A. Maas (ARCH '62)
David S. Moore (DSGN '62)
William H. Slavik (EE '62)
Larry A. Darda (EE '63)
Thomas "Tom" D. Flanagan (LAW '63)
Robert P. Gordon (ARCH '63, M.S. CRP '67)
Robert C. Krishfield (IE '63)
Lawrence L. Wier ('63)
Michael D. Dunn (MATH '64)
Stephen H. Hale (PHOT '64)
John R. Kissinger (EE '64)
Charles A. Rice (ARCH '64)

Raymond E. Rogers (‘64)
 Victor N. Benson Jr. (ME ‘65)
 Rex L. Hutton (MATH ‘65)
 Robert M. Nielsen (EE ‘65)
 Joseph Cardinali (EE ‘66)
 Andre A. Moenssens (LAW ‘66)
 John E. Schupp Jr. (ARCH ‘66)
 Thomas F. Barrow (M.S. DSGN ‘67)
 Edward J. Kanter (LAW ‘67)
 Fred O. Soderberg Sr. (IE ‘67)
 Robert E. Schulz (LAW ‘68)
 Peter E. Kelly (CHE ‘68, M.S. ‘71)
 Barbara Mankus-Louthan (MATH ‘68)
 Alan D. Meacham (MAE ‘68)
 Kenneth J. Obrzut (BE ‘68)
 James H. Pagenkopf (MATH ‘68)
 David R. Hadden (CHE ‘69)
 Barbara L. Stentz (M.S. SOC ‘69)
 Ronald A. Derbisz Sr. (CHE ‘70)
 Harvey Feingold (Ph.D. EE ‘70)
 Jerome M. Gardberg (LAW ‘70)
 Jeffery H. Kravitz (EE ‘70)
 Louis S. Smulkstys (M.S. EE ‘70)
 Daniel J. Coll (M.A.S. PA ‘70)
 Ronald C. Seipp (BE ‘70)
 Uwe F. Wiechering (EE ‘70)
 Gerald P. Budzik (CHEM ‘71)
 Finley Hubbard (PHYS ‘71)
 John P. Lambertson Jr. (M.S. SOC ‘71)
 Jeffrey A. Brenner (MATH ‘72)
 Pham Q. Hung (PHYS ‘72)
 Allen J. Kapusta (MATH ‘72, M.S. CS ‘74)
 Roger M. Orth (BIOL ‘72)
 Henry K. Skrzypczak (MAE ‘72)
 James E. Staruck (LAW ‘72)
 Joan V. Stokes (MATH ‘72)
 Paul K. Guncheon (DSGN ‘73)
 Raymond H. Schleeper Jr. (LAW ‘73)
 Michael A. Cohen (MATH ‘74)
 Kevin E. Fleming (MAE ‘74)
 Eugene M. Moriarty (Ph.D. EE ‘74)
 Michael G. Tomeczko (LAW ‘75)
 Charles E. Feltes (MGT ‘76)
 Michael W. Manning (BE ‘76)
 Scott A. Mayer (LAW ‘76)
 Wendell Hecke (ME ‘77)
 Michael E. Kassner (M.S. MET ‘77)
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 Jon R. Bertram (Ph.D. BIOL ‘79)
 Eric P. Hatfield (CHE ‘79)
 Philip J. Nathanson (LAW ‘79)
 Patrick E. Charbonneau (M.A.S. BA ‘80)
 Mary Jo Kanady (LAW ‘80)
 Francis “Frank” P. Weider (CE ‘80)
 James “Jim” J. Dombek (LAW ‘81)
 Ralph “Chris” Christopher Naylor (LAW ‘81)
 Nelly Monterrubio Valdez (ARCH ‘81)

Steven L. Burkhart (M.A.S. BA ‘82)
 Kevin M. Colombo (LAW ‘82)
 Jane C. Fraytet (LAW ‘82)
 Ioannis K. Gastouniotis (ME ‘82)
 Richard D. Hassler (CS ‘84)
 Kent D. Folgers (ARCH ‘86)
 Kevin J. Ryan (LAW ‘87)
 Charles R. Trein (‘87)
 Richard “Rich” F. Wajda (CS ‘87)
 Kelvin C. Bulger (LAW ‘88)
 John C. Ellis (M.A.S. PA ‘88)
 Walter M. Douglas (LAW ‘89)
 Albert A. Brady (AE ‘89)
 Brent S. Lipschultz (LAW ‘91)
 Peter Jankus (M.S. CS ‘94)
 Terrence “Terry” Hughes (CERCE ‘97)
 Jeffery “Jeff” L. Wilgus (LAW ‘98)
 Jacob T. DiCiaula (LAW ‘08)
 Henry M. H. Winn (CS ‘16)
 Aaron E. Cook (M.D.S. DSGN ‘17)

Faculty and Staff

Joel Goldhar
 Sidney Guralnick
 Janet A. Keim
 Bogdan Krupa
 Vincent Samar
 Nicole A. Vilches

Friends

Linda Alley
 James E. Baine
 John R. Berry
 George Byrne
 Lynn Conway
 Elizabeth “Betty” C. Cowie
 Barbara C. Cunningham
 Eugene W. Donnellan
 Kurt W. Forster
 David W. Grainger
 Patricia “Pat” T. Greer
 Edna Mae Jordt
 Jacqueline L. Kurz
 Beatrice P. Lo Iacono
 Agnes McCaffrey
 Sylvia Mikulka
 Louise Novotny
 Vivian Yin-Chan Pan
 Janet Petry
 Jennifer K. Poltrock
 Doris L. Sahli
 Mary Jane Sahlstrom
 Richard E. Zagorski

Take Five

Ryan Roark is an assistant professor at Illinois Tech's College of Architecture, where her research focuses on radical adaptive reuse as a strategy for urban and ecological sustainability. In addition to being a licensed architect, she has a Ph.D. in biology. Recently one of her courses, Repetition and Difference: Collective Living, Biophilia, and Mass Timber on the Campus of IIT in Chicago, received the 2025 Housing Design Education Award from the Association of Collegiate Schools of Architecture.

Q: Your work focuses on the use of biologically based materials. What are those, and how do you incorporate them into designs?

Biomaterials are made of stuff that was alive until recently. Wood is a biomaterial. I research novel biomaterials, specifically seafood industry waste...such as fish skins, crab shells. These materials aren't entirely waterproof but are water-resistant. I would use them in interior applications such as insulation, flooring, interior wall partitions, drywall replacement, and screens cutting ultraviolet [rays] or glare from windows. Biomaterials are especially interesting in the adaptive reuse of buildings.

Q: What are the advantages of using biologically based materials?

Not only is it unnecessary for every part of the building to last equally long—it's also not desirable. Most building materials aren't permanent or waterproof, and most of them end up in the city dump. Biodegradability is important. All the parts of our buildings are aging differently, and when things are too tightly tied together—such as a super-efficient wall—sometimes the building will get demolished way before the structure wears out.

Q: What level of biodegradability do you prefer?

At the moment, I hold everything to the standard of being compostable, which is the highest standard of biodegradable—meaning you can put it in your garden and it will become mulch. This way of thinking about buildings is necessary to reduce the carbon footprint of our industry, which is huge: more than 35 percent of all global carbon emissions. Some percentage of that is

operating energy, but a big part is how materials are made. That's why I've chosen to focus on food industry waste that is already going into garbage landfills, because it doesn't require additional manufacturing. It does need to be processed, but the raw material already exists.

Q: Are there any disadvantages to using such materials?

The disadvantage is largely in public perception, because as soon as people hear that it isn't waterproof, they lose faith. The biomaterials I work with are mold- and bacteria-resistant, but a lot of biomaterials are not, so they're high-maintenance to produce.

Q: What has the reception been in the architectural community?

A lot of these materials aren't used in the architectural community yet. I recently presented a project that used these materials on the facades of Crown Hall at the Docomomo International conference in Santiago, Chile. Crown Hall is a Modernist masterpiece, so people have strong opinions about anything that gets done to it; you would never put drapes on it, for example. We installed [interior] screens to stop birds from crashing into the windows during migration season. People were very excited to see a piece of architecture we generally see as untouchable adapted in a way that doesn't hurt it at all, but does improve its performance.

Ryan Roark



Before You Go

Illinois Tech student Amelia Moseman (CS 4th Year) discusses pop culture, music, and current events on the “In Theory” radio show on WIIT Radio.

Photo by Jamie Ceaser

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