

illinois INSTITUTE OF TECHNOLOGY iit magazine

Summer 2014



Generation Innovation Charting Their Own Paths

ALTERNATIVE SPRING BREAK
Humanity-Inspired Road Trip

KAPLAN INSTITUTE
Build It and They Will Innovate

JASON RESCH (CS '06)
Patently Superb

Letter

from the President



Brody Zech, nephew of Scarlet Hawks men's baseball head coach Scott Marks, joins IIT President John Anderson at the South Side Classic.

"In the end, the American dream is not a sprint...Our families don't always cross the finish line in the span of one generation. But each generation passes on to the next the fruits of their labor."

—Julian Castro, Mayor of San Antonio, Texas

When this issue of *IIT Magazine* reaches you, you may have already heard the news that I am resigning as president of Illinois Institute of Technology as of August 1, 2015. I have been emphasizing that I am *resigning*, not retiring, so that alumni, faculty, staff, students, and friends know that I intend to stay engaged in the work of the university for the next year and even after I step down from my formal leadership role. I will be joining the faculty of Armour College of Engineering as a member of the chemical engineering department—and I am looking forward to having more opportunities to interact with the many bright, talented students who come here to study and do research.

But enough about me. This issue is about Illinois Tech's up-and-comers—some of our most recent graduates who are already making a name for themselves as community activists, entrepreneurs, innovative thinkers, and business leaders. I have said that our graduates stand on the shoulders of giants—alumni and faculty whose products and processes revolutionized how business does business, whose vision re-shaped skylines and legislation, and whose research gave us insight into how we think and how we can build the power grids of tomorrow. When you read what these young alumni have accomplished to date, I think you will agree that they are carrying on our proud legacy of innovation, tech entrepreneurship, and community service.

I was also thinking about what it means to bring your "A Game" when I attended Illinois Tech's South Side Classic at U.S. Cellular Field this spring. Each year, our Scarlet Hawks get to play baseball in a big-league stadium and to be cheered on by family and friends. Our team won the game this year and one of our players hit a home run over the left-field fence. Clearly, he and the rest of his teammates brought their "A Game" to the Cell that afternoon and left with more than a win—they left with an experience of a lifetime.

It was an afternoon when I was reminded once again that an IIT education needs to prepare our graduates to hit the ground running on their first job, but more importantly, prepare them to adapt to changing times 20 years from now.

If we have done our job—and if they have done theirs—then they leave us knowing how to be part of a team, to step up to the plate, to swing for the fence, to round the bases, and to head for home. They also know not to give up when they strike out, drop the ball, and are sometimes called out on a close call. And they know they need to keep practicing, remain optimistic, take risks, and love what they do. That's what we do here at Illinois Tech. It's all about bringing your "A Game," all of the time.

I am looking forward to my final year as president of this great university and seeing what this next generation will add to our legacy. I have no doubt our graduates will be hitting more home runs in the future because the best days of IIT are still to come.

A handwritten signature in black ink that reads "John L. Anderson". The signature is written in a cursive, flowing style.

John L. Anderson
President

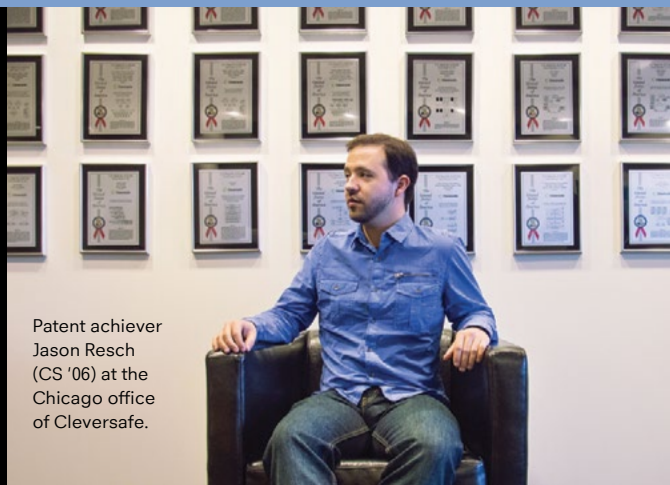
contents

Summer 2014

ON THE COVER

Generation Innovation

From developing apps to designing hoopouses—students, recent alumni, and faculty from all disciplines are charting their own paths from their home base of IIT.



Patent achiever Jason Resch (CS '06) at the Chicago office of Cleversafe.

06 Research Brief:

Aron Culotta/
Libby Hemphill
Navigating the River Twitter

08 Dane Christianson

(ME 3rd year)/
Ed Kaplan (ME '65)
Educating Generation Innovation

10 Jason Resch (CS '06)

Cleversafe Patent Achiever

12 Guillermo Krovblit

(M.Des./M.B.A. '11)
Junyoung Yang (M.Des. '11)
Jeremy Abrams (LAW '14)
Stefanie Bassler
They've Got an App for That

14 Gaby Sumampouw

(CHE 3rd year)
Stephanie Kunkel (M.S. BIOL '11, Ph.D. '14)
New Directions in STEM Research

18 Larry Dorn (ARCH '11,

M.A.S. INBD '12) and IPRO
320/497 Students Helping the Sheriff's Garden Grow

20 Yuming "Gary" Hou

(M.S. FIN '14)
Advancing the Investment Experience

22 Alternative Spring

Break Students Building with Heart in Hand

DEPARTMENTS

- 02 News Briefs
- 26 Alumni News
- 36 Rewind



.....
Corrections: In the spring 2014 issue, the sidebar "Integrated Multivariable AP" on page 25 stated that hypoglycemia "... occurs when the "body's level of insulin is too low..." It should read "... occurs when the "body's level of glucose is too low..." Also, on page 3 the photo credit for Andrea Berry should be Nicole Caldwell, and on page 36, "Jacob" in the photo caption should be spelled as "Jakob."



***IIT Magazine* Online-Only Content!**

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

fuelinginnovation

THE CAMPAIGN FOR IIT

IIT's six-year fundraising campaign has raised more than \$170 million as of May 15, 2014—68 percent toward its goal of \$250 million.

Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship Established at IIT

Ed Kaplan (ME '65)—a successful entrepreneur, innovator, and member of the IIT Board of Trustees—and his wife, Carol, have created a \$10 million challenge grant to establish the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship.

"IIT will be transformed into a center of technical innovation in Chicago," said Kaplan at an event announcing the gift. "The institute will help grow the tech ecosystem here in Chicago and be a catalyst for innovation."

Kaplan is the co-founder of Zebra Technologies, a leader in bar code-printing technology. His \$10 million gift is in addition to the \$1 million he has previously given to support this project. These gifts, combined with his other campaign gifts, including the endowment of the Carol and Ed Kaplan Armour College Dean of Engineering Chair, make him the largest alumnus donor to Fueling Innovation and second only to the late University Regent Robert A. Pritzker (IE '46) in lifetime giving by an alumnus.

Bringing together under one roof all the signature elements of an IIT education—creativity, innovation, collaboration, and entrepreneurship—the Kaplan Institute will feature state-of-the-art labs, prototyping spaces, and collaborative areas. It will also be home to IIT Institute of Design as well as Self Leadership Academy, the Idea Shop, Jules F. Knapp Entrepreneurship Center, and the Interprofessional Projects (IPRO) Program. With every IIT undergraduate completing at least two IPRO courses as part of their curriculum, the institute will become the hub of innovation and enterprise creation on campus.

"IIT has a rich history and will now have a brighter future with the innovation center," said Chicago Mayor Rahm Emanuel, who joined President Anderson at a press conference in March to announce the selection of design and programming architects for the project.

Congressman Bobby Rush expressed his gratitude for the various learning opportunities IIT has sponsored for the local community and anticipated the limitless horizon of further opportunity made possible by the Kaplan family gift.

The \$40 million, 100,000-square-foot Kaplan Institute will be the first academic building constructed on Main Campus in more than 45 years. IIT President John Anderson calls it a "defining milestone in IIT's history" that will transform how the university educates the next generation of students. The key capital project in the Fueling Innovation campaign, the institute is essential to the university's strategic plan to increase undergraduate enrollment to 4,000 students by 2019. [See page 8 to read an interview with Ed Kaplan.]



Chicago Mayor Rahm Emanuel shares a laugh with recent IIT engineering management graduate Cleo Richard at the event announcing the architects for the Kaplan Institute.

Visit fuelinginnovation.iit.edu/innovation-center or fuelinginnovation.iit.edu/edward-kaplan to read more about the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship or Kaplan's innovation story. Be sure to also check out the many innovative alumni, students, and faculty featured on the site.

"IIT has opened its doors in remarkable ways throughout the years," Rush said at the press conference. "Thank you, IIT."

John Ronan Architects, a Chicago-based, internationally renowned architecture and design firm, has been selected as the design architect of the Kaplan Institute. John Ronan is founding principal of the firm and has been a professor at IIT College of Architecture since 1992. The firm received two American Institute of Architects Institute Honor Awards, for the Poetry Foundation and the Gary Comer Youth Center, both in Chicago.

Shepley Bulfinch, a national firm specializing in the programming and planning of prototype collaboration spaces, is the programming architect. The firm's work includes Harvard Innovation Lab, Duke University's Link Teaching and Learning Center, and collaborative engineering and learning environments for Johns Hopkins University.

CAMPAIGN PROGRESS

Through May 15, 2014

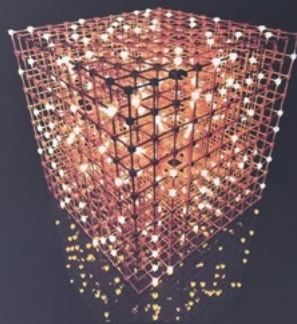
\$170,863,435 RAISED

- 15 ENDOWED CHAIRS
- MORE THAN \$27 MILLION RAISED FOR SCHOLARSHIPS
- 6 FAMILIES HAVE MADE GIFTS OF \$10 MILLION OR MORE
- MORE THAN 8,900 ALUMNI DONORS

fuelinginnovation.iit.edu

NAE Smart Grid Speakers

[Left to right] Mohammad Shahidehpour, IIT Robert W. Galvin Center for Electricity Innovation Bodine Chair Professor and center director; H. Vincent Poor, Michael Henry Strater University Professor of Electrical Engineering, Princeton University; Anjan Bose, Regents Professor, School of Electrical Engineering and Computer Science, Washington State University; and John R. Birge, Jerry W. and Carol Lee Levin Professor of Operations Management, University of Chicago Booth School of Business, join IIT Provost and Senior Vice President for Academic Affairs Alan Cramb at the National Academy of Engineering (NAE) Regional Meeting and Symposium held at IIT on May 14. IIT president and NAE member John Anderson hosted the event.



Welcome to the

National Academy of Engineering
2014 Regional Meeting and Symposium

Wednesday, May 14, 2014



ILLINOIS INSTITUTE OF TECHNOLOGY

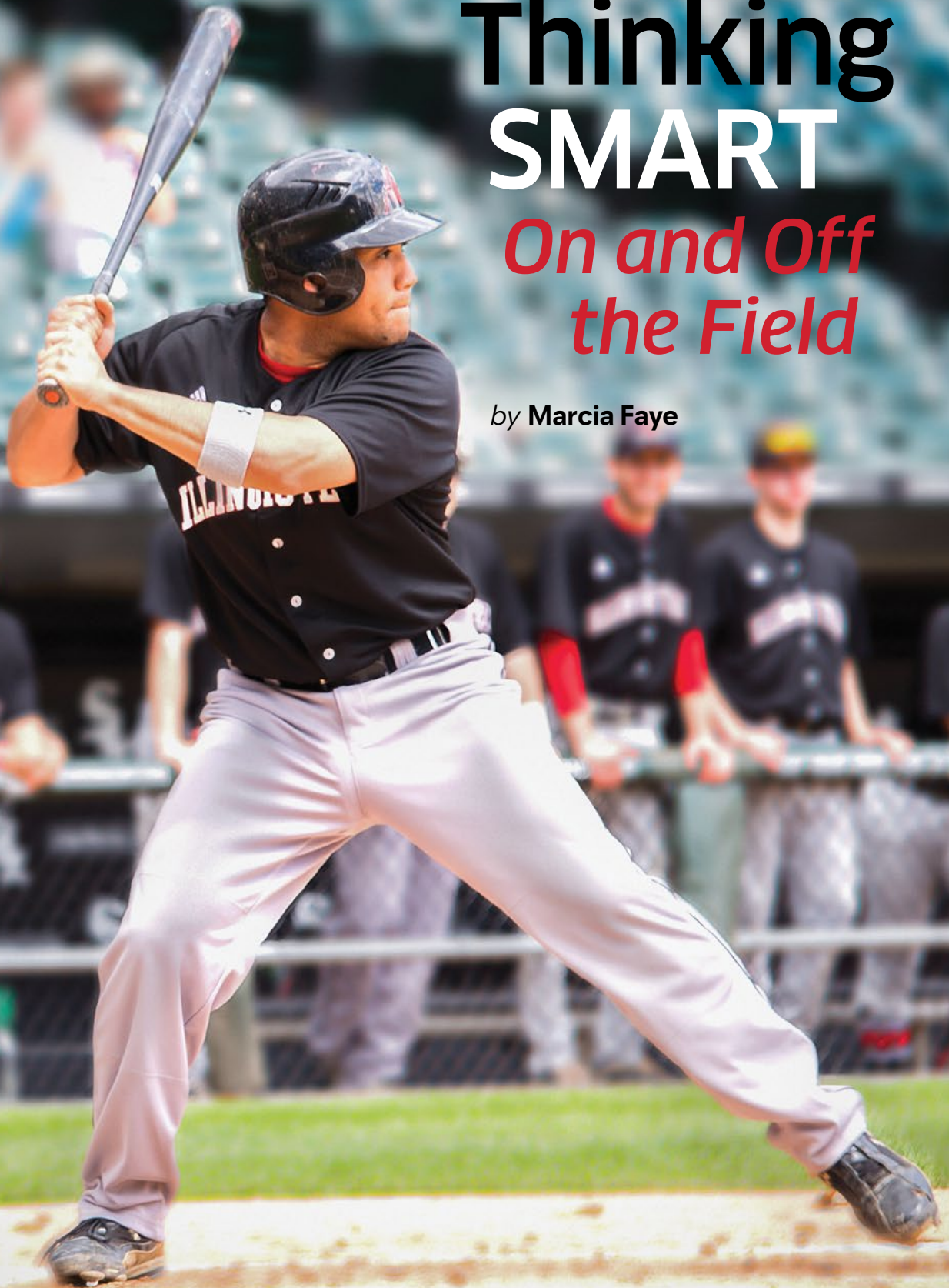


PHOTO: BONNIE ROBINSON

Thinking SMART

*On and Off
the Field*

by Marcia Faye



PHOTOS: MICHAEL GOSS

ALTHOUGH HE MAY HAVE A RATHER DISTINGUISHED FIRST NAME, **DARWIN ARGUMEDO** (CHE 3rd year) is hopeful that he'll be remembered at IIT for his academic accomplishments as well as his talents as a player for the Scarlet Hawks men's baseball team. Soon after Argumedo first stepped onto IIT's Ed Glancy Field in fall 2013, Head Coach Scott Marks knew he had a winner.

"Darwin represents everything we want an Illinois Tech student-athlete and baseball player to strive to be," says Marks, noting that Argumedo came to the university from Sinclair Community College in Ohio, where he scored big as a catcher and a hitter. "Throughout the fall season, Darwin showed increasing arm strength over and over again, so naturally we put a ball in his hand, took away the catcher's gear, and let him pitch. It was a foreign experience for him at first, but we are starting to see him become a large threat to our opponents not just as a catcher but also as a pitcher and a hitter."

Argumedo learned baseball on the streets in Cartagena, Colombia, where he and his grade school buddies crafted balls out of stones wrapped in paper and plastic, which they hit with both aluminum and wooden bats. He admits that as a youth, having fun in the neighborhood took priority, and he had a difficult time focusing on either his homework or his blossoming ball skills until his father provided him with discipline in the form of a personal baseball coach/mentor.

Argumedo's love of the sport grew. He and his family immigrated to the United States in 2010, when he joined the nationally recognized Dayton [Ohio] Classics, a team that prepares players for either college- or professional-level baseball. Argumedo played with the organization for one year before entering community college and obtaining a slot on the Sinclair Tartan Pride ball team. Fully immersed in his life as a student-athlete, he shifted his priorities to his education.

[Left] Darwin Argumedo (CHE 3rd year) is poised to swing a mighty bat at the South Side Classic, held at U.S. Cellular Field on May 3. *[Right]* Along with his Illinois Tech teammates, Darwin Argumedo [as catcher] rallied to score a 19-7 victory against Maranatha Baptist University in the South Side Classic.

"I looked for the best chemical engineering schools in the country and IIT was one of them," Argumedo says, adding that his first semester of coursework at the university presented him with a level of difficulty he had not anticipated, but that "it's all for the good of my future."

Thinking back to his formative ball-playing years, Argumedo says that one of his most cherished memories was when Orlando Cabrera, retired Colombian-American Major League Baseball shortstop, joined him and his friends in an impromptu game in the streets of Cartagena. Now, Argumedo is creating new experiences that are supplanting those of the past.

"The opportunities I have in the United States are unbelievable," he says. "The job fairs and my scholarship are awesome. I get to wake up and play baseball, and attend school at IIT. I feel blessed." ●



MORE ONLINE ▶

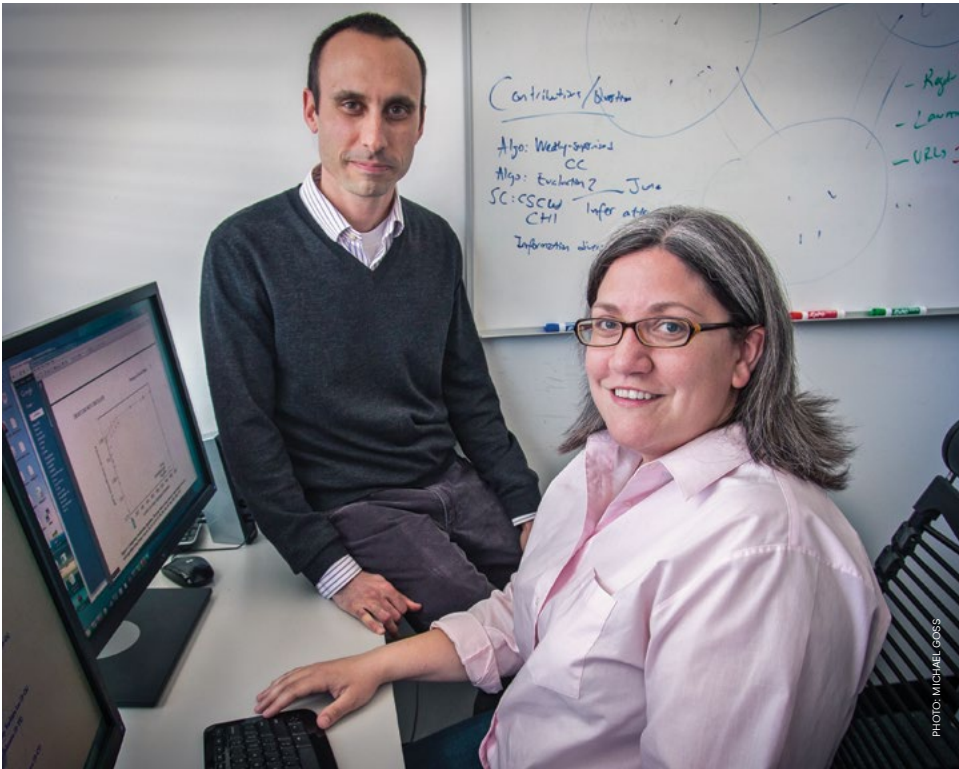
Dayton Classics: www.leaguelineup.com/welcome.asp?url=daytonclassics

Separating the
Chatter from the
Tweets

by Steve Hendershot



ILLUSTRATION: GETTY IMAGES



Aron Culotta and Libby Hemphill, social media researchers

ARON CULOTTA, assistant professor of computer science at IIT College of Science, finds meaning within Twitter's raging river of conversations and observations by harnessing the power of the social network's application program interface (API). Twitter's API allows software developers to access the aggregate data generated by the social network; Culotta's research searches for correlations between phrases used in Tweets and health-related trends.

For example, in one of his projects he determined that the frequency with which terms such as "sore throat," "cough," and "flu" were used on Twitter correlated strongly with spikes in influenza as reported by the United States Centers for Disease Control and Prevention (CDC). The finding could allow health care providers to respond more quickly to flu outbreaks, because the CDC data isn't available for weeks, but the Twitter data is available instantly. A second project correlates county-level health trends and activity-related Tweets (think "I'm sleepy" versus "Who's up for a 10-mile run?"). The study found that counties with less energetic Tweets also tended to have higher obesity rates.

Culotta tunes his analytical software to become more adept at gathering and interpreting relevant data. The term "cough," for example, was useful to his influenza study, whereas "fever" was not; too many people were making references to "Justin Bieber Fever" for the term to helpfully relate to flu trends.

MORE ONLINE ▶

Aron Culotta's Homepage: <http://cs.iit.edu/~culotta>

Libby Hemphill's Homepage: <http://humansciences.iit.edu/faculty/libby-hemphill>



PEOPLE ARE MORE LIKELY TO SPREAD REALLY CRAZY TWEETS THAN THEY ARE TO SPREAD MODERATE ONES.



"My ideal research loop starts with applying off-the-shelf tools to a socially interesting problem. Then, I see where those tools don't work and I work to improve them," says Culotta, who joined the IIT faculty in 2013. A New Orleans native who earned his Ph.D. in machine learning from the University of Massachusetts, Culotta taught at Northeastern Illinois University prior to his move to IIT, where he now runs the Text Analysis in the Public Interest Lab.


At IIT, one of his collaborators is Libby Hemphill, assistant professor of communication and information studies at IIT Lewis College of Human Sciences, who shares his interest in parsing Twitter data. Culotta and Hemphill are working together as part of Hemphill's project to use Twitter to analyze the polarization of messaging among members of the U.S. Congress. Culotta has developed a tool to gauge polarization according to hashtag (#) use. Hemphill says they're finding that Twitter is making American political dialogue more extreme, because polarized Tweets gain traction more easily.

"People are more likely to spread really crazy Tweets than they are to spread moderate ones," she says.

Culotta says Twitter has already changed substantially since he began studying it in 2009: its user base is larger and more representative of the overall population, and Tweets are more likely to be news-related than the status updates that were popular in the network's early days. If he and Hemphill succeed, they will derive yet another advantage: channeling Twitter's flood of data into a stream of useful insights. ●

A Hub for Generation Innovation

Generation Innovation Member Dane Christianson Interviews Ed Kaplan About the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship



Only minutes after meeting entrepreneur Ed Kaplan (ME '65) for the first time, Dane Christianson (ME 3rd year) says it was clear that Kaplan is deeply committed to students. The two first met earlier this year at an event announcing Kaplan's latest gift to IIT: a \$10 million challenge grant to help build the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship. John Ronan Architects and Shepley Bulfinch will design the building, which is slated for completion in 2017.

PHOTO: MICHAEL GOSS

The co-founder of Zebra Technologies, a manufacturer of on-demand bar code and RFID labeling and ticketing systems, Kaplan says while pursuing his mechanical engineering degree at IIT, he discovered that “the intersection of engineering and business could provide many opportunities.” He redirected his career path late in his senior year from a master’s in electro-mechanisms to an M.B.A. at the University of Chicago. Kaplan worked days as a research and development engineer at Teletype Corporation, a data communications company, while pursuing his degree at night. It became clear to Kaplan that he wanted to become an entrepreneur and his own boss. At 26 he left Teletype to pursue his dream and started Data Specialties, which later was transitioned into Zebra Technologies.

Christianson, inventor of the X-Cube twisty puzzle, told the crowd attending the gift event that he has a few things in common with Kaplan: both started businesses in their 20s, both belonged to fraternities, and both studied mechanical engineering—but 50 years apart.

Christianson rejoined Kaplan in April to ask him how the new institute will impact IIT students 50 years beyond Christianson’s own commencement.

Christianson: Your gift is a really big deal—a game changer. What do IIT students have to look forward to at the Kaplan Institute?

Kaplan: The most important thing about what we’re doing is that it is for the students. Our graduates will acquire a capability to innovate that will be superior to any other technical university and will lead to a lifetime of career success. Some will become successful entrepreneurs. The endgame for students is that they will be able to get jobs that they will find very satisfying, will be very good at, and will be passionate about. What we will do at the Kaplan Institute is enable them to be very, very productive in achieving their personal and professional goals. If you can go ahead and put somebody in a position where they could do what it is they want to do and it’s something that makes them happy and productive, then they will need the tools to enable themselves to go forward and change the world.

Christianson: So you don’t think we’re doing that now?

Kaplan: I assume that you are asking what IIT is doing now. IIT currently has an Institute of Design (ID) that is located in downtown Chicago. It was started in the 1930s. It only grants graduate degrees, and it is believed to be the best design school in the country. The faculty teach design methods and how to solve problems. We expect to house ID in the Kaplan Institute on IIT Main Campus. Undergraduates will be able to access their teachings. Our Interprofessional Projects (IPRO) Program and Idea Shop will also be moved to the Kaplan Institute. This past spring semester, there were 70 teams with a total of 750 students working on IPROs.

IIT also has a Leadership Academy and an Entrepreneurship Academy (EA). We intend to build the EA into a world-class tech entrepreneurial center that will provide a wide range of academic courses as well as exposure to distinctive programming in experiential learning. So you can see that everything is under one roof. All undergraduates will be required to participate in coursework in this building. There will be collaborations between professors, researchers, and students from all disciplines. This is our vision for the future at IIT.

ED KAPLAN FAMILY INSTITUTE FOR INNOVATION AND TECH ENTREPRENEURSHIP

at a glance:

Cost: \$40 million

Size: 100,000 square feet

Location: IIT Main Campus

Construction: Scheduled to commence in August 2015

Open and operational: Fall 2017*

Design architects: John Ronan Architects, Chicago

Programming architects: Shepley Bulfinch, Boston

Home to IIT Institute of Design, the Interprofessional Projects (IPRO) Program, the Idea Shop, Self Leadership Academy, and Jules F. Knapp Entrepreneurship Center, among others

* Assumes fundraising goals have been met


Christianson: I get what tech entrepreneurship is about—where technology and business meet—but could you explain a term you mentioned at the gift event: tech ecosystem?

Kaplan: A tech ecosystem is typically made up of technology-based companies, universities, and research institutions as well as other components, such as the government, which is a key player in its creation. Chicago happens to be sitting in the middle of a triangle of tech ecosystems delineated by Austin, Texas; Silicon Valley; and Boston. The Kaplan Institute can play a leadership role in developing the tech ecosystem of the Midwest.

Christianson: If this gift had been given when you were an IIT student 50-plus years ago, how would your life have been different or improved?

Kaplan: I’m not sure that my life would have been different or improved; however, I do think that a significant number of people derive benefit directly and indirectly through what such a gift makes possible. In my case, I’ve always loved taking science and engineering courses because I learned how to solve all kinds of problems, not just engineering problems. I learned to answer the questions “why” and “how”—not just “what.” But there were other courses at IIT that blew me away. My intro to economics course taught me fundamental business principles, such as how the banking system created money and about the concept of inelastic supply and elastic demand. The engineering economics course introduced me to a tool that taught me how to evaluate the purchase of a piece of major equipment or make sound real estate investment decisions.

At the Kaplan Institute, we will provide pathways, giving students a menu of practical, useful, targeted courses that will help them pursue their entrepreneurial interests. We will give our students opportunities to learn from the experiences of others as well as through hands-on learning. We will teach our students how to convert an idea into an innovation and then commercialize that innovation or use that innovation to save lives. No single university in the United States has a program that will be as robust as ours.



Another Day, Another Patent

by STEVE HENDERSHOT

JASON RESCH (CS '06)
WAS AWARDED THREE
PATENTS TODAY.

HO HUM.

ORDINARILY, THREE PATENTS IN A SINGLE DAY would represent a banner achievement for a software engineer. Even three patents spread over the course of a career would constitute an impressive body of work. Yet for Resch, a notice from the United States Patent and Trademark Office (USPTO) just means it's Tuesday—he received another patent two weeks ago, another the week before that, and three more the week before that. In all, Resch, 30, has received 58 patents since joining Chicago-based cloud-storage company Cleversafe, Inc. as an IIT undergraduate in 2005.

The company, founded in 2004 by IIT Board of Trustees member Chris Gladwin and incubated on campus from 2005 to 2007, markets advanced cloud-based, security-focused object-storage products to organizations that collect enormous amounts of data online. Cleversafe's clients can store hundreds of petabytes of data online—for reference, 100 petabytes (100 million gigabytes) is the equivalent of all the photos and videos uploaded by Facebook users around the world as of 2012, when the social network filed for its initial public offering. Resch signed on with Cleversafe as an IIT undergraduate, helping to build the company's object-storage software for years before its first deployment in 2010. The company raised \$55 million in venture capital last year and boasts such customers as the photo-sharing site Shutterfly and In-Q-Tel, a firm that vets technology for use by intelligence organizations like the Central Intelligence Agency.

Cleversafe's cutting-edge technology appealed to Resch, who built a 50,000-user Internet chat service while still a Rhode Island teenager before moving to Chicago for college in 2002. He thrives on the constant innovation that Cleversafe requires.

"It's a brand-new technology and a new way for storing data, and there are many unexplored possibilities around that idea. The more we develop around it, the more room for further innovation we find," says Resch.

Cleversafe outgrew its offices on campus in 2007 and is now based in the Loop. Resch, who answered tech-support phone calls for two years as a student, remains close to the university, living in Chicago's nearby Bridgeport neighborhood with a former college roommate who also now works at Cleversafe. Indeed, the IIT-Cleversafe pipeline is strong: the company counts 19 IIT graduates among its 125 employees. Among the 18 engineers on Resch's team, seven are IIT alumni.

Among the IIT alumni working at Cleversafe, Resch is a crown jewel, according to Gladwin.

"When I first met Jason in 2005, he came across as a person with a very special intellect and enormous potential," he says. "Since then, he's proven himself as not only a brilliant software engineer but also one of the most prolific inventors of his generation."

Once a patent application is filed, it typically takes the USPTO at least three years to issue formal approval. That means that Resch's recent patent hot streak is based on work done years ago. His 58 patents are just the beginning; he has approximately 200 more pending. ●



IIT alumnus Jason Resch stands by a Cleversafe data center in the Chicago office. The center contains rows of server racks, each of which contains up to 40 separate computers, and is used for internal testing, development, and research purposes.

MORE ONLINE ▶

Cleversafe, Inc.: www.cleversafe.com
Top 10 IIT Alumni Employers: iit.edu/magazine
United States Patent and Trademark Office: www.uspto.gov

Appetite for Development

by Marcia Faye

Peapod Labs and Uppd are both startups that began life as apps created by IIT students. Now alumni, the apps' founders may come from different academic disciplines but share qualities exhibited by successful entrepreneurs—that of being forward-thinking, self-motivating, and hardworking. Here is a snapshot look at the apps that came out of their efforts.

Peapod Labs > peapodlabs.com

Guillermo Krovblit (M.Des./M.B.A. '11)

Junyoung Yang (M.Des. '11)

CO-FOUNDED IN 2010 AS A STARTUP by Guillermo Krovblit and Junyoung Yang [Jared Allen (M.Des. '11) is also a co-founder but no longer with the company] through an IIT Institute of Design independent project, Peapod Labs links the digital world with the physical world through more than 20 educational apps developed for children through age five, such as ABC Wildlife and Firehouse Adventure.

INSPIRATION: “The iPad,” says Krovblit. “When we first heard the Apple announcement, we assumed the point of view of user-centered designers. We immediately saw that it was going to be a fresh, green space for all sorts of new things and envisioned a device that could potentially change the way people interact with technology, especially in the education field.”

KUDOS: On December 31, 2013, Peapod Labs apps had been downloaded 1 million times through the App Store at \$2.99/app. Individual apps have been recognized by *Children's Technology Review*, iLounge, and the iTunes Hall of Fame. Last year, the ABC Actions app received a “mention” in the nonfiction digital category of the Bologna Ragazzi Awards. The awards are an initiative of the Bologna Children's Book Fair, considered to be the world's leading professional fair for children's books.

WORDS OF WISDOM: Krovblit says that one of the greatest elements he has learned through his graduate program is the necessity of user testing. “In your mind, you are developing an award-winning, Nobel Prize-deserving, game-changing product,” Krovblit says with a laugh. “The way to validate your product is to let the actual users actively use it and try to understand the interactions that take place. You must utilize whatever you have in your skill set to record what happens to make your idea better or decide if you have to kill the project. The last word on whether or not your product is successful comes from the user, not the designer.”

WHAT'S AHEAD: “Our true goal is to make a difference within the education industry,” Krovblit explains. “We want to create a link between our company and something really big, perhaps an insightful finding that enables people to learn more efficiently or to become more engaged in the learning process.”



PHOTO: CHRISTOPHE TESTI



PHOTO: BONNIE ROBINSON

Uppd, LLC > getuppd.com

Jeremy Abrams (LAW '14)
Stefanie Bassler

JEREMY ABRAMS AND STEFANIE BASSLER were looking for a fun side project last year; he was interning at a law firm and she had just left her job as an innovation consultant. Inspired by video, social media, and gaming, the friends quickly drew up a business plan for Uppd—a free mobile app that allows users to upload videos of themselves engaged in a sporting activity, for example, and then challenge others to “up” the competition for virtual and real-world rewards.

BACKGROUNDS: Abrams launched his first startup—an e-publishing company—at age 15. Since then, he’s participated in five other ventures and has worked as an early user interface/user experience designer for Trackbill.com. Bassler earned a Master in Business Innovation from the Monterrey Center for Higher Learning of Design (Mexico) and launched her first company in Mallorca, Spain, in 2011. “Our diverse yet complementary backgrounds as well as our established friendship created the perfect mix for business partners,” says Abrams about his working relationship with Bassler. “As we have heard over and over again, it’s 99 percent about the team and 1 percent about the idea. Our inspiration for executing the particular idea stemmed from our deep-rooted belief of inclusion and community. We believe there should be no barriers to entry when it comes to skill competition. Anyone and everyone should have the opportunity to compete, and we wanted to create Uppd in order to level the playing field across the world.”

KUDOS: Putting aside his public-speaking jitters, Abrams took first place in the 2013 Elevator Pitch Competition hosted by the IIT Entrepreneurship Academy and won \$500 from Elance Chicago to hire a graphic designer.

GENDER BENDER: While app development is still a male-dominated field, Bassler believes the tide is turning. “As a consultant, I helped to manage both internal and client teams in Web development projects, so it was a natural transition to begin my own tech company,” she says, noting that Uppd—her first app project—has evolved into a full-time job. “Women are beginning to take on more roles within engineering and technology as gender role perceptions continue to shift.”

WORDS OF WISDOM: “Don’t get discouraged, but do enjoy the ride; some days we feel on top of the world and other days we feel at the very bottom,” Abrams advises to other students looking to develop apps. “It’s all part of the fun and there hasn’t been a single bad experience that has left us without a valuable lesson learned. Our intention is to create a platform in which everyone around the world can compete on an even playing field. Uppd is nothing more than a solution to this intention.”



PHOTO: MICHAEL GOSS



A Catalyst for Biofuels— *and for Self-Discovery*

by Marcia Faye



PHOTO: MICHAEL GOSS

GABY SUMAMPOU (CHE 3rd year) serves on the Executive Board of the IIT chapter of Engineers Without Borders, leads a vegan lifestyle, and gives plenty of thought to society's dependence upon fossil fuels. During her second year at IIT, she was seeking summer opportunities to further explore her major; at the same time IIT Armour College of Engineering had just announced its Distinctive Education Program. The program was for undergraduates like Sumampouw who were focusing on the college's themes of energy, health, security, and water.

Sumampouw learned that Johnson Polymer Professor Fouad Teymour was investigating how to create energy from algae and spoke with him about the chance to join his research team.

"Biofuels derived from algae could be a renewable energy alternative," she says. "These third-generation biofuels do not compete with food sources and use considerably less landmass than other biofuels, which is a major issue. Its potential is very exciting."

Sumampouw is one student benefiting from Armour R&D, made up of PURE (Program for Undergraduate Research in Engineering) and MIND (Mentored INnovation for Development), the latter for faculty projects that have moved from the research phase into the development phase. Besides exploring research as a possible career option, PURE and MIND students also earn a stipend.

"We are now in the fourth semester of Armour R&D and have seen an increased interest from the students—many who have reported their positive experiences," says Teymour, who is also a member of the Armour Distinctive Education Faculty Council, led by Dean Natacha DePaola. "Even more importantly, my colleagues have been eagerly seeking out students and creating projects with them. It's a big success story, one that is helping both the students and faculty. Undergraduate

**“
ARMOUR R&D HAS SHOWN
ME WHAT LIFE WOULD
BE LIKE IF I DO DECIDE TO
PURSUE RESEARCH AS A
CAREER OPTION.
”**

research is not a staple everywhere and it's becoming very important at IIT."

Teymour says that Sumampouw has developed acute accuracy performing thin-layer chromatography, a technique that helps researchers identify compounds, determine their purity, and check on the progress of a chemical reaction. She uses the technique as part of her work extracting lipids from algae using a catalyst to produce biofuel. Because it's inexpensive and easy to use, the catalyst sodium hydroxide is the industry standard for production of biodiesel, but the process is sensitive to impurities and requires energy-intensive separations. Sumampouw is attempting to develop a more time- and energy-efficient process for direct *in situ* conversion of algae oil to biodiesel. She is applying her newly developed chromatography skills to the production of biodiesel using this process. She is also exploring the use of high-quality enzymatic lipase catalyst in this regard.

Now in an environmental health and safety summer internship at TTX Company in Chicago's Loop, Sumampouw is undecided about pursuing life in the laboratory. But she is certain that her time as a PURE student lent an invaluable perspective to her undergraduate education.

"Armour R&D has shown me what life would be like if I do decide to pursue research as a career option," she says. "Overall, this experience has done great things for me by giving me the opportunity to be part of an up-and-coming renewable energy alternative." ●

MORE ONLINE ▶

IIT Armour College of Engineering: iit.edu/engineering

JUST MONTHS AWAY from attaining her doctorate, Stephanie Kunkel (M.S. BIOL '11, Ph.D. '14) fills test tubes at her workbench in the Life Sciences Building, her long brown hair under a navy Arizona ball cap she wears in support of the Wildcats basketball team. While Kunkel was introduced to the laboratory as a University of Arizona undergraduate, IIT is where she established herself as a researcher. Her academic path has led to increasingly satisfying research challenges, prominent awards, and the realization that her calling lies in teaching.

"It seems that my plan was always to teach," says Kunkel, thinking back on her five years at the university. "I've been a teaching assistant at IIT each semester that I've been here. I enjoy instilling the love of doing research into the students and seeing the looks on their faces when they get what I'm teaching."

Raised in an environmentally conscious family, Kunkel began her laboratory experience investigating

"Up to 70 percent of the energy needed to run a wastewater treatment plant goes into aerating the water. I wondered how we could make the process greener and reduce the energy cost," says Kunkel.

Over a 14-month period, she conducted two experiments. In one, she ran wastewater samples at both high-oxygen and low-oxygen levels to observe if hemoglobin production could be directed as the bacteria adapted to lower rates of aeration. In the other, she inserted VHb into the bacterium *Nitrosomonas europaea*, which is commonly found in wastewater sludge, in the hope that it would take up more oxygen than the naturally occurring bacterium without the special hemoglobin.

"If we could express or enhance the level of hemoglobin in the bacteria, they'll be able to grab the oxygen more efficiently, which means that the treatment plant could be operated at a lower oxygen level. Lower oxygen levels mean less aeration of the plant, which in turn leads

Environmentally Motivated

by Marcia Faye

annual plants of the Southwestern desert region where she lived. She also interned for the Muscular Dystrophy Association; this led to her acquaintance with IIT Associate Professor Nick Menhart and his Duchenne muscular dystrophy research. Kunkel decided to pursue her graduate education at IIT and continued her environmental studies under the mentorship of Ben Stark, professor of biology, and Krishna Pagilla, professor of environmental engineering.

The focus of Kunkel's graduate research was on bacterial hemoglobin and its potential in biofuel production and wastewater treatment. In her master's program she explored how the *Vitreoscilla* hemoglobin protein (VHb)—discovered by Dale A. Webster, IIT Distinguished Professor of Biology—can enhance ethanol production and then applied that knowledge to wastewater for her doctoral program. Certain bacteria can make hemoglobin under conditions of low oxygen or stress and like the oxygen-transporting hemoglobin of red blood cells can carry dissolved gases.

to potentially significant energy savings," explains Kunkel, who earned a 2013 GEN 10 Award from *Genetic Engineering & Biotechnology News* for excellence in scientific research and a 2013 University Research Honor Award from the American Academy of Environmental Engineers and Scientists.

At the end of her 14-month test period, Kunkel observed that the bacteria became more oxygen-efficient in their adaptation to the low-oxygen environment and that the VHb-enhanced sludge bacteria did have a slightly higher oxygen uptake rate than did those without it.

This month, Kunkel is taking her environmental interests in still another direction as the recipient of a two-year \$120,000 postdoctoral fellowship from the Alfred P. Sloan Foundation. She and Assistant Professor Brent Stephens, director of the IIT Built Environment Research Group, will investigate the mechanisms by which aerosolized bacteria and viruses are spread among humans in the indoor environment. ●

MORE ONLINE ▶

Abstracts of Co-Authoring Research Papers: www.ncbi.nlm.nih.gov/pubmed/20717665; www.sciencedirect.com/science/article/pii/S0961953411006672; www.ncbi.nlm.nih.gov/pubmed/23435900; www.ncbi.nlm.nih.gov/pubmed/24272370



PHOTO: MICHAEL GOSS

Fertile Minds Yield Cro



Tomato plants grow in full force at the Cook County Jail sheriff's garden.



IPRO students take on-site measurements for a hoophouse at the Cook County Jail.

During summer's golden days, a visitor to the spacious garden off 27th and California streets in Chicago's Little Village neighborhood could believe the abundant plot is located in the farm communities of rural Illinois instead of urban Cook County. Heavy watermelons, pumpkin vines, and peanut plants grow low. Beds of Swiss chard and other leafy produce take over the greenhouse. Giant sunflowers tower over caged tomato plants. But even higher than the sunflowers is an item that seems somehow out of place in this lush environment: a cyclone fence capped by spiraling barbed wire.

Welcome to the Cook County Sheriff's Garden project at the Cook County Jail.

Established in 1993 as a place of respite and diversion for inmates, the garden, under the direction of Sheriff Thomas Dart, has grown into an award-winning job-training initiative for nonviolent offenders who earn a certificate of competency in various areas of horticulture. For the past two years, IIT students enrolled in an Inter-professional Projects (IPRO) Program directed by Blake

Davis, adjunct professor of industrial technology and management, have worked to extend the jail garden's growing season. With outdoor space of just over one acre and a 1,500-square-foot greenhouse, the garden annually yields many thousands of pounds of produce that is sold to several Chicago restaurants and supplies a vendor's stand at the Daley Center Plaza Farmers Market. Proceeds go back into the program to maintain its self-sufficient status.

Carlos Irazabal (ARCH 4th year) says a unique hydronic solar-heating system was IPRO 497-320B's major contribution to the project. The system is designed to provide a transfer of heat by circulating fluid through cross-linked polyethylene tubing known as PEX. Installed at root level in the plant beds, the tubing would concentrate heat to support plant life during winter.

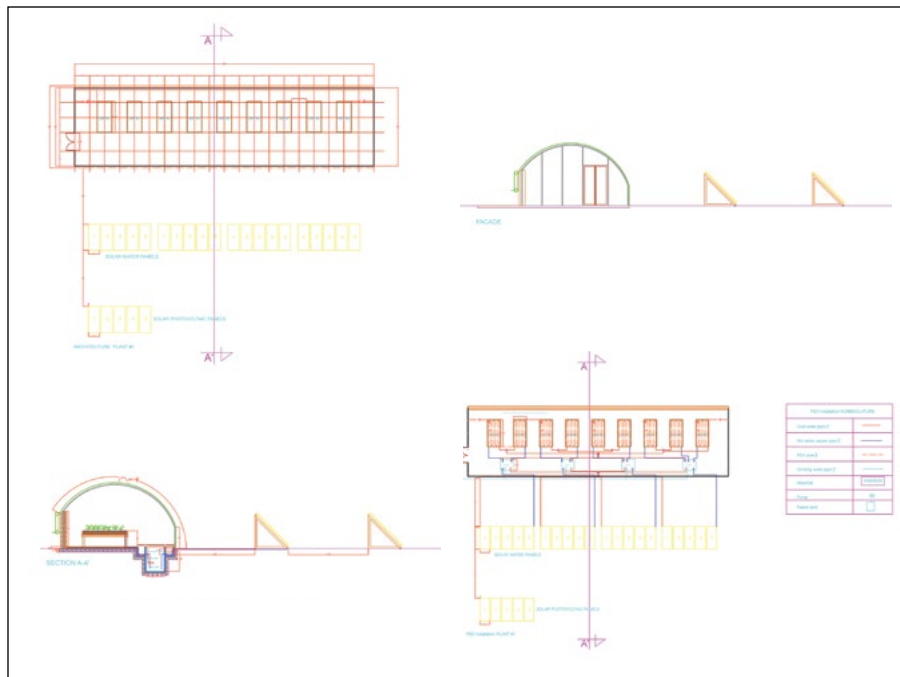
"I'm thankful to the students of IIT for their dedication to our urban farming programs at the Cook County Jail," says Sheriff Dart. "These students should be proud of the impact they've made in helping inmates develop skills that can be applied on the outside and may very well turn their lives around." ●

Top of Innovative Ideas

by Marcia Faye



Larry Dorn (ARCH '11, M.A.S. INBD '12), IPRO advisor, and Joanna Domagala (ARCH 5th year) build solar panel frames for the hoophouse.



As part of their work on the hoophouse heating system, spring 2014 IPRO students prepared drawings using Autodesk software. Source: All images courtesy of Larry Dorn and Carlos Irazabal.

IPRO Evolution

IPRO 320 (spring 2013): Plants Behind Bars

OBJECTIVE

To design a cold-climate hoophouse for use in the Cook County Jail garden that could support the raising of microgreens. The jail requested that the students utilize donated solar panels in the design of the heating system. The hoophouse should be simple enough for the inmates to erect, yet strong enough to withstand significant snowfall.

OUTCOMES

- Preliminary design for the hoophouse, including the structure, and heating and drip-irrigation systems
- Construction manual

IPRO 497-320B (fall 2013, spring 2014): Reformative Growing

OBJECTIVE

To review and further refine earlier design of hoophouse structure and systems, selection of materials, and proposed budget.

OUTCOMES

- Refined design by building a prototype of a hoophouse on a student's farm property and produced a new construction manual to correspond with this new structure
- Conducted site visits to both The Plant to research details regarding a possible aquaponics system, and Growing Home, an established agricultural job-training organization
- Surveyed and measured Cook County Jail site for hoophouse construction
- Constructed frames for solar panels
- Determined that the hoophouse will need to incorporate a more-active heating system in addition to passive heating to sustain the minimum temperature of 45 degrees Fahrenheit needed to sustain such hardy green stock as kale and lettuce varieties
- Designed two heating-system plans for consideration by jail administration, the first based on immersion heaters and the second based on an ethylene glycol-based closed system

Investing

by David Chong

in His Future

For IIT Stuart School of Business graduate finance student Yuming “Gary” Hou (M.S. FIN ’14), one commodity always seemed scarce this past school year—time. As executive director of Stuart Investments, a student group that invests a portion of IIT’s endowment to give students real investment experience, he was helping to manage a portfolio of stocks valued at a half-million dollars. Hou was also spending dozens of hours each week working on IIT’s submission for a prestigious international finance competition, all while trying to juggle demanding coursework and an internship.

“I slept probably only four to five hours a night during that three-month period,” Hou says. “But it was a great experience and worth it.”

Hou had studied computer science as an undergraduate in his native China and had come to IIT because of the school’s strong quantitative finance program, where mathematical models and computational tools are applied to financial analysis. But after hearing about Stuart Investments during Orientation Week, Hou joined the group to gain experience with fundamental analysis, in which multiple economic factors are examined for their potential effect on markets. He says it was a constant challenge to switch between his coursework and Stuart Investments because quantitative analysis and fundamental analysis require vastly different mindsets.

“Initially I focused more on the quantitative side because I thought I was good at that,” Hou explains. “But as I got to know more about fundamental analysis, I felt like my real interest became about combining both.”

Under the guidance of Michael Rybak, senior lecturer of finance, Hou and dozens of other graduate and undergraduate students in Stuart Investments scrupulously researched which stocks to purchase, tracked the stocks’ progress, and calculated the return on investment. Hou is credited with helping the portfolio’s valuation to nearly double in size from the initial \$250,000 investment of IIT’s endowment.

This year Hou was among five students selected to represent IIT at the CFA Institute Research Challenge. The annual competition invites university students from across the world to test their financial-analysis skills and their ability to evaluate stocks.

Drawing upon many of the same skills they developed at Stuart Investments, the IIT team members impressed the judges and secured a first-place finish at the regional level, beating a select group of Chicago-area universities. Hou and his teammates then had the opportunity to compete at the national level in Denver this past March. Although the team did not move on to the international competition, Hou says the CFA Challenge and Stuart Investments have been invaluable opportunities to develop his financial analysis skills.

He also credits these experiences with helping him find his real interests within the finance industry and hopes to find a job where he can tap into both the quantitative and fundamental analysis sides of his mind. ●

MORE ONLINE ▶

CFA Institute Research Challenge: www.cfainstitute.org/community/challenge/Pages/index.aspx



PHOTO: MICHAEL GOSS



Better Than a Week at the Beach

by MARCIA FAYE

IIT architecture
undergraduate Shreya
Jha paints a bench in
Pilsen People Plaza as
part of ASB 2014.

PHOTO: BONNIE ROBINSON

“ASB has been a part of IIT in some form or another for many years and has grown to become one of the most popular service-learning opportunities on this campus.”

For Utsav Gandhi (EMGT '14) and 24 other IIT students, “a little house somewhere in the innards of mountain country in wild and wonderful West Virginia” won out over such cities as Las Vegas, Miami, and Cancun as the getaway destination for spring break this year. Then again, this wasn't traditional spring break but Alternative Spring Break (ASB), an annual student-led, team-building, community-service project that strives to raise awareness about such issues as homelessness, poverty, and social injustice.

IIT's nonprofit partner in the ASB experience is Habitat for Humanity, an international organization that provides affordable housing through largely volunteer efforts. IIT ASB 2014, held March 15–22, took participants to Pendleton County, W. Va., where they worked alongside two other university teams to construct an addition onto the home of a widower and his two young sons.

“ASB has been a part of IIT in some form or another for many years and has grown to become one of the most popular service-learning opportunities on this campus,” says Lynne Meyer, director of the IIT Office of Spiritual Life and Service Learning. “It allows students and the staff who travel with them to give back to the community in a direct, hands-on manner. The reward is immediate and, for the vast majority of participants, intensely emotional. They get to know each other as real people, not statistics or stereotypes, and the effect is transformative for everyone involved.”

This year, more than 75 applicants applied for 25 slots, not including spaces for three staff members and one faculty member who also joined the group. After the team was selected in early fall, members began fundraising for the journey by sending personal solicitation letters and holding spaghetti dinners, food sales, and even celebrity pie throws, featuring such IIT celebrities as President John Anderson.

Gandhi, who served as team leader before graduating this May, says his four years volunteering with ASB and such community-service projects as the IIT Big Event have fueled his desire to work in the public-service sector and even pursue a Master of Public Administration degree in the future.

“West Virginia is a starkly, desolately, and hauntingly beautiful part of the country and its people so warm, friendly, and welcoming,” said Gandhi in the days following the group's return to IIT Main Campus. “The mountains, rivers, and little towns as well as the hours we spent on the winding roads will stay in our memories—but so will the two little boys we were fortunate enough to serve. The look of joy on their faces as they saw our work



IIT students worked to build an extension onto a family's home [above] during the week and made time on weekends to sightsee.

“This project shows both art and practicality, making it very good for our community.”

—Alderman
Danny Solis
of the 25th Ward



PHOTO: BONNIE ROBINSON

Alderman Danny Solis wields a paint roller during the Chicago ASB project while Lynne Meyer, IIT's director of spiritual life and service learning [center], and AFHC's Bryn Namavari [holding cup] share a laugh.

in rendering their home more structurally safe and sound was worth all the effort, and so much more.”

Students interested in learning more about ASB 2015 can contact Alternative Spring Break officers at asb.iit@gmail.com.

Local ASB Only an “L” Ride Away

Nearly 640 miles from Pendleton County, the early spring day may have been chilly and the sky gray over 18th and Paulina streets on Chicago’s Southwest Side. But an array of handcrafted benches painted in festive colors warmed the hearts and enlivened the spirits of the crowd gathered there in Pilsen People Plaza. The outdoor furniture—which nearly a dozen IIT students constructed and erected—was the focus of the Alternative-Alternative Spring Break, a first-time local companion event to the traditional Alternative Spring

Break. Hosted by Architecture for Humanity Chicago (AFHC) and the IIT Office of Spiritual Life and Service Learning, the project, held March 19–22, was the brainchild of designers Eric Koffler and Jameson Skaife, who won an AFHC Activate! competition with the dual intent of transforming the plaza and fostering relationships. “The winners imagined benches and walls that would emphasize mural making,” says Betsy Williams, AFHC managing director and adjunct faculty member at IIT College of Architecture, noting that base colors for the furniture were selected to match murals decorating the outer walls of an adjacent building. “There are some true mural artists living in Pilsen, so there is definitely a relationship to the kind of piece being made here and the talents of the community.”

Alderman Danny Solis of the 25th Ward made a site visit to the plaza on March 22 to thank the IIT students for their efforts and to get a firsthand look at the painting.

“This project shows both art and practicality, making it very good for our community,” he said. “Anytime you can have positive activity within a community it helps

in many ways—improves business, makes the neighborhood safer, and adds to the knowledge base. I’m very happy and grateful for this.” In a moment of serendipity, a group of 45 students from Grand Valley State University (Allendale, Mich.) in town for a cultural tour of Pilsen chanced upon the painting party and surrounded the benches, picking up brushes and leaving a part of themselves in the very neighborhood they came to experience. “Our whole intent was to engage the community by having a revolving art canvas that brings everyone together,” said a smiling Koffler, looking at the plaza filled with impromptu painters. “Clearly, it’s already begun to do that.”

The Alternative-Alternative Spring Break was made possible by the generous support of partners Latent Design [principal Katherine Darnstadt (ARCH ’05)], The Resurrection Project, and the Chicago Department of Transportation Make Way For People initiative as well as funders Muller+Muller, Ltd. and Friedler Construction. Kaitlin Streyle (ARCH ’09) was AFHC project lead and Cody Fallico (ARCH 4th year) served as job captain. ●

MORE ONLINE ▶

Habitat for Humanity: www.habitat.org

Architecture for Humanity Chicago: chicago.architectureforhumanity.org



Visit iit.edu/magazine to read about

- Shay Bahramirad (Ph.D. EE '10), manager of smart grid and technology for ComEd
- Anita Burke (ME '90), vehicle chief engineer of the 2015 GMC Canyon and 2015 Chevrolet Colorado
- Irina Papuc (PHYS '12), who undertook a unique Silk Road journey by motorcycle, bus, airplane, and boat
- Top organizations where IIT graduates are working



Shay Bahramirad (Ph.D. EE '10)

PHOTO: MICHAEL GOSS



Anita Burke (ME '90)



Irina Papuc (PHYS '12)



PHOTO: MICHAEL GOSS

More than 2,600 students graduated from IIT on May 17 at a ceremony held on Ed Glancy Field on Main Campus. View a Commencement photo gallery at iit.edu/commencement.

IIT Worldwide Alumni Chapters, Clubs, and Networks

New York City (NYC) Chapter

New York City Chapter Chair Michael Siem (CHE '96) describes the NYC Chapter this way: "We have an excellent, fun, and growing group of IIT alumni in the New York/New Jersey area that is getting reconnected to IIT through our chapter." Siem's goals for the chapter are to increase alumni participation and connection to IIT as well as for members to make new friends. The chapter has established traditions such as a holiday party every December and a February Happy Hour. Members hosted IIT

President John Anderson at the Union League Club last fall and IIT Provost and Senior Vice President for Academic Affairs Alan Cramb at the NYC offices of innovation consultant Doblin this spring. Each summer the chapter welcomes alumni and interns new to NYC and hosts events for young alumni.

Chicago Chapter

"My goal as chapter chair is to further connect and engage the 35,000-plus IIT alumni in the greater Chicago region," says Steve Nargang (ME '96), Chicago

Chapter chair, noting that he plans to do this by developing a strong leadership team representing the suburban areas of Chicago as well as within the city proper. "Through increased alumni interaction and outreach, we will aim to introduce more prospective students to IIT's strengths and provide them with examples of successful professionals who are alumni. Many people may already assume that we've had an established Chicago Chapter for many years. Although alumni in the Chicago area may get opportunities to connect or work together, we

really need an organized approach to actively engage and connect such a large alumni community. By forming this official Chicago Chapter with a strong leadership team, we can tackle this challenge with a strategic approach."

Bay Area Chapter

The number of IIT alumni living in the Bay Area keeps growing at a rapid pace and is now more than 2,000. Heidi Rank (ARCH '81) is the Bay Area Chapter chair. Chapter events have been hosted in alumni homes in San Jose, Los



PHOTO: CHAS SHULYAN PHOTOGRAPHY



PHOTO: MICHAEL ESQUEL



1. The New York City Chapter learns about plans for the new World Trade Center. 2. The Bay Area Chapter hosts alumni at LinkedIn headquarters.



3. Alumni enjoy the Chicago Architecture Foundation's boat tour. 4. Alumni and campus leaders gather at the eighth IIT Asian Alumni Meeting in Seoul, South Korea.

Gatos, Fremont, and San Francisco, and at such companies as LinkedIn, IDEO, and Prysma. The Bay Area Chapter began the traditions of welcoming new alumni to the area during the summer and hosting young alumni events. The group is planning future events with opportunities to network, visit unique places, and learn from each other. Rank believes that the chapter will provide a convenient way for members to get to know each other and establish a more prominent awareness of the chapter's presence and influence in the Bay Area. "This group has the potential to be excellent for networking and recruiting students," she says.

Chapters in the United States

Volunteers who enjoy connecting IIT graduates to their alma mater manage each IIT chapter. Local chapters and their leaders are:

- Bay Area: **Heidi Rank** (ARCH '81) heidirank@sbcglobal.net
 - Chicago: **Steve Nargang** (ME '96) SNargang@hawk.iit.edu
 - Los Angeles/Orange County: **Benny Jones** (MATH '94) bennyjones.iit@gmail.com
 - New York City: **Michael Siem** (CHE '96) siem.michael@gmail.com
 - Phoenix: **Peter Koliopoulos** (ARCH '86) peter@circlewest.net
 - San Diego: **Crystal Sargent** (M.S. MCOM '02) CSargent@torreypinesbank.com
 - Seattle: **Mike Wayte** (ME '61) mikejwsr@hotmail.com
 - Washington, D.C.: **Randy Sullivan** (ES '74) R.sullivan@rlsullivan.us
- Alumni networks and activities are underway in Austin, Texas, headed by Arun Prakash (AE '99, prakaru@gmail.com) and in Minneapolis by Harley Feldman (CHEM '69, Harleyfeldman@gmail.com). The IIT alumni community is expanding to include chapters in Houston and Dallas, and is coordinating annual activities in Atlanta, Boston, and Denver.
- If you live in any of these areas and want to get involved, contact the chapter chair or email the Office of Alumni Relations at alumni@iit.edu.

Chapters in Asia

- China: **General Secretary Jennifer Meng Xia** (M.P.A. '07) gyxiameng@hotmail.com
- Hong Kong: **Victor Lo** (DSGN '73) victor_lo@goldpeak.com

Attention Asian Alumni!

Every two years, a local chapter hosts the Asian Alumni Association gathering. In 2014, the IIT Alumni Association is hosting the first Global Alumni Gathering in Chicago from September 19–20. Don't miss out on the chance to network and learn from alumni across the globe and connect with the chapter in your home country.

- India: **T. Ashok** (M.S. CS '01) ash@stagsoftware.com
- South Korea: **Hyungjin Kim** (LAW '96) intercle@gmail.com
- Taiwan: **Steve Chun Pan** (M.S. IE '77, Ph.D. MSC '88) chun@uch.edu.tw
- Thailand: **Paiboon Pongchairerks** (M.S. IE '75) paiboopo@gmail.com



"I continue to marvel at the quality of the education I received at Illinois Tech, and I am proud to support IIT with my monthly donations."

—Brian Kibbe (ME '11)

Are You A Loyal Hawk?

Loyal Hawks is IIT's new monthly giving program. Monthly giving makes supporting IIT easy and affordable for our most loyal alumni and friends.

Whether you support scholarships, the Strategic Initiatives Fund, or your college's or department's annual fund, your monthly gift will go to work immediately to support IIT students and improve their IIT experience.

IIT owes its very existence to the generosity of alumni and friends—and your monthly gifts. Whether \$5, \$50, or \$500, your gifts add up and have a lasting impact.

Show your Hawk pride! Make a gift at give.iit.edu/loyal and become a Loyal Hawk today!

2-FOR-200—A SPECIAL OFFER FOR IIT CLASSES OF 2004 AND LATER

JAY FISHER (CHE '63) wants to encourage young alumni from the past 10 years to give back to Illinois Tech. If you are among the first 200 alumni to sign up, he will generously match your first year as a Loyal Hawk \$2 to your \$1. Make your gift at give.iit.edu/2-for-200 and triple the impact of your donation.



1950s

James Albrecht (FE '53, M.S. '55), Baltimore, former vice president of McCormick & Company, Inc., received the Institute of Food Technologists Calvert L. Willey Award for long and meritorious services in July 2013.

Robert Krupp (M.S. PHYS '56, Ph.D. '65), Bradenton, Fla., received two Mom's Choice Awards for his books *Laura and Grandpa—Discovering Science Together, Part One* and *Part Two*. He is a retired professor of physics from Wilbur Wright College.

1960s

Walter E. Goldstein (CHE '61), Las Vegas, attained a Ph.D. in chemical engineering and is a Registered Professional Engineer. He is developing the commercial basis for a cell-culture process to produce universal blood from stem cells. Goldstein's second book in the environmental area, *Pharmaceutical Accumulation in the Environment: Prevention, Control, Health Effects, and Economic Impact*, was published by CRC Press in June.

N. J. "Pete" Pointner (ARCH '61, M.S. CRP '62), Wheaton, Ill., has made available *Readings in Urban Planning and Design*, a compendium of 25 published and four unpublished papers he has authored, as a free download at <http://readingsinurbanplanninganddesign.blogspot.com>. Each of the papers is an elaboration on the content of the chapters of his book *Planning Connections: Human, Natural and Man Made*. From 1965 to 1969, Pointner taught at IIT College of Architecture.

Paul M. Wellen (M.S. PSYC '67, Ph.D. '70), Chicago, received the Walter E. Heller College of Business Lifetime Achievement Award from Roosevelt University in May. A member of the college for the past 35 years, he is a professor of marketing and chair of the departments

of management, human resources, entrepreneurship, and marketing. He has won the college's Outstanding Professor award three times and the Hormel Foods/Marketing Management Association's Teaching Excellence Award.

Madan Birla (M.S. IE '69), Collierville, Tenn., had his second book, *Unleashing Creativity and Innovation: Nine Lessons from Nature for Enterprise Growth and Career Success*, published by John Wiley & Sons. His first book, *FedEx Delivers: How the World's Leading Shipping Company Keeps Innovating and Outperforming the Competition*, has been translated into several languages.

Robert Johnson (CE '69, M.S. '71), Buffalo Grove, Ill., was a key exhibitor at the Des Plaines Public Library's Science Day event last fall. For the past 25 years, he has been educating students of all ages on structural engineering. Johnson also participated in the 2014 DuPage Area Engineers Week Expo.

1970s

Steve Tonissen (EE '70), Glen Ellyn, Ill., is vice president for business

development at SmartSignal Corporation. He previously served as the company's vice president for marketing.

Anita Douthat (DSGN '72), Alexandria, Ky., had her work featured in the exhibition *Under the Sun* at the Alice F. and Harris K. Weston Art Gallery in Cincinnati from March 28 to June 8.

Jack Dongarra (M.S. CS '73), Oak Ridge, Tenn., received the 2013 ACM-IEEE Computer Society Ken Kennedy Award, which recognizes substantial contributions to programmability and productivity in computing, and substantial community service or mentoring contributions.

Carl Baldassarra (FPSE '74), Arlington Heights, Ill., is president of the Society of Fire Protection Engineers (SFPE) for 2014. An SFPE fellow, Baldassarra is a 40-year veteran of the profession. He is a member of the SFPE board of directors and has served as chair of the Public Awareness Committee, as well as on the Editorial Board of *Fire Protection Engineering* magazine. Baldassarra is an executive vice president at Rolf Jensen and Associates in Chicago.



Michael Lutch (DSGN '74), Milton, Mass., a photographer known for his work with a variety of musicians and other subjects, had several images featured on the banner of 90.9 WBUR, Boston's NPR news station.

Michael Mercer (M.S. PSYC '74, Ph.D. '80), Barrington, Ill., is author of the book *Hire the Best...and Avoid the Rest*, which is in its 13th printing.

Daniel Sansone (M.B.A. '75), Birmingham, Ala., was named executive vice president for strategy at the Vulcan Materials Company. He previously served Vulcan as executive vice president and chief financial officer.

James Sporleder (LAW '76), North Barrington, Ill., is retiring from Allstate Insurance Company after 34 years of employment in the Law & Regulation Department. As vice president and assistant general counsel, Sporleder supervised the company's legal issues involving property/casualty ceded and assumed reinsurance. In retirement, he will become an active participant in reinsurance industry arbitrations as an ARIAS U.S. Certified Arbitrator.

1980s

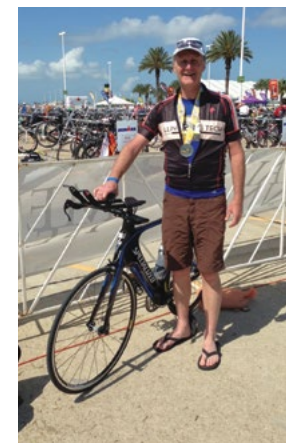
John Calabrese (ME '81), Northville, Mich., was named to the board of directors of Project Lead The Way, the nation's leading provider of science, technology, engineering, and mathematics (STEM) programs. He is vice president of global vehicle engineering for General Motors Corporation. For the past several years, Calabrese has been a leading advocate of the company's STEM educational outreach.

Mark Zerwic (M.S. PSYC '81, Ph.D. '84), Chicago, is chief of psychology at the Jesse Brown VA Medical Center and clinical associate professor at University of Illinois College of Medicine. Zerwic is also an executive coach for the VA's leadership development program and a mentor to early career psychologists in the American Psychological Association and the Association of VA Psychologist Leaders.

George Crouse (MGT '82), Troy, Ill., has been elected president of the Independent Accountants Association of Illinois.

Karen Lambert (M.S. REHB '85), Barrington, Ill., president of Advocate Good Shepherd Hospital, was featured in the "Who's Who in Health Care" section of the February 3 edition of the *Daily Herald Business Ledger*.

Richard Findlay



(M.B.A. '87), Austin, Texas, completed the 2013 Memorial Hermann IRONMAN 70.3 Texas.

Isaac Gamwo (M.A.S. CHE '87, Ph.D. '92), Murrysville, Penn., a senior research chemical engineer at the National Energy Technology Laboratory, was inducted as a fellow of the American Institute of Chemical Engineers during its annual meeting in San Francisco in November 2013. He was recognized for his research contributions in reactive multiphase flow modeling and his numerous services to the chemical engineering community.

Eduardo Gasca (M.S. ENVE '89), Chicago, is a volunteer with the Interstate Technology & Regulatory Council and received the 2013 Industry Recognition Award for Biochemical Reactors for Mining-Influenced Water.

1990s

Online Exclusive

Anita Burke

(ME '90), Detroit, is vehicle chief engineer for the new General Motors Corporation Canyon and Chevrolet Colorado trucks, unveiled at this year's Chicago Auto Show. Read about Burke in an *IIT Magazine* online exclusive at iit.edu/magazine.

Scott Ternovits

(DSGN '92), Inverness, Ill., is a founding partner of gravitytank, an innovation consultancy firm. The firm won the grand prize in the Bill & Melinda Gates Foundation Records for Life competition, which was launched to create more-effective child immunization records for countries in the developing world.

Nilesh Rathi

(CHE '93), Pune, India, is a member of the Seed Fund Committee of the National Science and Technology Entrepreneurship Development Board of India.

David Wiatrowski

(M.S. EE '93, CER. COMM '04, M.A.S. ECE '08), Woodstock, Ill., was awarded the honorary title of Dan Noble Fellow by Motorola Solutions, Inc. on November 13, 2013. Accorded to fewer than 0.50 percent of Motorola's technical professional staff, the award is the highest bestowed upon a technologist within Motorola and recognizes outstanding technical creativity, innovative ability, and productive achievements. A Distinguished Member of Motorola's technical staff, Wiatrowski presently holds 98 patents in 13 countries with another 20 inventions pending patent grants.

Patrick Funck

(M.B.A. '97), Germantown, Tenn., is senior vice president and chief information officer for Accretive Health, Inc.

Mark Cumba

(LAW '98), San Diego, was selected as a San Diego County Top Attorney finalist in the category of Municipal & Gov-

ernment Attorneys, through a peer voting process conducted by *The Daily Transcript*, San Diego Service. Additionally, the California Board of Trustees appointed Cumba as a member of the Commission on Judicial Nominees Evaluation, where he assists California's governor in the judicial selection process.

Arun Prakash

(AE '99), Austin, Texas, and his wife, Anita, are happy to announce the arrival of their second son, Arjan, who was born in March. The new parents especially enjoy seeing their sons interact. Prakash is a partner with Virgo Capital, a private equity firm focused on software company acquisitions in the lower-middle market.

2000s

Youngsoo Kim



(M.S. EE '01), Seoul, South Korea, was named the South Korea country chair for BICSI, a professional association supporting the advancement of the information and communications technology community.

Rahul Sinha

(M.S. EE '01, Ph.D. '07), Bangalore, India, was named a senior member of the (IEEE). A senior membership reflects significant experience with technology and professional maturity in an area of expertise. Sinha has been a volunteer for several technical IEEE activities.

Cari Dutcher

(CHE '04), Minneapolis, is assistant professor of mechanical engineering at the University of Minnesota.

Raejean Ferriolo



(EE '05), San Diego, was promoted to project manager in electrical engineering at Sparling, a consulting and engineering firm.

Jason Gordon

(LAW '06), Chicago, was elected co-chair of the Children's Research Fund Junior Board of the Ann & Robert H. Lurie Children's Hospital of Chicago.

Matthew Topic

(LAW '06), Chicago, was honored by the Better Government Association for his pro bono Freedom of Information Act and government transparency work.

Rachel Zahorsky

(LAW '06), Streamwood, Ill., was a 2013 Azbee Awards of Excellence finalist for her investigative reporting. The American Society of Business Press Editors sponsors the awards.

Matthew Jenkins

(LAW '07), Chicago, was named to the 2013 list of "40 Illinois Attorneys Under 40 to Watch" by *Chicago Lawyer* magazine.

Julia Lissner

(LAW '07), Chicago, was named a 2013 Illinois Rising Star by *Super Lawyer* magazine.

Abby Moeddel

(LAW '07), Palm City, Fla., was named a 2013 Rising Star by *Super Lawyer* magazine.

Jill Roberts

(LAW '08), Chicago, received the 2013 Honorable Abraham Lincoln Marovitz Public Interest Law Award from



Lillian Park

(ARCH '11), Naperville, Ill., and three colleagues at Booth Hansen received one of two Professional Merit Awards in the Architecture at Zero 2013 international design competition.

IIT Chicago-Kent College of Law in recognition of her outstanding work.

Stacy Rudd

(LAW '08), Chicago, was named to the Jewish United Fund/Jewish Federation of Metropolitan Chicago's second annual "36 Under 36" list in recognition of her work with the Consulate General of Israel to the Midwest and with the Anti-Defamation League.

Raymond Steadmon

(LAW '09), Chicago, was named a 2013 Illinois Rising Star by *Super Lawyer* magazine.

LaShon Anthony

(CER. IT '10), Chicago, is celebrating more than 15 years serving small business owners and nonprofits as a consultant. Her company, visuals4u, specializes in marketing, Web development, fundraising, and graphic design. For the past three years, she has partnered with Jewish Vocational Services and delivered a presentation at the Creative Chicago Expo in March on advanced social media strategies.

Melissa Caballero

(LAW '10), Chicago, was named a 2013 Illinois Rising Star by *Super Lawyer* magazine.

and a fellow of the Collaborative Law Institute of Illinois, expanding her practice into the collaborative law arena.

Kathleen Robson

(LAW '10), Chicago, received the 2013 Outstanding Pro Bono Service Award from IIT Chicago-Kent College of Law.

Natashia Holmes

(LAW '12), Chicago, is alderman for the Seventh Ward of Chicago.

Online Exclusive

Irina Papuc

(PHYS '12), Wonder Lake, Ill., is concluding an overland trip from Thailand to Romania, which she began in January. Read her story and blog in an *IIT Magazine* online exclusive at iit.edu/magazine.

A Legacy Gift — and Tax Wise, Too!



Morgan Fitch Jr. (CHE '43) and his wife, Helen, provided for IIT through his retirement plan.

Morgan Fitch Jr. (CHE '43) believed in the value of a college education. His daughter, Ruth White, remembers her dad saying, "The most important thing earning a college degree could do for you is to teach you that you can learn anything later in life."

Fitch grew up in the South Shore neighborhood of Chicago. At IIT, he was an active student with an impressive list of extracurricular activities. In addition to belonging to four fraternities, he was a Black Knight, president of his senior class, features editor for *TechNews*, editor-in-chief of the *Integral*, and founder and first president of the Engineers Cooperative, to name just a few.

Fitch enlisted in the United States Navy after graduation. When his active-duty service was completed, he renewed his pursuit of an education, earning a law degree and subsequently practicing law for more than 58 years.

"IIT was always important to my father; he had fond memories of his time there. Making a gift to the university was of primary importance to him," says White.

Fitch designated a portion of his individual retirement account to IIT. After Fitch and his wife, Helen, passed, IIT received the bequest.

The benefits of designating IIT as a beneficiary of your retirement plan are many:

- Remove taxable assets from your estate
- Avoid having heirs pay tax on the proceeds
- It's easy to do—just download the form from your plan administrator
- No need to redo your will or trust

Visit iit.edu/giftplanning to learn about how you can benefit from such giving methods as retirement plans. Contact Stuart Gold, director of gift planning, at sgold@iit.edu or 312.567.5020.

If you have named IIT as a beneficiary in your estate plan, please let us know so that we may acknowledge your generosity and include you as a member of our esteemed Gunsaulus Society.

ALUMNI AWARDS 2014

Awards Honor Alumni Leaders and Visionaries

On April 25, members of the IIT family gathered together in Hermann Hall for the annual Alumni Awards ceremony to celebrate a tradition of recognizing alumni and friends who are leaders and visionaries in business and their communities.

Winners of the 2014 Alumni Awards

Alumni Medal

Robert A. Cornog
(MET '61)

Alumni Service Award

Adrian R. Nemcek
(EE '70)

Collens Merit Award

Edward R. Bedrosian
(CE '54)

Galvin Award

Caryl Pucci Rettaliata

International Award of Merit

Dhongchai Lamsam
(M.S. IE '70)

Lifetime Achievement Award

Pedro L. Rustan Jr.
(EE '70, M.S. '70)

Outstanding Young Alumnus/ Alumna Award

Tarek A. Fadel
(LAW '03)

Donna G. Heidkamp
(M.S. FMT '99)

Professional Achievement Award

Kenneth B. Josephson
(M.S. DSGN '60)

Herbert S. Levinson
(CE '49)

Sarabjit S. Randhava
(M.S. CHE '66, Ph.D. '70)



1. IIT President John Anderson [top row, far left] and Scott Ternovits [top row, far right], chair of the IIT Alumni Association Alumni Awards Committee, join the 2014 Alumni Awards recipients [left to right—bottom row] Herbert Levinson, Edward Bedrosian, Donna Heidkamp, Adrian Nemcek, [top row, beginning second from left] Tarek Fadel, Jose Perez [accepting for his late uncle, Pedro L. Rustan Jr.], Robert Cornog, Kenneth Josephson, and Sarabjit Randhava.

2. IIT President John Anderson [left] and Alumni Medal recipient Robert Cornog [right] join Cornog's scholarship recipient, Elliot Chibe, at the Alumni Awards.

3. Outstanding Young Alumna recipient Donna Heidkamp engages in conversation with her family and supporters at the Alumni Awards luncheon.

4. Alumni, family, friends, and university faculty and staff listen to IIT President John Anderson pay tribute to the recipients of the 2014 Alumni Awards.

5. Alumni Service Award recipient Adrian Nemcek, former chair of the Alumni Association Board of Directors, is joined by IIT President John Anderson at the awards luncheon.





1. IN GRATITUDE IIT students pose for a photo after writing thank you cards, signing a banner, and videotaping their gratitude to donors on Student Engagement and Philanthropy Day. *Photo: Bonnie Robinson Photography*

2. PIZZA AND PI Alumni such as [left to right] Ross Brazzale (CE '10, M.A.S. STE '13), Arturo Veiga Lopez (M.A.S. MAE '14), and David Biedrzycki (CS '13) celebrated Pi Day at Headquarters Beercade in Chicago with vintage arcade games and pizza.

3. NEW YORK ALUMNI GATHERING New York alumni gather at Dublin.

4. MIES BIRTHDAY PARTY IIT College of Architecture students attend the 128th birthday celebration of Mies. *Photo: Michael Goss*

5. PRYSM Elizabeth Corson (CHE '11) and Manuel Lopez Morales (AE '10) with IIT Provost and Senior Vice President for Academic Affairs Alan Cramb [right] at the Bay Area Chapter gathering at Prysm in San Jose, Calif. *Photo: Splash Studios, Inc.*

6. STUDENT PROJECT SHOWCASE Chicago Chapter alumni leaders [left to right] Ann Trandai (EE '89, M.S. EE '93), Lucy Hynes (EE '88), and Diane Rink (EE '99), along with Ted Erikson (CHE '52, M.S. CHEM '59), enjoy a night at IIT Rice Campus for the IIT Student Project Showcase.

7. GUNSAULUS SOCIETY LUNCHEON IIT President John Anderson [back row, center] was the featured speaker at the Gunsaulus Society luncheon in Palo Alto, Calif. *Photo: Splash Studios, Inc.*

8. SOUTHERN CALIFORNIA GATHERING [Left to right] Edward Schaschl (CHE '45), IIT Provost and Senior Vice President for Academic Affairs Alan Cramb, and IIT Board of Trustees member Andrea Berry (CS '84) at a Southern California Chapter event.

9. ENGINEERING FUTURE SUCCESS Scott Elmer (M.A.S. ITM '10) enjoys time with family during the DuPage Area Engineers Week alumni breakfast at IIT Rice Campus.

10. BOARD OF TRUSTEES CELEBRATION Alan "Bud" Wendorf (ME '71) [center] and his wife, Suzanne [second from left], with many of the Alan and Suzanne Wendorf Scholars [left to right]: Mariah Dixon, Adam Lilliebridge, Joshua Burman, Allen White, and Maria Garcia at the February IIT Board of Trustees celebration honoring Wendorf as the new chairman of the board. *Photo: Bonnie Robinson Photography*

ALUMNI EVENTS

For information about the upcoming alumni events listed here and other alumni activities, please contact the Office of Alumni Relations at alumni@iit.edu or 312.567.5040. Visit alumni.iit.edu to join our online community.

Welcome Alumni!

New York, Washington, D.C., Seattle, and the Bay Area

Alumni are invited to welcome the 2014 graduates to the IIT Alumni Association in the Washington, D.C., Seattle, and Bay Area locales. Watch your email for details about these events.

Help Build a LEGO City

Saturday, July 12, 2014

**IIT Main Campus
Chicago**

Calling all alumni families! Come and build your own structures with LEGOs. Use your imagination and add it to our LEGO city. Join us for breakfast and early access to LEGOs starting at 8 a.m. This event is free of charge but registration is required. The event opens to the public at 9 a.m.

Kane County Cougars

Baseball Game

Sunday, July 13, 2014

**Fifth Third Bank Baseball Field
Geneva, Ill.**

Spend a summer afternoon with fellow alumni on a rooftop deck watching the Kane County Cougars engage in America's favorite pastime.

Denver Alumni Gathering

Thursday, July 24, 2014

**The Walnut Room
Denver**

Spend an evening with IIT at The Walnut Room—Denver's premiere American pizzeria. Mingle with alumni and friends over food and drinks on the patio!

IIT and the Chicago White Sox—a Home Run!

Tuesday, August 5, 2014

**IIT Main Campus and
U.S. Cellular Field
Chicago**

Join fellow alumni for an evening of baseball. Enjoy complimentary on-campus parking and a pre-game party before heading over to U.S. Cellular Field to cheer on the Chicago White Sox as they take on the Texas Rangers.

GLOBAL GATHERING, HOMECOMING, AND REUNIONS 2014

September 19–20, 2014

IIT Main Campus | Chicago

Join alumni, friends, and current students to celebrate more than a century of Tech Traditions! Weekend activities include:

Global Alumni Gathering

This seminal event will bring together faculty, students, and alumni from around the world to celebrate IIT's imprint on innovation. They will discuss topics such as energy, intellectual property rights, and innovation.

Golden Society Reunion

This reunion celebrates alumni who graduated from IIT 50 or more years ago. Members of the Class of 1964 will receive their golden medallions in recognition of this milestone anniversary. If you missed your 50th reunion year, join us to receive your class medallion. All alumni who graduated in 1964 or prior are encouraged to attend.

25th Reunion

This special event celebrates IIT alumni who graduated in 1989.

Reunite with classmates, reminisce about the '80s, and experience a small slice of campus life today.

Athletic Events

Cheer on the Scarlet Hawks! Attend basketball, soccer, and volleyball games with students, staff, and fellow alumni. Also plan to attend the athletics reception on Saturday evening.

Gather in The Bog!*

Join students and alumni for an informal gathering in The Bog to mark the fifth anniversary of the Student Gift Campaign celebration with food, drinks, and lots of fun.

Carnival**

The Homecoming carnival is a family affair! Interact with current students and catch up with old friends while enjoying food, drinks, and games in the alumni beer garden.

Visit alumni.iit.edu/homecoming for up-to-date information on all activities and more.

* Friday, September 19

** Saturday, September 20



Barry Bernstein

IIT Armour College of Engineering and IIT College of Science
Professor Emeritus of Chemical Engineering and Applied Mathematics

A member of the IIT faculty for more than 40 years, Barry Bernstein was recognized as an expert in the mechanical and thermodynamic behavior of materials. He was instrumental in the development of the BKZ (Bernstein, Kearsley, and Zapas) mathematical model, widely used to study polymer melts and bulk polymers. He and his wife, Judith Bonem, were avid travelers and visited a number of locales in Asia and Europe, among others.

In addition to his wife, Bernstein is survived by five children and many grandchildren.

INMEMORIAM

Milton Shaffner

LL.B. '39
Northbrook, Ill.

Harry Soukup

ME '39
Venice, Fla.

Morgan Fitch

CHE '43
Kalamazoo, Mich.

S. William Kapranos

CHE '43
Clearlake, Calif.

Robert Kirk

M.S. CHE '43
Leverett, Mass.

Burton Snyder

ME '43
Stevensville, Mich.

Harry Anderson

CHE '44
San Rafael, Calif.

Owen Kane

ME '45
Cortland, Ohio

C. Frederick Leydig

CHE '45
Barrington, Ill.

Sherman Strauss

CHEM '45
San Rafael, Calif.

Howard Poulter

EE '46
Oakland, Calif.

A. Earl Austin Jr.

CHE '47
Somerset, N.J.

John Bonin

ME '47, M.S. '48
Los Gatos, Calif.

Cheruvuri Kotieth Chandran

M.S. EE '47
Columbia, Md.

Warren Moore

ME '47
Crystal Lake, Ill.

Robert Cunningham

ARCH '48
Cupertino, Calif.

Ida Gabler

BIOL '48
Bedford, Texas

Edward Kosner

MATH '48
Northbrook, Ill.

Robert Nystrom

LAW '49
Punta Gorda, Fla.

Julian Snyder

CE '49, M.S. '51
Buffalo, N.Y.

Norman Toberman

CE '49
Arlington Heights, Ill.

Dan Brusslan

LAW '50
Buffalo Grove, Ill.

Charles Dolejs

CE '50
Bonita Springs, Fla.

Peter Kocsis

CE '50
Barrington, Ill.

Edwin Michelson

DSGN '50
Wheaton, Ill.

Robert Reeves

ARCH '50
Piedmont, Calif.

Clair Richardson

LAW '50
Oxford, Ohio

James Sevcik

ME '50
Lombard, Ill.

Richard Bailie

CHE '51
New Bern, N.C.

John Devereux

FE '51
Randolph, N.J.

Elmer Foote

DSGN '51
Pennellville, N.Y.

Gilbert Shaw Krohn

ME '51
Eustis, Fla.

Raymond Mathisen

LL.B. '52
Palm Beach Gardens, Fla.

Jerome Mestdagh

CHE '52
Elwood, Ill.

Richard Sawicki

DSGN '52
New Canaan, Conn.

Ira Dawson

LL.B. '53
Chicago

Ira Hardman

ARCH '53
Matteson, Ill.

Leo Slattery

EE '53
Mendota Heights, Minn.

Walter Schmidt

ME '54
Mundelein, Ill.

Marshall Wernick

CHE '54
Los Angeles

Vernon Mellentin

ME '55
Galesburg, Ill.

Orville Northstrum Jr.

ME '55
Mount Prospect, Ill.

Richard Spector

LL.B. '55
Chicago

Robert Beattie

CE '56
Sarasota, Fla.

Marcia Martin

ARCH '56
Wheaton, Ill.

Karl Alsens

ME '57, EE '60
Skokie, Ill.

H. P. Davis Rockwell

ARCH '57
North Brandford, Conn.

Robert Tooper

PHYS '57, Ph.D. '65
Los Angeles

James E. Weise

CHE '57
Rapid City, S.D.

Gerald Tuite

LAW '58
Fontana, Wis.

Louis Godette Jr.

BE '59
Tinley Park, Ill.

Richard Rochester

LL.B. '59
Northbrook, Ill.

Marianna Cook

LAW '60
Roseburg, Ore.

Herbert Hacker

ARCH '60, M.B.A. '69
Phoenix

Fred Lieder

EE '60
Lincolnwood, Ill.

Richard Dean

BE '62
St. Louis

William Herring

MET '62
Palm Desert, Calif.

Louis Pagones

CRP '63
Chicago

Leon Dudzik

M.B.A. '64
Lisle, Ill.

Stephen Ginocchio

CHEM '64
Kimberling City, Mo.

John Firth Jr.

CE '65
Roselle, Ill.

Phillip Berkowitz

CHEM '66
Beacon Falls, Conn.

Alan Schmidt

MAE '67
Oregon, Wis.

Jack Engbrecht

MAE '71
Phoenix

Clarence Hilbrick Jr.

CE '71
Beaverton, Ore.

James Brodie

M.P.A. '73
Orland Park, Ill.

Suzanne Sumner

M.Des. '73
Wilmette, Ill.

Georgiana Daskais

LAW '75
Ventura, Calif.

John Bencik

EE '76
Austin, Texas

Alan Schencker

LAW '76
Riverwoods, Ill.

Gregory Slovacek

LAW '76
Dundee, Ill.

David Baum

LAW '79
Evanston, Ill.

Richard Kundrat

MET '79, M.S. '81
Chicago

Wenceslaus Prikazsky

ME '79
Hinsdale, Ill.

John Walsh

LAW '80
Orland Park, Ill.

Robert Carberry

ARCH '81
Chicago

Rosabel Seigan

LAW '82
Chicago

Booker Washington

M.P.A. '84
Algonquin, Ill.

Christopher Collins

LAW '88
Marietta, Ga.

Leatrice Schmidt

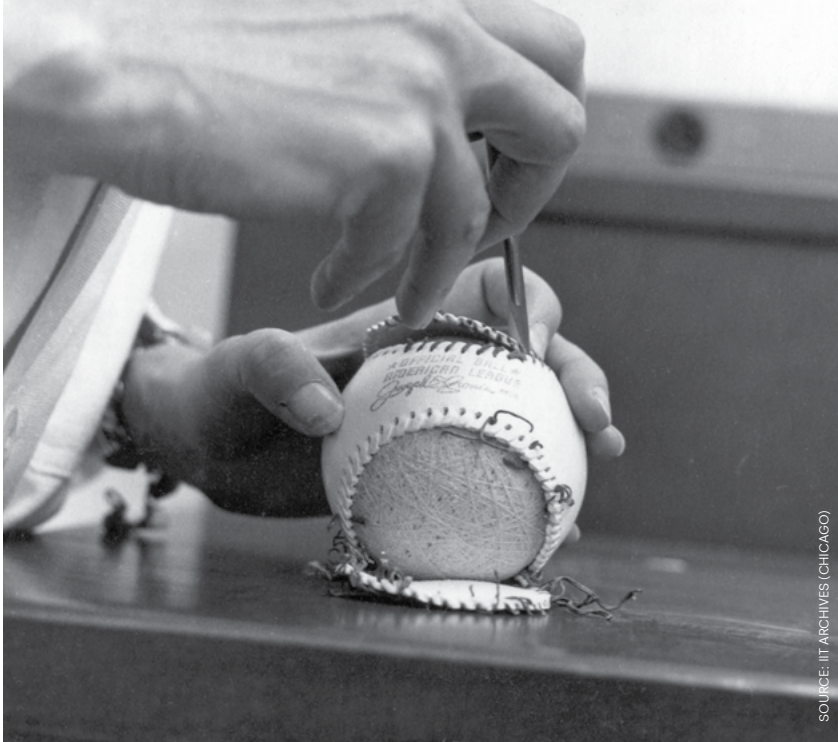
LAW '90
Lake Forest, Ill.

Nancy Shannon-Rooney

LAW '90
Scottsdale, Ariz.

IIT and ARF *Hit It Out of the Park*

by MARCIA FAYE



In 1961, an Armour Research Foundation staff member sliced open a baseball in an attempt to determine its “liveliness.”

T rue-blue Chicago Major League Baseball (MLB) fans may remember 1961 as the time when Cubs left fielder Billy Williams was named Rookie of the Year.

But for most fans of either the National or American Leagues, the watershed sports event of that year was Roger Maris’s 61st home run on October 1—a bat crack heard ’round the world—when he broke Babe Ruth’s home run record of 1927. That shot also set off a shockwave of suspicion aimed at an inanimate object perhaps more beloved than the Babe himself: the baseball.

Were the baseballs of 1961 spunkier balls than those used during the Sultan of Swat’s reign? With a total of 2,730 homers, 1961 was also the greatest home run year since 1901, when America’s favorite pastime became a two-league sport. To help quell the debate that stretched from the dugout to living rooms across the country, the editors of the magazine *Popular Mechanics* contacted a scientific organization they believed was “the best—and most independent—testing facility we know—Armour Research Foundation [ARF] at Illinois Institute of Technology.”¹

A team led by Caroline Miller, chief research chemist, analyzed official MLB balls from 1927, 1930, and 1961. Balls were dropped, bounced, and observed; batted from a custom-made machine; blown through a wind tunnel; and dissected, weighed, and otherwise scrutinized. After four months of testing, the editors and scientists determined that

- the baseballs of 1961 were not identical in composition to the balls the Babe homered; and
- the baseballs of 1961 were “livelier” overall than earlier balls in that they could be hit a greater distance than the earlier balls.²

Maris’s celebratory season held until 2001 when the National League’s Barry Bonds broke the standing record with 12 more home runs.

¹ Editors, “Has the Baseball Really Been Changed?” *Popular Mechanics*, October 1961, vol. 116, no. 4: 134–137, 264, 266.

² Laura E. Talley, “The Science of Baseball.” IIT Research Institute: A Retrospective: Spanning the Years of 1936–2002.



Alumnus Nishanth Samala's growth from curious student to budding entrepreneur perfectly embodies IIT's distinctive brand of education—focused on innovation and fueled by a cross-flow of knowledge and ideas.

The new Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship—the capstone capital project in *Fueling Innovation: The Campaign for IIT*—will be home to IPRO, the Idea Shop, and IIT Institute of Design, among others.

(See pages 8–9 or visit fuelinginnovation.iit.edu for more on plans for the Kaplan Institute.)

"If you think about it, we all drive our cars on a faith-based system," says Nishanth Samala (CS '14). "We get into our cars and hope and pray that they drive that day and no weird dashboard lights or sounds go off. Most of us have no idea what is going on inside, what to do when problems occur, or how much fixing all of it should cost."

A \$2,000 invoice for routine maintenance on his car got Samala thinking. He wondered why it cost so much and more importantly, why there was such an imbalance of available information between those who drove their cars and those who fixed them.

So Samala developed an app that translates a car's computer signals and data into text and colors. The app—Strados—uses a small diagnostic device that plugs into the underside of the car's steering wheel. Diagnosed problems are translated for the user and assigned a severity rating.

Samala, who started at IIT as an aeronautical engineering major, credits his first Interprofessional Projects (IPRO) Program project—an unmanned aerial vehicle—for leading him to a degree in computer science and Strados. *Inc.com* recently listed Samala's Strados on its list of "America's Coolest College Startups 2014."

Visit fuelinginnovation.iit.edu to learn more about innovators like Samala.

Tell us your innovation story!

We want to know how you are affecting change in your communities, regions, and nations. Email us at innovation@iit.edu along with your name, class, and major.

fuelinginnovation
THE CAMPAIGN FOR IIT

September 19-20, 2014

This is the time to come back to campus! Network with CEOs and industry leaders, connect with alumni and friends, meet students, interact with faculty, hear from experts. Don't miss out.



Global Alumni Gathering

Our first-ever Global Alumni Gathering will bring together alumni and faculty from around the world to celebrate IIT's distinctive imprint on innovation.

Visit alumni.iit.edu/global-gathering to see a list of topics, speakers, and panel discussions.

Golden Society Reunion

Class of 1964 and all prior years: Celebrate the 50th (or greater) anniversary of your graduation! Connect with old friends, receive your golden medallion, and reminisce about your IIT days. Visit alumni.iit.edu/golden for details.

25th Reunion

Calling all alumni from the Class of 1989! It's been 25 years since you graduated! Reunite with friends, meet and mingle with current students at Homecoming, and experience a slice of campus life today. Visit alumni.iit.edu/reunion-1989 for details.

Homecoming

Carnival, alumni beer garden, campus tours, sporting events, affinity and Greek activities—so much to do! Visit alumni.iit.edu/homecoming for full details.

For questions about these and other alumni events, contact the Office of Alumni Relations at alumni@iit.edu or 312.567.5040.