

An Intersection of Art and Architecture

Juan De La Mora's (ARCH '09) architecture career has always tangled with his talent and passion for street art. Now, after getting some media recognition, he's ready for a new chapter.

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Juan De La Mora stands in front of his mural, "May Flowers," located in Chicago's Humboldt Park neighborhood
Photo By: Scott Benbrook

Features

Finding the Concept

By Tad Vezner

There have been numerous instances in Juan De La Mora's life where he felt torn between two worlds. Take his career, for instance.

Then there's his heritage. As a muralist, De La Mora has left his mark all across the Chicago metro area—but also in Mexico, where his parents are from.

"Chicagoans look at you as Mexican. Mexicans look at you as American," he says. Of his murals, he adds, "It's like Mexican food in America: It's not the same, but you put a twist in."

He's painted roughly 50 murals in all, receiving [local media attention](#) in addition to plenty of Instagram and Pinterest attention. Tourists and influencers sometimes pick his works to pose in front of. As for his architectural models, he's been more of a conceptual designer than a frontman.

"Juan is one of my favorite current artists based in Chicago from Mexico. With his career, being Mexican, I kind of understand this notion of being in the shadows sometimes," says Rafael Robles, the co-founder of architectural design firm [Duo Development](#).

"When I think of Juan and his work, I think of two very distinct things. On the one hand, there's the architecture, and on the other hand there's the murals," says client Lou Bank, founder of Sacred, a Chicago-based nonprofit that supports Mexican communities that distribute heritage agave spirits.

"They seem like two very disparate forms of art, but I feel like what he's trying to do is tell a story with each of them."

A UNIQUE EDUCATION

De La Mora really started mixing art and architecture after moving to Portugal. It was the second time he'd left architecture school.

"My community of artists look at me as an architect. And the community of architects look at me as an artist,"

—Juan De La Mora

The first time was from Illinois Institute of Technology, after extending a trip abroad to Madrid in 2000. He decided to stay in Spain for what eventually turned out to be five years because, "I felt the poetry of architecture there. People don't talk about it that way here. You're maintaining a tradition, a legacy in Spain."

But while going to school part-time at Escuela Técnica Superior de Arquitectura de Madrid, he also started two side gigs that conform to his dichotomous interests: an architectural model business and street art.

For his street art, he focused on a national celebrity: the white albino gorilla, Snowflake—the only one of its kind in captivity. De La Mora felt an affinity within the gorilla's eyes and expressions.

"You can relate to some of the things about him. Feeling different, trying to fit in," De La Mora says.

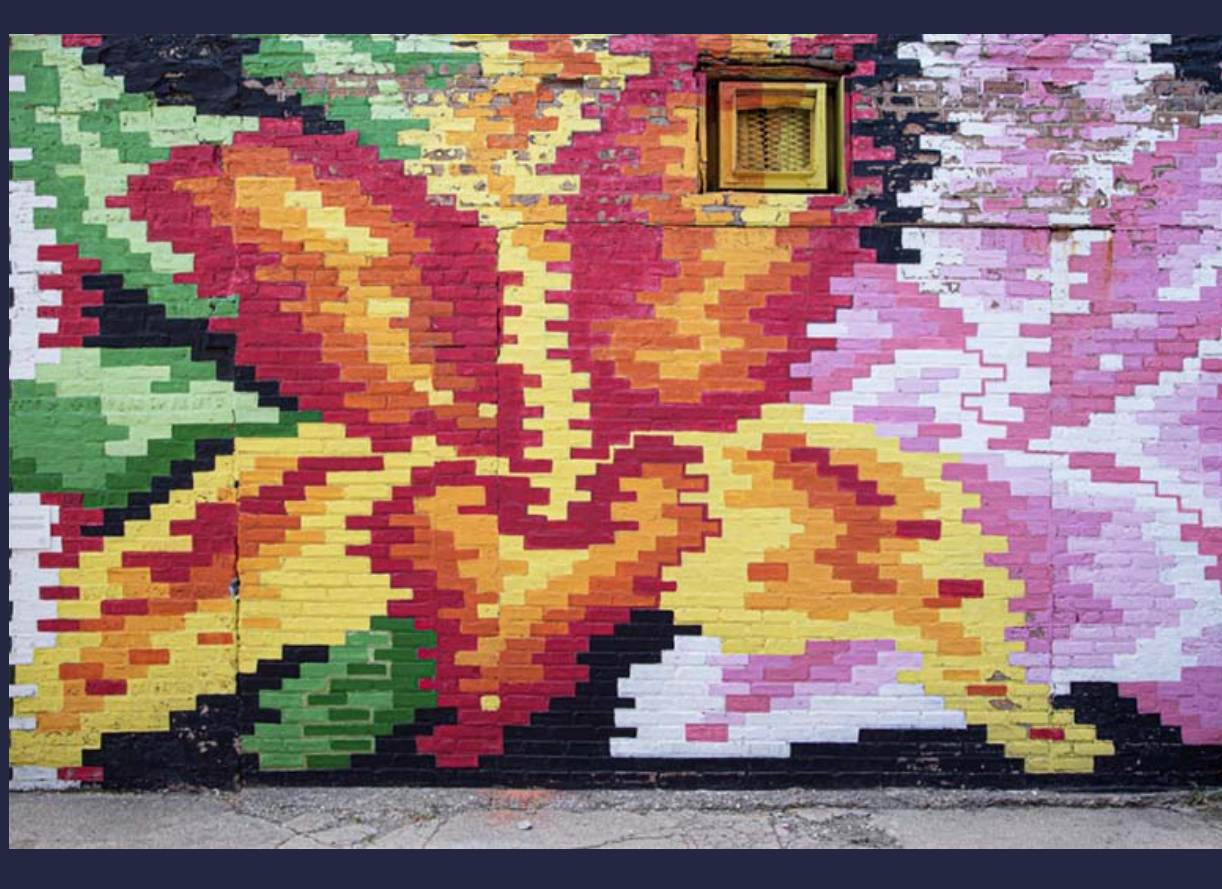
His work was notable enough to attract some esoteric patrons, including a pair of gallerists who told him about a tiny town in Portugal: Montemor-o-Velho.

A rural town of about 800 people, Montemor-o-Velho was built around a medieval castle on a hill; the gallerists had an acquaintance who owned multiple properties there. De La Mora could go there and paint, as well as create sculptures and larger constructs of wood, copper, and construction materials among the town's patios, courtyards, and gardens. An abundance of art and architecture.

So that's what De La Mora did, taking an eight-hour bus ride to Portugal monthly, then back to Madrid to earn enough to keep his art going. His first commission, Torre Azul, was a multi-story, sky-blue, wooden watchtower constructed near the base of the castle. Schooling drifted by the wayside.

Artists always told De La Mora they could sense his architectural background—its structure and discipline. He even considered going to a third architecture school in Coimbra, Portugal. But when he went to visit the dean, she offered him some blunt advice.

"It would be a waste. Go back to Chicago or Madrid," she told him. If it was an education he wanted, go big.



MAKING A MARK

After seven years abroad, De La Mora returned to Illinois Tech and rediscovered why he'd enrolled in the first place.

"I grew up as such a shy kid. Architecture school made me realize that's there's more people like me. If you come into a place where people recognize you, your confidence grows," he says.

Born and raised in the southwest Chicago neighborhood of Chicago Lawn by first-generation Mexican immigrants, De La Mora suffered from Kawasaki disease as a child, a pulmonary condition that made his heart behave like a 65-year-old's. So, he "drew every day. Robots, buildings, trucks, airplanes. Pretty much my dad's hobbies. From my dad, I knew I wanted to be an architect."

His father, a Chicago mechanic who built model airplanes to show off at competitions, started having De La Mora work in his mechanics shop at the age of 8. The money, invested early in the stock market, helped support De La Mora in Spain.

After finishing his degree from Illinois Tech in three semesters, De La Mora began working at [Studio Gang](#), where he directed the architectural firm's model shop. There, he helped design thousands of models for more than a decade while creating murals on the side.

"Murals were my meditation, my pull away from architecture, when I don't have to be in design team meetings. Just myself," De La Mora says. Still, when painting them, he makes a point to talk with anyone who stops to watch. And he didn't worry about graffiti being painted over his art.

"The rule on the street is if you paint a mural, you respect it. I never put earbuds in. I want people to approach me," he says. It's important to include as much community input as possible: "Otherwise, why do it?" he asks.

Bank notes that De La Mora went out of his way to research several murals about the traditional agave distillation process. He traveled to rural Mexico, where he learned about the process himself, cooking plants in underground, stone-lined ovens.

"He wanted to see the authentic part of it. That's how he is," Bank says. One mural now rests on the outer walls of CH Distillery in Chicago's Pilsen neighborhood, another on the side of a liquor store in the Little Village neighborhood. De La Mora painted the third on the garage door of his own home in Chicago's Pilsen neighborhood.

More recently, De La Mora attracted media attention for painting a 90-foot-long pedestrian tunnel in Glen Ellyn, Illinois, a Chicago suburb. His design, contracted by the College of DuPage in 2022, was picked via an online vote that included more than 60 other proposals.

True to his philosophy, De La Mora tied the project to its hometown. He created a mural of winding branches and leaves—an homage to local trees drifting through their seasonal changes—after researching that the town was associated with trees and once stood in a heavily forested area.

As for architecture, when the COVID-19 pandemic hit, De La Mora decided to leave Studio Gang. "I wanted to look for and create my own design problems to solve," he says.

He's started his own art and architecture practice, JDLM Designs, to try to "capture the human side of architecture."

Notes Duo Development founder Robles, who once worked with De La Mora at Studio Gang and considered him a mentor, "He doesn't just do murals, just do models. I would describe Juan as more of a conceptual artist. With model making, he's really good at pushing the concepts of a project forward."

Adds De La Mora, "The hardest part in architecture is to maintain your concept. Once the concept gets diluted, it's like, what am I doing this for?"



Photo By: Scott Benbrook

Features

The Opportunity Maker

By Tad Vezner

Right after college, Ruth Lopez-McCarthy (LAW '09) started doorknocking. It was the community organizing, block club kind of outreach: pushing for more alley lights, safety patrols, better garbage pickup.

On the first day, she knocked on the door of a childhood friend. They talked about their childhood, growing up in the Belmont-Cragin neighborhood of Chicago.

“I met friends and leaders who would share their immigration stories with me. I really felt a calling to answer, with my skills and lived experience. I know what it is to be a child of immigrants, with that understanding that [the life you built] could all go away,” Lopez-McCarthy says.

With a father who immigrated from Peru and a mother who immigrated from Colombia, Lopez-McCarthy—born in Chicago—didn’t learn to speak English until she was five. Her father was imprisoned when she was 1-year-old, leaving her mother and grandmother to raise her for a time. Her mother went back to school to become a public school teacher.

Her father, upon being released, had a deportation hearing. He received representation from immigration services and was able to stay, eventually becoming a tool and die maker and never breaking the law again. She thought a lot about her father as she decided upon a career.

“In Catholic school, I learned about liberation theology...but it wasn’t until I was in college that I really decided and thought about what I wanted to do,” she says.

Since then, Lopez-McCarthy has become a leader in immigration reform, working for major organizations both locally and nationally and most recently being appointed to a powerful state position by the Illinois governor.

Now that she’s done “the advocacy, the organizing, the direct lawyering, the policy and legislative work,” she admits, “being a mother in social justice work is very difficult, the pay isn’t very good. When your calling is a passion it can require a lot of yourself....”

“But I benefited immensely under a system that is now broken. Honestly I can’t see myself doing anything else.”

Going National

After graduating from Chicago-Kent College of Law, Lopez-McCarthy traveled to Washington, D.C., to start working on immigration reform—a path that she has now followed for more than a decade.

At the time, a national push for comprehensive reform was kicking off under President Barack Obama, and Lopez-McCarthy, building on her community organizing skills, became a deputy field director for the Reform Immigration for America campaign. She coordinated campaigns and events and identified the swing votes in the United States Congress. In the end, the U.S. Senate passed a bill, but it did not pass the House.

“It’s never going to get easier for immigration in America. It [immigration work] takes a fortitude I’m not sure I have; it’s remarkable she’s done it as long as she has,” says Gabe Gonzalez, a longtime community organizer and activist who is now chief of staff at the Sierra Club. He met Lopez-McCarthy when she started organizing in Chicago and got to know her better in Washington.

“She works in a world where it’s very easy to get lost. In politics...you can become a gamer. Ruth is not like that, she’s completely grounded in her beliefs,” Gonzalez says.

Undeterred by the Washington stalemate, Lopez-McCarthy returned to Chicago in 2014 and began working at the Illinois Coalition for Immigrant and Refugee Rights, a nonprofit focused on immigration reform, specifically an Obama executive order relating to Deferred Action for Parent Arrivals (DAPA).

The order was halted by a lawsuit in 2015. Shifting focus, Lopez-McCarthy then took a job at the National Immigrant Justice Center in Chicago, one of the largest nonprofits offering legal services to immigrants in Chicago.

She then became the managing attorney for an immigrant legal-protection fund created by a city grant—at a time when the Trump administration was making hundreds of changes to immigration legal code every year.

“You would wake up and say, ‘What’s different today?’” Lopez-McCarthy says.

In the first year, her office did 3,000 legal screenings. On top of managing the program, Lopez-McCarthy had her own caseload.

Katarina A. Ramos, current managing attorney at the National Immigrant Justice Center, worked with Lopez-McCarthy when the protection fund was created.

“Ruth really created the project and made it what it is,” Ramos says. “One of the things I loved about working with her was she never lost that sense of humanity. When you’re working in a stressful situation, it can be really easy to just ‘get the work done.’ She checked in, made sure our health was OK.”

Still, Lopez-McCarthy often took a step beyond the job description. Ramos remembers her going to a hospital after hours to stop a police officer from turning over an immigrant to federal authorities.

“She went and stood between this officer and this person, started calling every contact in her book, and eventually did convince the officer he couldn’t turn this undocumented person over,” Ramos says.

“I think for people who are involved in social justice, there is the question of, do you work in a broken system or try to fix the system? Ruth was always more of the ‘how do we fix the system’ school,” Ramos adds.

Pushing Boulders

Still, the work took a toll on Lopez-McCarthy. She watched the immigration court dates backlog increase into the tens of thousands, gave birth to her third child, and decided to take some family time.

“It’s very frustrating; it’s a very hard field to work in,” Lopez-McCarthy says. “I felt like Sisyphus [of the Greek legend], pushing a boulder up and up. What I’ve seen is that the boulder has just gotten further and further. Congress hasn’t touched this issue [immigration reform] in 30–40 years in any substantive way. And since then our rhetoric has only worsened.”

But in that time of reflection, an opportunity arose. Her acquaintances told her about a new position created by Governor J. B. Pritzker in the Illinois Department of Human Services. The department’s senior Emerson immigration fellow would work with various state agencies to help them understand immigrant issues and concerns, as well as influence policy.

She got the job in 2021, and she has also served as a member of the Illinois Immigrant Impact Task Force, which authored a report calling for a full assessment of service needs in Illinois—particularly outside the Chicago metropolitan area.

It’s the state’s rural areas that are seeing the greatest proportional growth in immigrants, Lopez-McCarthy notes, and she’s working to identify services that can help.

“I think people have a lot of misconceptions about immigrants and why they immigrate. Our workforce is highly dependent on immigrants and immigration, high-skilled and low-skilled. They pay so much into our federal tax system, and those that don’t have status will never get that back,” she says.

In the end, Lopez-McCarthy notes, everyone agrees that the system is broken. How it’s broken is a point of contention, but from her perspective, she sees immigrant families waiting 20 or more years for a visa, with many hiding in the meantime.

“I do put myself in the shoes of others. I can see where people are concerned about change. I would ask people to see how things we’ve done in the past haven’t worked. Family members have died waiting to reunite. Our whole system is predicated on something that doesn’t work anymore...The system has to be made so it’s workable,” she says.

“We were all given an opportunity. That’s the reason why I continue to do the work I do.”

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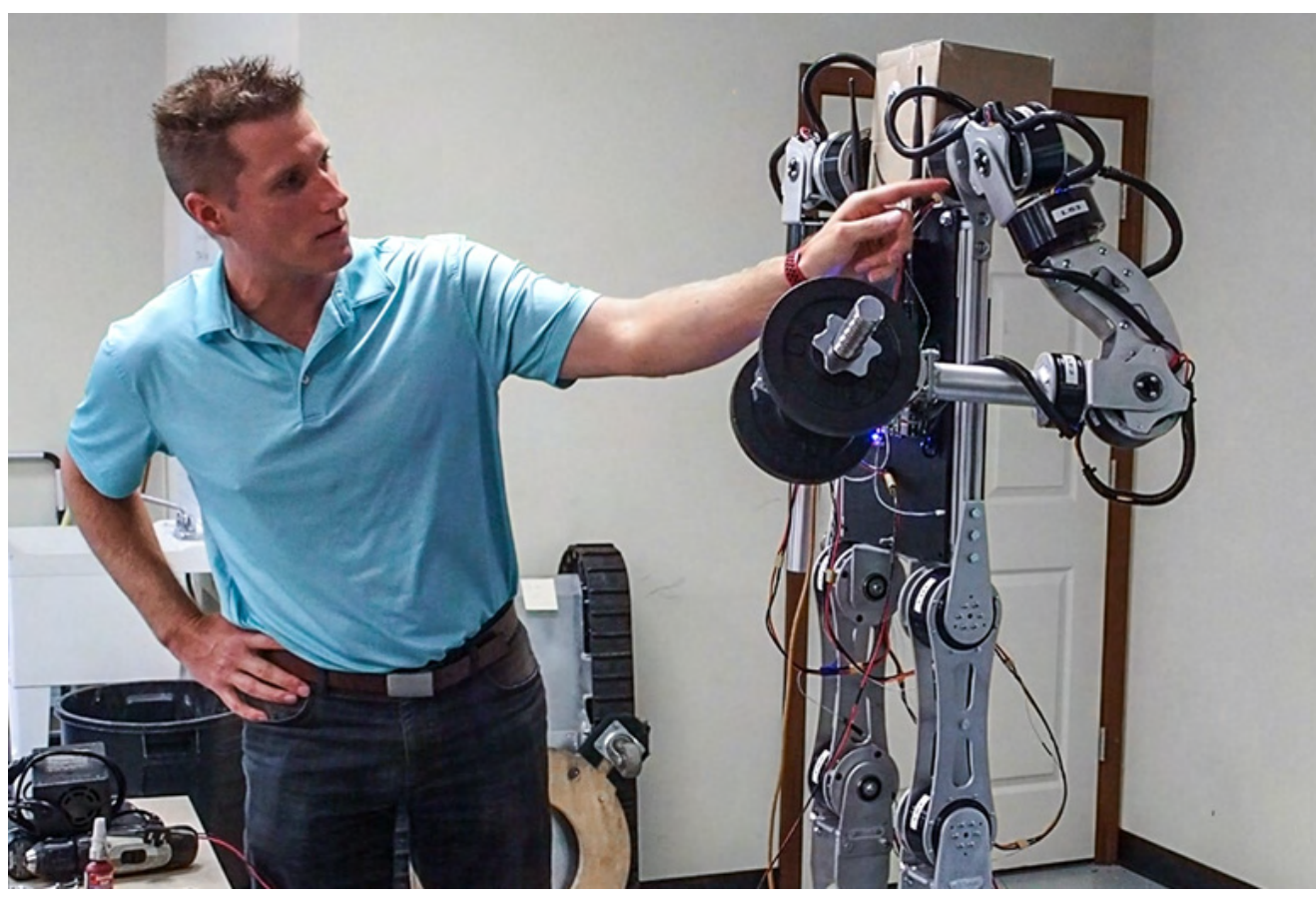


Photo courtesy of REX Engineering Group

Automating Busywork

By Tad Vezner

Steven Uecke (AE '07) will make you feel like you haven't been working hard enough—though when he reflects on his ideas he sometimes claims the opposite, saying they sprout from a desire to be lazy.

Or at least to have less busywork.

After founding his first company in his 20s (not counting the successful landscaping business that he and his brother founded in their teens), Uecke, at age 37, now owns three companies in the construction industry. He was recently named one of **ENR Midwest's 2023 Top Young Pros** for the quick ascent of his career trajectory.

But it's his latest company that seems to excite him most: it branches into robotics and artificial intelligence in order to create humanoid robots to assist on construction sites and elsewhere.

"The thing that drives me personally is automating work. Maybe it's a form of laziness," he laughs. "That's what excites me, and that's kind of carried through all these different companies."

A Prolific Founder

To call Uecke lazy seems to contrast starkly with his track record.

Homeschooled in Winfield, Illinois, Uecke started early in business by rehabbing and flipping houses with his father, who also owned an accounting firm. They would do a single home at a time, but it was enough to whet Uecke's appetite for working in the construction industry.

"I wanted to be a home builder, but our dad encouraged us [Uecke and his brother] to get a degree in something even if we did," Uecke says.

When it came time to apply for college, Uecke debated architecture or engineering; seeing himself as more analytical than artistic, he chose engineering.

After graduating from Illinois Institute of Technology, Uecke worked for Robert Johnson & Associates, a small structural engineering firm in Wheaton, Illinois. He then transferred to Johnson Wilber Adams, where he managed the majority of the firm's connection and miscellaneous steel design projects, more than 650 in all, including some where he also served as project engineer.

He found creative ways to manage the work, specifically the busywork. In the evenings—building on some Illinois Tech coding courses—Uecke developed a software application to automate the uninspiring aspects of his job.

He enjoyed the work, but when his wife had to move to Wisconsin to finish her schooling, Uecke decided it was time to branch out on his own. His first company, RexConn Design LTD, was started in 2012 with a desk and phone in his Wisconsin apartment. RexConn was a structural engineering firm that specialized in designing steel connections and stairs for steel fabricators and detailers.

Like any startup, finding initial customers was tough. He didn't have a non-compete agreement with Johnson Wilber Adams, but agreed not to reach out to former clients. The company, in turn, said it was OK if clients reached out to him.

"But they had to find me," Uecke says. "This was before social media. At that point it wasn't the easiest thing."

His first job was as a subcontractor of a subcontractor of a general contractor of a tiny portion of Freedom Tower in New York. Gradually, work picked up, and by the time Uecke and his wife left Wisconsin, his business had a half dozen employees. He also acquired another business, a software company called Descon Plus, which specialized in structural steel connection engineering software.

"It was basically the software I was using," Uecke says. "At the time, I didn't have the money to spend on the software. And I was competing in the transaction with other multi million-dollar established companies."

Still, the company had its headaches: There hadn't been any updates to the software's code base in years, and Microsoft would soon end support for it.

"I got myself in way over my head," Uecke laughs. He did an initial update himself, then hired people to do a full rebuild.

There were many brands over the years, but the next major milestone occurred in 2017, when Uecke purchased a Los Angeles engineering firm, later changed to **REX Engineering Group**, which housed all of his companies' engineering services for commercial, institutional, and some high-end residential buildings.

The employee headcount hit 20, revenues hit seven figures, and some Canadian clients made it an international company.

His second business, **REX Construction Services**, is a commercial general contractor with projects ranging from multi-family residential buildings to adaptive-use offices to large distribution centers.

His third, **REX Technology Solutions**, focuses on new technologies.

Recently, Uecke decided to ramp up his investment in that third area—in a big way.

"I wanted to build a product that you could hold in your hand, something tangible. Everything with services is digital. I just kind of thought about, 'What are the technologies I'm interested in, and what might be a good opportunity?'" Uecke says.

He was interested in robotics. He had tried exploring the field himself, starting in 2018, but "back then we didn't know what jobs we were trying to help."

The New Automation

In May 2022 Uecke purchased **SuperDroid Robots**, a North Carolina-based robotics manufacturer. The company provided robots that could do remote inspections: The robots are essentially mobile cameras with a couple of tools attached, and they are used by SWAT and HAZMAT teams to go into hazardous environments and do simple things like open doors.

Uecke wants to expand upon that, creating a "humanoid platform" to tackle more strenuous jobs.

"The big issue with construction is labor shortage. The simplest way to assist with labor shortage is to have a robot that's similar to a human, and can navigate the construction site like a human," he says.

He has already gotten requests from companies wanting specific automations, often in environments where human labor is risky or dangerous. He's working on a low-maintenance platform that he'd offer on a subscription basis, rather than having companies buy the units outright.

"The possibilities are limitless, but the applications that are simple are sufficient," Uecke says. A "robotic eye," for instance, can patrol a worksite at night to safeguard against theft or vandalism, opening and closing gates and flipping switches.

"It's not hard, but in order to cover a large area, it costs a lot of money to have a person do it," Uecke says.

And yes, he'd like to incorporate AI into the build. With safeguards, he's quick to add.

"No first contact with humans. A robot or something that it's holding cannot make contact with a person. It would have to be contacted by that entity," he says.

And like his early company days writing a program to help with busywork, Uecke sees the elimination of simple tasks as a net benefit, not just for him but for society as a whole.

"With robotics specifically, we have an opportunity to make a positive impact on the world," he says.

"A lot of people would rather operate a computer than a drill press. It's about letting people do what they want to do."

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📌 **Category:** Spotlight



Assistant Professor of Biomedical Engineering Emma Dosmar
Photo courtesy of Rose-Hulman Institute of Technology

Producing Problem Solvers, Not Parrots

By Casey Halas

As a student of a Waldorf School, Emma Dosmar (Ph.D. BME '17) didn't receive a letter grade until she reached high school.

Her academic experience from kindergarten through eighth grade was based entirely on experiential and developmental learning—omitting the typical grading scale used in the United States education system. It was as a young child that Dosmar was able to see how this unique learning approach benefitted students and created problem solvers.

Now as an assistant professor of biomedical engineering at Rose-Hulman Institute of Technology, Dosmar has pulled from her academic experiences and applied the technique of “ungrading” to her courses.

“The definition of ungrading that I use is anything you do that decentralizes the authority of the professor or the teacher in a classroom,” says Dosmar.

In spring 2022 Dosmar received a teaching grant from Course-Hero for her research on ungrading, which she applied toward a professional incentive for her Matlab course for first year students.

Rather than having students rely on her to tell them how they're doing in a course, she makes it a group effort, meaning that every student is involved in the grading process. Dosmar sees her feedback as a concrete way for them to conduct self-assessment and revisit their work.

It's all about students having agency over what they're learning, how they're learning, and how they're assessed. When students are involved in the process, it makes them more trusting of that process, Dosmar adds.

With students engaging in feedback and revisiting their previous work, Dosmar is also able to see who clearly knows the content and who doesn't—making it almost impossible to simply coast through a class. Regurgitating information is not enough.

“I want to make my students feel safe to fail,” she says. “Not that I want them failing courses, but I see students who are so hung up on what grade they're going to get that they are unwilling to take risks or take on challenges. I want them to try things that might not work and learn from that process without worrying that it could cost them their A.”

Dosmar wanted to emphasize that, rather than working for grades, students work just as hard toward goals or incentives that are beneficial to them academically and professionally.

One professional incentive that had exceptional results was taking seven of her top Matlab students to the Rocky Mountain Bioengineering Symposium conference, where they could present research and hear from academic and industry professionals.

“My goal as an educator is to produce problem solvers, not parrots, and ungrading allows me to do that,” Dosmar says. “I want them to feel safe to learn something new and try.”

From Issue: Summer 2023

📌 **Category:** Spotlight



CARNATIONS Seeded with \$10 Million Grant

By Illinois Tech Marketing and Communications Staff

The Center for Assured and Resilient Navigation in Advanced TransportatION Systems (CARNATIONS) at Illinois Institute of Technology was named a new Tier 1 University Transportation Center (UTC) by the United States Department of Transportation. As a Tier 1 UTC, CARNATIONS will receive a \$10 million grant for improving transportation navigation systems by making them more resilient to cyber attacks, such as spoofing and jamming.

Led by Professor of Mechanical and Aerospace Engineering Boris Pervan, CARNATIONS brings together a consortium of universities to perform transformative research in the area of resilient transportation systems, facilitate technology transfer to public agencies and industry, and advance workforce and educational development.

Interference such as jamming and spoofing that targets critical infrastructure has the potential to cause widespread delays and cascading failures across multiple modes of transportation including ships, trains, trucks, and cars—and the problem is only getting worse.

A major aircraft manufacturer reported more than 10,000 global navigation satellite system (GNSS) interference events in 2021 alone, and repeated spoofing has impacted a range of military operations internationally.

“Whether it’s innovating ways to identify cybersecurity threats to our transportation systems or removing those potential risks, I’m confident that the bright minds at Illinois Institute of Technology and Chicago State University will be working on infrastructure breakthroughs to help protect working families across America, all while creating jobs for the diverse transportation and tech leaders of tomorrow,” says United States Senator Tammy Duckworth (D-Illinois). “I’m proud to have advocated for this project and look forward to this federal investment helping prioritize the advanced transportation that will drive our nation’s future.”

With a broad coalition of university collaborators and industry advisers, Pervan and his team plan to approach the problem from several angles, including developing sophisticated algorithms that can tell the difference between authentic or spoofed GPS signals and improving GPS receivers by combining them with other types of sensors that are immune to jamming and spoofing.

Addressing these problems is essential to intelligent transportation systems that rely on GPS not just for navigation but for control, such as in self-driving cars, which Pervan has experience researching.

CARNATIONS will be looking to the future at the possibility of a fully connected system, where self-driving cars share information with each other and with smart infrastructure such as traffic signals.

“Spoofing vehicles can be very dangerous,” says Pervan. “If you spoof one car and that information gets passed on to others, it’s infecting the whole system. On the other hand, the information from the other vehicles could be of some use to tell you that you’re being spoofed, so right now we have no idea how that trade-off will play out.”

CARNATIONS will create workforce development programs, develop certificates, and prioritize educating the next group of transportation professionals.

In addition to Pervan, Illinois Tech Professor of Mechanical and Aerospace Engineering Matthew Spenko and Research Associate Professor Samer Khanafseh will conduct research through CARNATIONS.

Chicago State University, Stanford University, University of California Riverside, and Virginia Polytechnic Institute and State University are also CARNATIONS consortium members.

“Our nation’s infrastructure increasingly relies on connected and automated technologies, with significant potential cybersecurity risks,” says U.S. Senator Dick Durbin (D-Illinois). “Illinois Institute of Technology will help develop innovative solutions to protect our nation’s transportation infrastructure from cybersecurity risks. This partnership with Chicago State University will train the next generation of engineers on innovative technology to identify, mitigate, and remove cybersecurity risks from our transportation infrastructure.”

Pervan, a foremost expert in his field, was recently awarded the prestigious Johannes Kepler Award by the Institute of Navigation.

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Category: Research Briefs

Illinois Tech Appoints Kenneth T. Christensen as Provost



Illinois Institute of Technology appointed Kenneth T. Christensen to the role of the university’s provost and senior vice president for academic affairs in June 2023. Christensen had been serving as Illinois Tech’s interim provost.

“Ken has been an exceptional interim provost, leading the university through continued growth in enrollment, the launch of groundbreaking new degree programs with Coursera, and the establishment of important new research and workforce initiatives, such as our partnership with DMG MORI to create a new national center for advanced manufacturing,” says Illinois Tech President Raj Echambadi. “He has an excellent mix of vision and practical experience, combining the strategic planning and institutional expertise needed to help Illinois Tech continue to grow and thrive.”

“I am honored to have been chosen to serve as provost, and I am deeply committed to the mission of advancing technology and innovation for all,” Christensen says. “I am also inspired by our plans for continued growth at Illinois Tech, broadening the impact of our mission by dramatically expanding the number of students we serve.”

Christensen first joined Illinois Tech in November 2020 as the Carol and Ed Kaplan Armour College Dean of Engineering Endowed Chair. He came from the University of Notre Dame, where he was the Viola D. Hank Professor and chair of the Department of Aerospace and Mechanical Engineering, with a joint appointment in the Department of Civil and Environmental Engineering and Earth Sciences.

During his time as interim provost, Christensen successfully guided the university through a period of sustained growth and enrollment, including the **launch of innovative degree programs with Coursera** and forging strategic partnerships such as the **alliance with DMG MORI to create a new national center for advanced manufacturing**; the **Midwest Semiconductor Network**; the **Midwest Alliance for Clean Hydrogen (MachH2)**; and **Chicago ARC**, an initiative to enable market-driven, scalable solutions to address health inequities. As provost, he will continue to oversee key research initiatives, cultivate strategic partnerships, and promote academic offerings that create new revenue streams and expand the university’s reach.

Christensen has authored more than 200 archival journal articles, book chapters, and peer-reviewed conference proceedings. His research focuses on complex interactions within various engineering systems, such as flow interactions with complex bedforms and multi-phase flow within heterogeneous porous structures.

Illinois Tech Expands New Partnerships



By Tad Vezner

Illinois Institute of Technology has entered into multiple partnerships to enhance student experiences and provide better access to students from all backgrounds, and recent data shows a remarkable surge of applicant interest in the university in 2023.

Starting in August 2023—in partnership with [Coursera](#), a leading online learning platform—Illinois Tech is offering four new degree programs that feature performance-based admissions. The programs, which are completely online, use performance-based admissions and are affordable and open to anyone worldwide.

“By joining forces with Coursera, we are breaking down barriers to higher education and offering individuals worldwide the opportunity to access Illinois Tech’s renowned, industry-relevant programs,” Illinois Tech President Raj Echambadi says.

The programs include a [Master of Business Administration \(M.B.A.\)](#) (Stuart School of Business) and [Master of Data Science](#), [Master of Information Technology](#), and [Bachelor of Information Technology](#) (College of Computing).

Additionally, Illinois Tech is launching the [Ascend program](#) in 2024. This pioneering collaboration with City Colleges of Chicago offers graduating high school seniors a cost-effective and flexible path to pursue their academic journeys.

Students begin their college experience at a partner institution, and upon successful completion of the first year, transition seamlessly to full-time study at Illinois Tech to finish their bachelor’s degree.

The Ascend program also offers a comprehensive range of support and benefits to scholars, including dedicated mentors, access to academic and career coaching services, a special tuition rate for Illinois Tech courses during the Ascend year (\$100 per credit hour), a guaranteed annual Illinois Tech scholarship of \$25,000 upon successful first-year completion, and full access to Illinois Tech student facilities and campus life activities. It also includes access to experiential learning opportunities, including virtual internships through Illinois Tech’s one-of-a-kind career-readiness program, Elevate.



Students use materials donated by Milwaukee Tool at the Illinois Tech Idea Shop
Photo By: Lauren Brennan

Milwaukee Tool Builds Opportunities for Student Success

By Brianne Meyer

This spring, Illinois Institute of Technology received two generous donations of power tools valued at nearly \$100,000 from Milwaukee Tool, a long-standing partner of the university.

The gift-in-kind included a variety of tools to be divided among the Idea Shop, located inside of the state-of-the-art Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship, Illinois Tech Motorsports, and various departments within Armour College of Engineering, including Department of Electrical and Computer Engineering laboratories.

The upgraded tools will help Illinois Tech students refine their skills and learn more about their craft, as well as offer them the opportunity to problem solve in a safe, collaborative environment and to deliver world-changing innovations with Milwaukee Tool products.

“Milwaukee Tool has unified the way we manage our handheld tools at Illinois Tech. Students are able to check out a battery when they enter the Idea Shop and use it to operate any Milwaukee tool they need to build their aircraft, electric vehicle, or new toy design. This type of hands-on learning experience helps to ignite ideas with cutting-edge tools and allows students to transform their new products and inventions into reality,” says Maryam Saleh, executive director of the Kaplan Institute.

Milwaukee Tool is the world’s fastest-growing designer, manufacturer, and marketer of power tools, accessories, and hand tools for the professional trades. The company prides itself in delivering disruptive innovation in every product it creates. And as a group of progressive problem solvers, Milwaukee Tool is committed to investing in the leaders of tomorrow, starting at Illinois Tech.

This ongoing collaboration with Milwaukee Tool is a tangible demonstration of Illinois Tech’s commitment to redefining access to a high-quality education. The university’s vision calls for a future where education and innovation are reimaged, breaking down the barriers of industry and institution; of classroom and practical experience. This approach is what drives the success of Illinois Tech graduates—creating newfound economic mobility, lifting students from families in the lowest 20 percent of income to the top 20 percent, and thus reshaping who can access the transformative power of a future-focused education.

“Milwaukee Tool recognizes how important advanced technologies and resources are to innovation,” says Omid Shirazi (M.S. EE ’08), senior manager of electrical engineering at Milwaukee Tool. “We hope students who have the opportunity to use our donated tools will find ways to refine their skills, continue to innovate, and discover what inspires them. If they do that, it’s an investment well made. The recent tool donation is also just one piece of the larger investment Milwaukee Tool is making on campus with Illinois Tech. We see great potential in these students and look forward to a continued partnership with Illinois Tech.”

In addition to this recent gift, Milwaukee Tool continues to provide internship opportunities through Illinois Tech’s one-of-a-kind Elevate program, which guarantees hands-on learning opportunities that give students the twenty-first century skills that employers seek.

Through Milwaukee Tool’s generosity, Illinois Tech is forging a pathway for student success and providing the necessary tools to support students from all walks of life to make the world a better, safer place.

“Because of our founding purpose to harness the power of collective difference to advance innovation for all, we hold singular value in this emerging world of twenty-first century technology,” says Ernie Iseminger, vice president for advancement at Illinois Tech. “We bring together different minds and encourage each to grow and develop individually, while also contributing to the greater good. And the end result is innovation that truly changes the course of human history. Partners like Milwaukee Tool empower the next generation of innovators who are transforming ideas that could change the world into breakthroughs that *will* change the world.”

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2023 Alumni Awards Winners

2023 Alumni Awards Slate

Alumni Medal

Burt Lewis (CE '48)

Alumni Service Award

Dan Ephraim (M.B.A. '76)

Collens Merit Award

Victor Tsao (M.S. CS '81)

International Award of Merit

Lih-Farn (Gary) Shiau (M.S. MET '87)

John J. Schommer Honor I Award

Gwenn Peters, (AE '02, ME '02)

Lifetime Achievement Award

Lajos Schmidt (LAW '54)

Outstanding Young Alumnus/ Alumna Award

Liz Butler (LAW '15)

Jessica Henson (ARCH '08)

Veeral Oza (MBB '05)

Silverio Patrizi (M.S. CE '11)

Allison Toonen-Talamo (ARCH '13, M.A.S. STE '15)

Professional Achievement Award

William M. (Billy) Dec (LAW '99)

Charles Knop (EE '54, M.S. '60, Ph.D. '63)

Robert Lyczkowski (M.S. GE '66, Ph.D. '70)

Don Means Jr. (EE '89)

Susan Solomon (CHEM '77)

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