ENTRAGBINARIA

2024 ANNUAL REPORT

Inside

ON THE COVER DPI apprenticeships launch new careers, boost tech connections

Student entrepreneurs find supportive space in reimagined makers' lab

UI Health lifts up Chicago community with specialty care





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Discovery Partners Institute software development apprentice Alejandra Landa collaborates with her John Deere colleagues.

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> For a digital version of this report, please visit: go.uillinois.edu/AnnualReport2024

ELEVATING THE EXTRAORDINARY

UNIVERSITY OF ILLINOIS SYSTEM LEADERSHIP



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Thowing everyone forward

Across the University of Illinois System, we work every day to live up to our land-grant mission by creating opportunity for the people of Illinois.

I invite you to peruse this report's sampling of recent U of I System initiatives we all should be proud of. First, let me be clear about the "how" behind each of them.

Engaged partners across the state and around the world help us make the extraordinary happen. We work with the best of the best to develop innovative solutions, to partner to grow thriving communities, and to elevate diverse perspectives all to address urgent challenges and create a better tomorrow.

Our partners help us arrive, again and again, at the sweet spot where higher education, government and the private sector work together to move society forward, strengthen our state and the world, and make all of our lives better. Through these efforts we are:

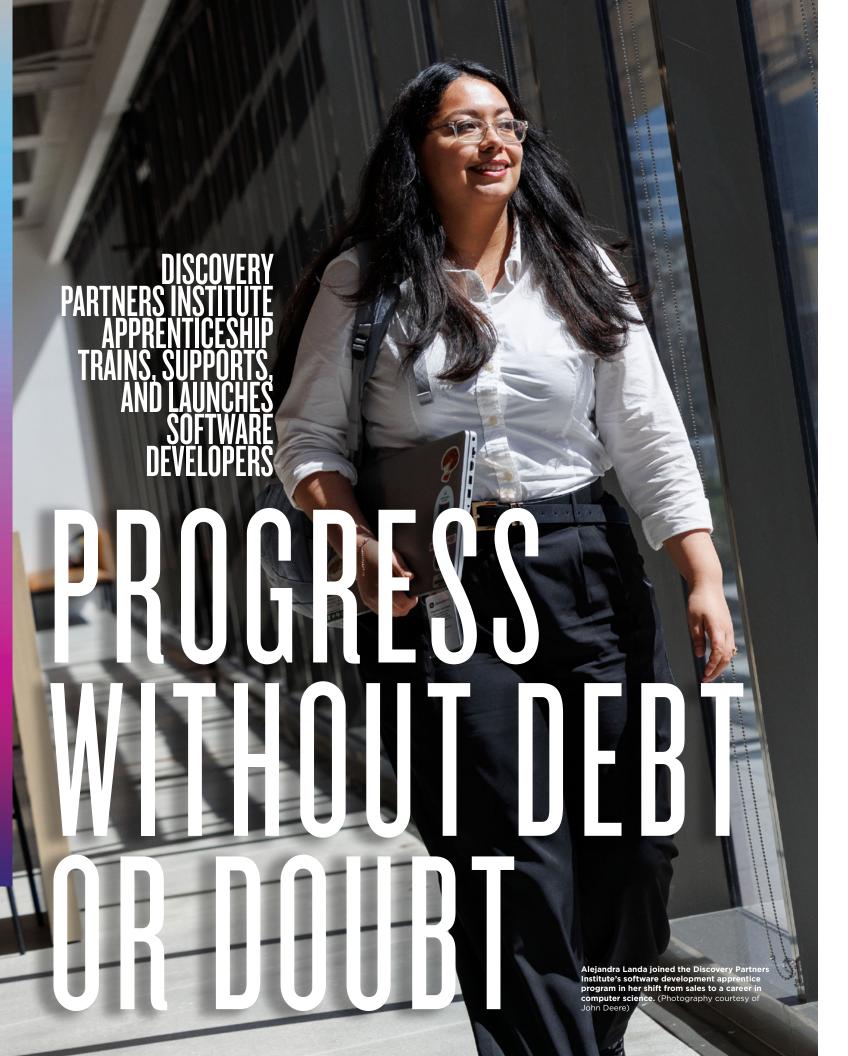
- Building educational pathways and robust support that provide more students with access to a world-class education that will help them reach their potential.
- Driving workforce and economic development outcomes that deliver progress and prosperity.
- Creating greater healthcare equity, life-altering research, and breakthrough discoveries that empower and enrich people's lives.

And those are just a few examples.

Our bottom line: We champion the extraordinary for our students, our state, and society — for all of us.

And, as we have throughout our history, we will deliver the ambitious outcomes that the world needs from us and that we expect of ourselves.

TElille



More than halfway through her apprenticeship at John Deere, Alejandra Landa's nerves had subsided, but her excitement hadn't.

"I don't think I could have asked for a better team," Landa said of the supplier relationship management crew. "They encourage me to ask questions. They work really hard, but they still take time to help me."

Discovery Partners Institute's software development apprentice program offers training, support, and connections. It serves eager learners—especially women and people of color—looking to shift to the careers of the future. Women hold only 25% of computing positions nationwide today, while Black and Latino/a populations make up less than 14% of Chicago's overall tech workforce. Part of the University of Illinois System, DPI focuses on increasing Chicago's talent supply and driving equitable economic growth in the region.

Landa and her husband, Pablo Riquene, moved to Chicago in 2021 so she could pivot from sales to a computer science career. She was born in Mexico. and her family moved to Florida when she was 2. She admits it's tough to explain the work web developers do to create everything people view and do online.

"My immigrant parents are so proud, even though they don't fully understand what I do," she said. "My dad tells me he'll still brag to all his friends when I get my first full-time developer job."

GETTING PAID TO LEARN

The chance to help tackle a pervasive societal issue prompted Morgan Diamond, director of workforce education, to work at DPI.

"People want to earn their way through the world, but not having money creates a cascading effect. Creating new pathways makes a meaningful difference." she said.

Developer apprenticeship program participants receive a stipend of up to \$2.500 a month. When Landa heard about that, she thought it was too good to be true.

"I felt fortunate to be paid while I learned. I could focus 100 percent on what DPI was teaching me, and we could pay the bills," she said.

While early hands-on coursework was intense, Landa found the programming language Ruby exciting. From there, she was off and running.

"We're looking for people who want to learn. Our goal is to embrace people where they are." Diamond said. "Some people are taught to be apologetic for not having a degree, but their strengths and skills can be an advantage here."

EYE ON THE FUTURE

In 10 years, Landa envisions being a senior developer with a master's degree in cybersecurity. Mastering the problem-solving mentality that software development requires took some time. It paid off, earning Landa one of 11 spots at John Deere.

"The apprenticeship benefits trainees, but it's ultimately a business solution. To have a real, sustainable impact, employers must see DPI as a strategic partner that provides consistently strong talent," Diamond said.



apprenticeship at John Deere.

Keisha Barnes, John Deere Global IT DEI program manager, said: "Discovery Partners Institute is a great program that allows John Deere to have an alternative recruiting pipeline of talent that brings diverse and unique perspectives, which continues to propel innovation forward within tech."

One of Landa's biggest apprenticeship accomplishments was adding a coding library to her coworkers' developers'

"I hadn't done advance work with React, but they had integrated Redux with other applications, so I could look at that for reference," she said. "In time, I went from being nervous, scared, and overwhelmed to so proud of the work I had done."

WHAT'S NEXT AT DPI

Discovery Partners Institute expects to break ground this year on its permanent home in Chicago's The 78. The inclusive tech ecosystem will feature office, classroom, lab, and event space.

Learn more at DPI.UILLINOIS.EDU

Easing the way helps community college students achieve success

Even before the new state law, students transferring from community colleges in Illinois enjoyed guaranteed admission to University of Illinois System universities.

Still, some expect the transfer process to be difficult, which prevents them from pursuing a four-year degree. When they do, they miss out. The Wall Street Journal used 12 years of labor market data to show bachelor's degrees deliver "an immediate 25% wage premium within a year of graduation."

"As part of our land grant mission, the U of I System partners on many fronts to make obtaining a degree more accessible. Transferring from a community college is an essential pathway to a four-year degree, so we make sure those students—especially first-generation students and those from underrepresented groups—have the tools and support they need to succeed at our universities, "U of I System Executive Vice President and Vice President for Academic Affairs Nick Jones said.

MADDIE'S STORY

Maddie Saenz—and many others—know the importance of a smooth transfer experience.

"I loved my community college time. Not just because it was close to home, but because the scholarships made it a no-brainer," said Saenz, who attended Lewis & Clark Community College. "I was told the transfer would be seamless, and it was."





"I had a good transfer experience. I want that to be the experience across Illinois.

— Holly Pflum U of I System assistant director of transfer outreach and initiatives

Saenz graduated this spring with a degree in systems engineering and design from the University of Illinois Urbana-Champaign.

Keri Niehans. UIUC senior associate director of admissions operations, said the transfer process—course planning, choosing a major, applying—is less daunting than some imagine.

"We want students and parents, as well as community colleges, to know they can reach out to us with questions," Niehans said. "They don't have to figure this out alone while they're exploring transfer options and when they are here as students."

GROWING OUR IMPACT

This spring, the U of I System partnered with Shawnee Community College near the state's southern tip to connect educators and administrators with public university transfer pathways for their students.

It's part of a larger push to engage with community colleges across the state to ensure students know about their transfer options and the support available when they attend U of I System universities.

Holly Pflum, U of I System assistant director of transfer outreach and initiatives, organized the SCC transfer symposium.

Pflum is passionate about her work.

"I got my associate degree from Parkland College in Champaign. Leaning on support staff and advisors, I had a good transfer experience. I want that to be the experience across Illinois," she said.

Pflum also helps drive transfer advances on a national level. The U of I System plays a lead role in the first National Association of Higher Education Systems Improvement Committee, which focuses on reducing barriers to student transfers to help ensure more people can obtain the benefits a fouryear degree provides.

For More Details:

Learn more about the U of I System Transfers Guarantee at go.uillinois.edu/ Transfer2024.

TRANSFER SUCCESSES ADD UP

The U of I System is working to increase merit scholarships for transfer students and welcome honors transfer students in system honors programs

Learn more at GO.UILLINOIS.EDU/TRANSFER2024

BY THE NUMBERS

Maddie Saenz and her father, Brian Saenz, take in a Fighting Illini football game at Memorial Stadium at the University of Illinois Urbana-Champaign



Technology designed with real people in mind changes lives. Virtual Reality Embedded Naloxone Training aims to save lives.

Stopping an overdose using naloxone requires quick action in tough situations. First responders use it as the opioid epidemic claims more than 200 lives in Illinois per month. Naloxone also helps those close to opioid users stand ready.

"We're creating training that mimics hectic moments so people can feel prepared," said Scott Barrows, director of OSF Innovation Design Lab at Jump Trading Simulation & Education Center and University of Illinois College of Medicine Peoria clinical associate. "VENT pairs augmented and virtual reality with hands-on practice for administering naloxone."

VENT received Illinois Innovation Network seed grant funding to develop and test the layperson-focused training.

IIN drives inclusive and integrated innovation, research, and economic development across Illinois. Led by the University of Illinois System, IIN issues grants that boost collaboration among regional partners and the state's 12 public universities.

TEAM IN ACTION

Along with Barrows, VENT collaborators include:

- Southern Illinois University Carbondale assistant professor of public health Wasantha Jayawardene
- Illinois State University Nursing Simulation Lab director Joanna Willett
- ISU associate professor of creative technologies Roy Magnuson

ISU graduate student Matt Kase's programming skills bring VENT to life. Magnuson involved Kase because of his tech abilities and addiction biology background. The VENT interface uses the new Apple Vision Pro. Kase turns to Magnuson when he gets stuck. That's just one way the partnership works.

"We're using everyone's experience. We have a really good mix of backgrounds," Kase said.

USING VENT TECHNOLOGY

First, VENT educates users about the dangers of opioids—including uber-potent Fentanyl. Then things get hands-on. Holding a Narcan dispenser. Giving the drug through a mannequin's nostrils.

Then things get real.

"VENT takes people, for example, into a dance club with dim lighting, loud music," Kase said. "They'll see someone on the floor who needs help, someone who has OD'd. We believe learning amid distractions will stick more in people's minds so they can draw on the skills if they need to."

In and around Peoria, Barrows incorporates industry and community organizations into the VENT endeavor, including IIN's Distillery Labs.

"Taking VENT on the road means critical education for schools, communities, and more. Because of IIN we're able to focus on vulnerable rural and urban communities to ensure our training makes the most impact possible," said Barrows, an alum of all three U of I System universities.

ANOTHER STATEWIDE ILLINOIS INNOVATION NETWORK INITIATIVE

The statewide Manufacturing
Matters campaign aims to boost
enrollment in community college
training programs by 5% to 10% in
2024. Through a strategic marketing
campaign, the IIN-community
college partnership aims to show
how critical today's manufacturing
work is to our ever-changing
environment and climate.

Learn more at IIN.UILLINOIS.EDU

"We believe learning amid distractions will stick more in people's minds so they can draw on the skills if they need to."



Wasantha Jayawardene



Joanna Wille



Roy Magnuson



1att Kase



Scott Barrows

HUBS STATEWIDE, ONE AT EACH PUBLIC UNIVERSITY

46 SUSTAINING ILLIN PROJECTS FUNDE

ILLINOIS JNDED

CONTINUING RESEARCH STUDENT EXPERIENCE, OUTREACH PROGRAMS

\$500M FEE

If they could talk, the tomato plants in Cairo's food donation garden would thank volunteers like Deb Davis.

"I water the garden about every night unless it rains," Davis said of the space launched in 2021 to ease food insecurity and increase healthy options in the economically challenged community. "I'm usually there until dark. It feels good. It's my therapy."



Food donation garden volunteer Anne Terry shows off one day's harvest of squash, peppers, tomatoes, and okra,

More than 270 gardens represent just one way Illinois Extension—part of the University of Illinois System via the College of Agricultural, Consumer and Environmental Sciences—supports communities. In all 102 Illinois counties, Extension translates University of Illinois Urbana-Champaign research to help people solve problems, make informed decisions, and adapt to change.

"We're fortunate to have Deb as our 'garden fairy,'" said Erin Garrett, Extension natural resources. environment, and energy educator for the southern Illinois region. "Illinois Extension is very invested in Cairo's donation garden. As long as we're here, the garden is going to be here."

Once a commerce hub. Cairo is home to a dwindling population of about 1,700. Before the garden's launch in 2021, produce was hard to come by with the closest grocery store 40-plus miles away. Illinois Extension, the U of I System, and local and state partners work to ensure initiatives such as food pantries, community gardens, and healthy food at the new Rise Community Market help those living in and near Cairo.

'AT NO CHARGE'

The Cairo garden donated all of its harvest—1,000 pounds—to Daystar Community Programs' food pantry Davis has lived in Cairo for more than 30 years. She used to run Mack's Restaurant which, like many businesses, closed years ago. Today she washes hair for the clients at her friend's salon. Hairworks.

As the unofficial ambassador of the food donation garden next door. Davis explains how her neighbors benefit.

"People often ask what's ripe and if they can have some," Davis said. "I explain that everything we harvest goes to Daystar, and they can help themselves to our fresh produce there at no charge."

A host of other volunteers—on their own and through local organizations work with Extension to plant, weed, and harvest, as well as deliver to Daystar.

"We have so much community support," Garrett said. "There's just something about this community. People really do

That's essential in more ways than one.

"If you visit Cairo, you won't see a lot of people. Buildings are falling down. abandoned. It seems like there's a lot of emptiness." Garrett said, "But then you turn a corner and see the garden, a bright spot that's full of life and hope."

BUSY AS BEES

The garden supplies even more.

The community space features a sensory garden so kids—especially those on the autism spectrum—can explore and learn. The pollinator garden features native plants visitors can grow to attract bees, butterflies, and other helpful insects.

And the federally funded SNAP-Ed provides nutrition education to share easy ways to prepare and store produce as the list of healthy offerings grows. Garden supporters added snap peas, snow peas, and mustard greens and had their first successful onion crop last year.

Each spring, Davis can hardly wait for the perennial flowers to start growing. Come fall, she'll help harvest favorite and less-familiar fruits and vegetables.

"I like to watch the okra grow. I don't mind that it can make you itchy." she said. "I don't have favorite things in our garden. I just love them all."

EXTENSION IN COOK COUNTY

To provide more opportunities for underserved populations, the Illinois Extension horticulture team is adding community and school gardens in Chicago and suburban Cook County. New gardens pair with where SNAP-Ed and Expanded Food and **Nutrition Education Program** work already targets better health through making nutritious choices, increasing physical activity, and preparing and storing food safely.

> **Learn more at EXTENSION.ILLINOIS.EDU**

48 EXTENSION SUPPORTED 13,492 POUNDS OF PRODUCE DONATED LAST YEAR 25 SCHOOL GARDENS IN COOK COUNTY



UIS computer science student Jonathan Aminiel uses Orion Lab amenities and expertise to make his eco-friendly commercial vehicle a reality.

FRESH IDEAS TAKE SHAPE

NEW UIS LAB PROVIDES SUPPLIES, SUPPORT FOR TECH-FOCUSED NTREPRENEIIRS



"I wanted no barriers to entry.

It's free. It's for all students,
faculty, and staff."

— Joshua Smith, computer science instructor and lab director Across the University of Illinois System, sparks of innovation ignite students' ideas. A new University of Illinois Springfield maker space fans the flames.

"Students can experiment with tools and materials in our new Orion Lab," said Joshua Smith, computer science instructor and lab director. "The amenities help student entrepreneurs gain practical experience. The experiential learning helps them develop creativity and critical-thinking skills."

The collaborative lab is perfect for Jonathan Aminiel. The computer science student from Tanzania is creating an eco-friendly mini truck with adaptations to suit industries' varying needs. Aminiel evolved his idea to reduce the use of rundown personal vehicles in his home country. He's one of many innovators systemwide who devise ways to make people's lives better and business more productive.

Case in point. For ultimate flexibility, the mini truck's chassis will work for any drive train—gas, diesel, electric. And someday hydrogen.

"We're not bound into any criteria," Aminiel said.

'NO BARRIERS'

To attract and support makers like Aminiel, Smith changed the dynamic of what had been a computer science-exclusive robotics lab. The Orion Lab offers cutting-edge equipment, including 3D printers, CNC machines, laser cutters and engravers, computing resources, cybersecurity systems, and fabrication equipment.

"I wanted no barriers to entry. It's free. It's for all students, faculty, and staff. Even community members can use our tools and supplies," Smith said. "Like Jonathan's truck, the lab evolves to suit makers' needs."

Smith and Aminiel meet on Fridays. Then Aminiel spends the week delivering on their iterative ideas. He appreciates Smith's promise to explore all avenues for big and small ideas.

"We're going to chase it down. Until the bitter end. Win, lose, or draw," Smith said.

Aminiel foresees a win because his truck will sell for less than \$20,000.

"The truck will be small and reliable. We can make a good case for this product," Aminiel said.



Orion Lab director Joshua Smith, center, works through improvements to Aminiel's invention.

IN BUSINESS

Before transferring to UIS, Aminiel attended nearby Lincoln Land Community College. That's where his big idea began to take shape.

"I looked around at all these bright community college students. I thought, 'They should have someplace to work. What if that place gives back to the community?" he said, envisioning his future business.

Aminiel is determined to manufacture his vehicle in Illinois, adding jobs to further boost the state's economy.

Smith has seen makers lose interest in their projects, but not Aminiel.

"He maintains his passion. That's hard to do," Smith said, adding Aminiel builds productivity and camaraderie as he adds team members to his endeavor. "His goal, his passion stays lit. And it spreads like wildfire."

Soon, Aminiel will shift to business plan mode. Enter another key resource—Innovate Springfield, the UIS business incubator that also supports and inspires entrepreneurs. Innovate Springfield was the first hub in the system's Illinois Innovation Network.

"Ensuring our students and community have access to tools and guidance that bring ideas to life right here in Illinois is essential. Our commitment to entrepreneurship that leads to economic growth and personal prosperity will never waiver," UIS Chancellor Janet L. Gooch said.

WHAT'S NEXT IN UIS TECH



University of Illinois
Springfield and
Innovate Springfield
are opening a hightech lab for high
school students to turn
their product ideas
into reality. A Horace
Mann Educators
Foundation grant will
supply 3D printers for
rapid prototyping.

Learn more at UIS.EDU/INNOVATION

3D PRINTERS AT ORIC

STUDENTS USING

35+ PROJECTS U

\$10K PRIVATE DONATION PLUS \$500 FROM PACULTY & STAFF

WHEN WE WORK TOGETHER, WE ACHIEVE THE EXTRAORDINARY

Across the state, we're bringing people together to break down barriers and create solutions that ensure all communities benefit from the progress that innovation inspires.

We're proud to lead the charge to co-create a brighter future for everyone through education, research, workforce development, and economic development that fosters growth in every corner of the state, and improves access to quality, affordable healthcare.



The University of Illinois Chicago is

the only public research university in Chicago. It is a world-class research institution with an academic health enterprise, UI Health.

- Enrollment: 33.500+
- 9.100+ degrees awarded annually



NATIONALLY AMONG TOP PERFORMERS IN SOCIAL MOBILITY



The University of Illinois Hospital & Health Sciences System provides comprehensive care, education and research to train healthcare leaders and foster healthy communities in Illinois and beyond.

HOSPITAL AND CLINICS PATIENT VISITS



UNIVERSITY OF **ILLINOIS**

Founded in 1867 as one of America's original land-grant institutions, the University of Illinois Urbana-Champaign is consistently ranked as one of the top public research universities in the U.S.

- Enrollment: 56,500+
- 16,800+ degrees awarded annually



#12 RANKED PUBLIC IN THE NATION RANKED PUBLIC UNIVERSITY



Illinois Extension UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

The University of Illinois **Extension** is the flagship outreach effort of the University of Illinois Urbana-Champaign, offering education programs to residents of all 102 Illinois counties.

COMMUNITIES SERVED

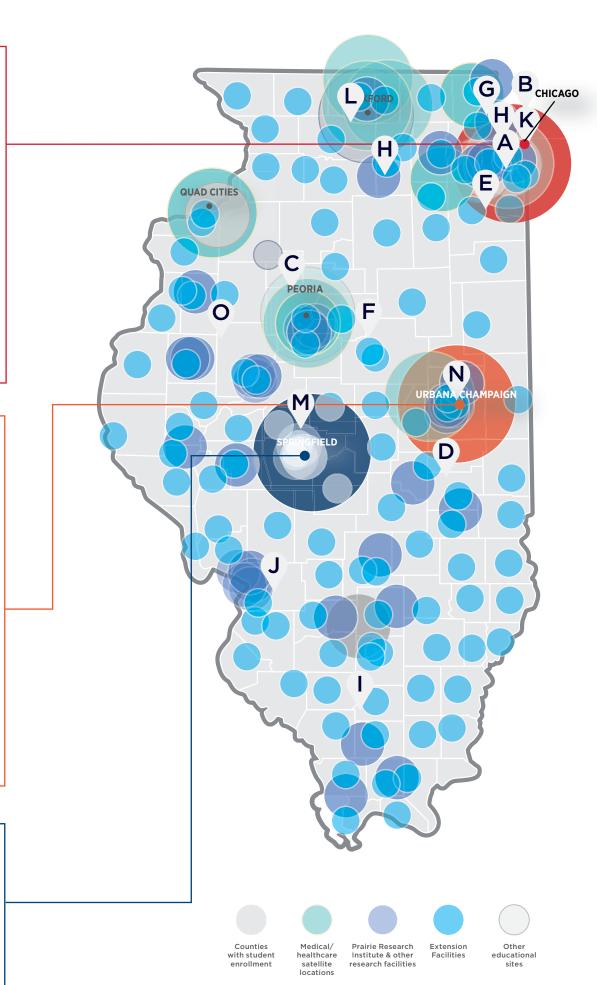
UNIVERSITY OF SPRINGFIELD

The University of Illinois Springfield

is a regional university based in the capital city with a strong public affairs and liberal arts core.

- Enrollment: 4,600+
- 1,110+ degrees awarded annually.







Part of the U of I System and in partnership with top regional and global research institutions, Chicago-based Discovery Partners Institute trains people for in-demand tech jobs, funds and conducts applied research and development, and launches new businesses built on university technology.

> SCIENCE TEAMS THAT CONVENE INTERDISCIPLINARY GROUPS OF RESEARCHERS



Led by the U of I System, the Illinois Innovation Network drives inclusive and integrated research, innovation and economic development across Illinois. IIN is a system of these 15 hubs. IIN's work combines the strengths of higher education, businesses, and communities.

\$500M FROM THE STATE OF ILLINOIS TO BUILD AND RENOVATE IIN FACILITIES FROM THE STATE OF

- A. Chicago State University, Chicago
- B. Discovery Partners Institute, Chicago
- C. Distillery Labs, Peoria
- D. Eastern Illinois University, Charleston
- E. Governors State University, University Park
- F. Illinois State University, Normal
- G. Northeastern Illinois University. Chicago
- H. Northern Illinois University, DeKalb
- I. Southern Illinois University Carbondale
- J. Southern Illinois University Edwardsville
- K. University of Illinois Chicago
- L. University of Illinois College of Medicine Rockford
- M. University of Illinois Springfield
- N. University of Illinois Urbana-Champaign
- O. Western Illinois University, Macomb



Journal of Appalachian Studies. especially but not limited to culture, health, literature, and Indigenous groups



Italian American Review. history and culture of Italian Americans, as well as other aspects of the Italian diaspora



Journal of Animal Ethics, devoted to the exploration of progressive thought about



American Journal of Theology & Philosophy, creative interchange of ideas between theologians and philosophers



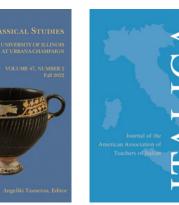
American Literary Realism. critical essays on American literature from the late 19th and early 20th centuries



Quarterly, one of the principal vehicles for publishing scholarly



Dialogue: A Journal of Mormon Thought. Mormon culture and the relevance of religion to



Illinois Classical Studies, topics related to the Classics, in all areas of Classical philology and ancillary disciplines



Italica, aspects of Italian language, literature, and culture, as well as studies on language



Journal of American Ethnic History. North American immigration history and American ethnic history



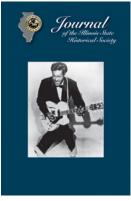
Folklore, articles, notes, and commentaries grounded in past and current folklore scholarship



American Music, devoted to all aspects of American music and music in America



Jazz & Culture, groundbreaking work by researchers alongside oral histories and articles written by master artists



Journal of the Illinois State Historical Society, preserving, promoting, and publishing new research about the Prairie State



Journal of Film & Video, scholarship on film, video, and media production, history, aesthetics and more

University of Illinois System backing puts humanities, social sciences journals in the hands of academic explorers across the state at no cost

Thanks to pilot program funding, the 128 libraries in the Consortium of Academic and Research Libraries in Illinois—also known as CARLI—have access to more than 40 University of Illinois Press journals.

"Access to our humanities and social sciences journals is important, especially when book bans and restrictions on intellectual exchange are hot-topic issues," said Laurie Matheson, UI Press director. "This initiative increases students' and researchers' ability to explore, use, and share reliable and vetted information.

"In fact, UI Press journal usage among CARLI-affiliated libraries has tripled since we launched the program in summer 2023."

UI Press is one of the leading publishers of humanities and social sciences journals in the country. Its titles cover a wide range of disciplines including philosophy and religion, ethnic and regional studies, and music and visual culture.

The University of Illinois System is funding the five-vear pilot.

"UI Press and CARLI are vital components of the U of I System," said Nick Jones, system executive vice president and vice president of academic affairs. "With greater access to knowledge in these critical areas of inquiry, scholars enjoy the essential academic

foundation that leads to boundless discovery and insight."

CARLI member libraries serve more than 90% of higher education students, faculty members, and staff statewide.

"This initiative expands access beyond the libraries that had been subscribing to University of Illinois Press journals to serve the full range of research and academic libraries in the state, including community colleges and smaller academic libraries," said Anne Craig, CARLI senior director.

HUMANITIES CHAMPIONS

The University of Illinois Press, CARLI, and JSTOR are partnering to provide all CARLI members unlimited access to nearly 700 University of Illinois Press e-books. CARLI and its members will choose titles for a permanent collection at the conclusion of fiscal year 2025.

> Learn more at PRESS.UILLINOIS.EDU and **CARLI.ILLINOIS.EDU**

"Access to our humanities and social sciences journals is important, especially when book bans and restrictions on intellectual exchange are hot-topic issues.





Laurie Matheson

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University of Illinois System Leadership State Tour stops often produce meaningful results. So true with Proviso East High School in Maywood, a Chicago suburb.

In 2022, Chicago area high school superintendents said students needed ways to connect with U of I System universities. That led to a fall 2023 state tour stop to hear directly from Proviso East students and educators. Next, more than 70 Proviso East students visited the University of Illinois Chicago. While exploring the campus, they soaked up information about applying, campus life, support services, and more.

And they saw firsthand how making a degree accessible is a priority for UIC and the system.

The visit resonated with Chellsea Neely.

"I'd heard of UIC, but I'd never been there. I hadn't considered UIC for after graduation," said Neely, Proviso East class of 2024. "But at the visit I decided UIC is on top of my list of colleges I would love to attend." The most recent state tour focused on education, health and sustainability, and economic development. System leaders met with legislators, industry partners, and community representatives statewide and are doing so again this fall.

'THEY NEED TO SEE US'

Neely's post-state tour response is the kind of outcome everyone wants.

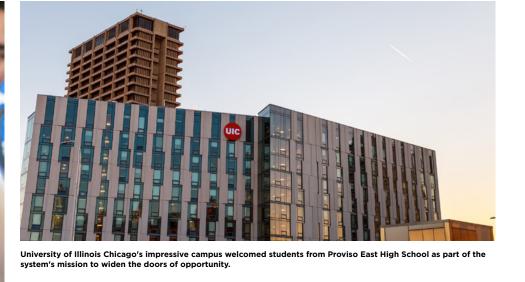
"This all came to be because Principal Rodney Hull talked powerfully and passionately about his students. He told us they need to see us, see our universities," U of I System President Tim Killeen said. "And they need to know that financial aid is available, that more than a third of our in-state undergraduates pay no tuition or fees."

Armed with information, Neely sees her future clearly.



"I'll address animals' visual impairments and improve their vision. And I'll increase the ratio of 1.4% African American veterinarians in the United States."

— Chellsea Neely Proviso East High School



"I know getting a degree will give me a head start in my career," she said. "I also want the opportunity to immerse myself in the college experience and make lifelong friends."

During the UIC visit, Neely liked seeing the nursing program in action, especially learning about surgery. That's no surprise for the future veterinarian.

"By specializing in ophthalmology, I'll develop in-depth expertise in treating animals' eye conditions," she said. "I want the chance to work with a wide range of species, from cats and dogs to exotic animals.

"That will be very rewarding."

BRIGHT FUTURES

Neely, whose favorite classes are anatomy and psychology, has done her research. And knows she'll make an impact.

"I'll address animals' visual impairments and improve their vision. And I'll increase the ratio of 1.4% African American veterinarians in the United States," she said.

UIC College of Business Dean Sandy Wayne enjoyed hosting Neely and her classmates during their visit.

"It was an exceptional opportunity to connect with UIC and its support

units. They met with UIC students and discovered the benefits of pursuing a degree here," Wayne said.

U of I System and university relationships with high schools across the state will continue to grow.

"We look forward to providing more chances for ambitious young people to see how the bright future we offer could be theirs," Killeen said.

WHAT'S NEXT ON THE STATEWIDE STATE TOUR?

A must for the 2024 U of I System
Leadership State Tour: even
more listening. Chicago-area
and down-state stops will focus
on education, manufacturing,
sustainability, innovation and
more, including connections with
our universities' alumni. The twopart September tour pairs system
leaders with engaged existing
and new partners.

Explore GO.UILLINOIS.EDU/STATETOUR

20 STOPS ON THE 202 STATE TOUR

90+ ORGANIZATI

1.300 ROAD MILE TRAVELED



DELVING INTO BOUNDLESS POTENTIAL

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Quantum's immense power and potential offers limitless opportunities on a global scale. As a leader in this field, focused on driving innovation and promoting economic growth, the University of Illinois System plays a critical role in its broad activation.

But what is quantum? Why should people care?

In short, it's a large body of technological advancements poised to touch many facets of daily life—from consumer goods distribution to research for combatting disease and mitigating climate change to succeeding in a world economy. Computer scientists, engineers, mathematicians, physicists, and a host of other experts around the globe are exploring and pooling knowledge in the name of progress.

Brian DeMarco answers questions to help us all gain understanding about the quantum realm. DeMarco is director of IQUIST at The Grainger College of Engineering at the University of Illinois Urbana-Champaign.

WHAT IS QUANTUM INFORMATION SCIENCE?

Quantum information science harnesses how energy and matter act at the smallest levels to process and transmit valuable information. Quantum computers can complete incredibly hard tasks better and faster than today's fastest supercomputers.

Important problems exist that only large-scale quantum computers will ever solve. These include how electrons carry current without electrical resistance in a superconductor, which could revolutionize the energy grid.

WHAT LEADERSHIP ROLES DOES THE U OF I SYSTEM PLAY IN THIS SPACE?

UIUC is part of one of the top hubs for quantum research in the world, the Chicago Quantum Exchange. The hub includes the system's private-university counterparts at the University of Chicago and Northwestern University, as well as the University of Wisconsin, Purdue University, and national labs Argonne and Fermilab.

In addition, four of the 10 national centers created by Congress to focus on accelerating quantum research and development are here in Illinois. The U of I System has a role in each of the four and leadership roles in three.



WHY IS QUANTUM COMPUTING CHALLENGING?

While bits, the ones and zeroes that make traditional computing possible, are digital, quantum's qubits are different. Their non-linear power is both fragile and difficult to manage.

UIUC is a powerhouse in advancing the forefront of quantum computing.

- To make it easier to build bigger quantum computers, Angela Kou is creating superconducting qubits that can work at higher temperatures.
- Wolfgang Pfaff and his team are developing the science and technology to create quantum computers that use swappable modules for upgradability.

IQUIST AT UIUC BY THE NUMBERS

60+

INTERDISCIPLINARY FACULTY IN IQUIST

MENTORS AT QUANTUM STARTUP ACCELERATOR DUALITY \$100N

PUBLIC QUANTUM
NETWORK FROM
THE GRAINGER
COLLEGE OF

learn more at IQUIST.ILLINOIS.EDU

- Andre Schleife is creating methods to use quantum computers to enhance our understanding of materials problems like corrosion.
- Santiago Nunez-Corrales and Bruno Abreau are working at the National Center for Supercomputing Applications to make quantum computing accessible to more researchers.

WHY IS QUANTUM COMPUTING IMPORTANT FOR THE PUBLIC GOOD?

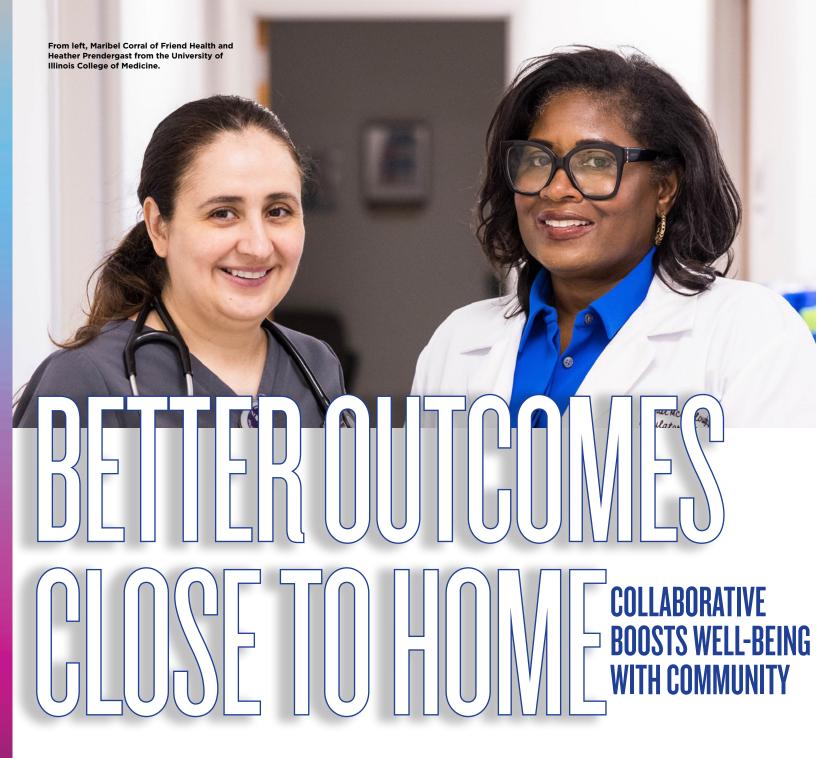
Our world is filled with challenges and opportunities. Collecting, assessing, and using data to create positive breakthroughs requires the complexity and speed quantum computing can deliver.

Quantum computing will reshape society in ways we can hardly imagine. Some applications are already emerging, including improving financial fraud detection, which costs the United States \$85 billion in annual losses and disproportionately impacts underserved communities. Quantum computers may also revolutionize drug discovery, weather forecasting, and energy storage.

WHAT'S NEXT



Thomas A. Searles from the University of Illinois Chicago is leading the new ReACT-QISE Consortium. The seven-university initiative will usher students from all backgrounds into quantum physics. Funded by a \$4.8 million award from the U. S. Department of Energy, the consortium is made up of Historically Black Colleges and Universities, Hispanic-Serving Institutions and institutions serving predominantly female students.



When Chicago's Gage Park-West Elsdon neighborhood experienced the closing of a vital health resource just before the pandemic, UI Health asked how it could help. The community of mostly Black and Hispanic residents eagerly responded.

"Our mission became bringing specialty care to a community that badly needed it," said Sandi McCullough, senior director of clinical operations at UI Health's 55th & Pulaski Health Collaborative.

Since early 2022, the collaborative has served more than 30,000 patients, especially neighbors who face barriers to managing disease. It's a shining example of how the University of Illinois System and its partners improve access to healthcare and close gaps in patient outcomes.



Sandi McCullough, senior director of clinical operations at UI Health's 55th & Pulaski Health Collaborative

RIGHT IN THE SAME BUILDING

One clinic that connects patients with specialty services resides on the building's main floor. Friend Health offers immediate care services. And it helps catch patients who fell through the cracks.

"Many people with chronic conditions are a lot sicker than they were before the pandemic. It's rewarding to see them getting care again, to see their blood pressure improve, see their A1C improve." said Maribel Corral. Friend Health physician assistant. "Especially with cardiac care, it's a breath of fresh air when I can do a warm handoff to someone upstairs at UI Health."

An effort of the University of Illinois College of Medicine, the University of Illinois Chicago College of Applied Health Sciences, and the UI Health Mile Square Health Center, the busy four-story facility brings together UIC's health sciences colleges and local providers for health screenings and specialty services, as well as behavioral and mental health care.

FROM SURVIVING TO THRIVING

"This initiative has been both innovative and impactful, in part, because of the range of expertise and partnerships," said Dr. Robert Barish. MD. UIC vice chancellor for health affairs. "Housing acute and chronic care needs with social services, like social and community health workers, all under one roof provides the level of attention and personalization needed to empower patients to truly thrive."

The clinic now offers care in 20 specialty areas, including radiology and endocrinology.

"We opened with three specialties. Since then, the number of patients we've served has quadrupled. We hear all the time how much people like the convenience," McCullough said.

"They say they feel supported."

TRANSFORMATION LEADERS

The Illinois Department of Healthcare and Family Services funded the launch of the collaborative through a \$15 million Healthcare Transformation Collaboratives award. It is the first statefunded collaborative to operationalize.

"Our approach aims to tackle the often-fragmented nature of healthcare delivery. Reducing that fragmentation is essential for improving health outcomes and reducing disparities," said Heather Prendergast, MD, College of Medicine associate dean for clinical affairs, who help spearhead the collaborative.

"Our goal is healthcare transformation, and we are full steam ahead."

MORE THAN MANAGING SYMPTOMS

The team has no intention of slowing down.

"We intend to expand this model to do even more," she said. "True health equality requires leveraging technology to enhance care coordination, implementing community-based health

programs to address social determinants of health, and fostering even stronger partnerships among healthcare providers and community partners."

Patients who visit may find more than they expect, including bilingual staff and providers.

"By helping with insurance, facilitating access to community resources, hosting community education sessions, and offering targeted programs-such as hypertension action planning, prenatal care, and diabetes and high blood pressure management—the facility ensures a holistic approach to healthcare to improve patient well-being for a healthier, more resilient community."

WHAT'S NEXT

To enhance its roster of patient-focused services, the UI Health 55th & Pulaski Health Collaborative will begin offering dental care in late 2024. It will continue to expand specialties and add providers-including orthopedics, physical therapy, and occupational therapy—for even broader patient access to exceptional quality care.

> **Explore HOSPITAL.UILLINOIS.EDU**

SPECIALITY CARE VISITS IN THE FACILITY'S FIRST

2,131 WOMEN'S HEALTH 1,348 OPHTHALMOLOGY 1,199 ORTHOPEDICS

A more than \$10 million vote of confidence supports the tenet that global science requires contributions from a wide range of thinkers and practitioners.

In September 2023, the new Global Center for Clean Energy and Equitable Transportation Solutions secured matching funds from the National Science Foundation and United Kingdom counterpart U.K. Research and Innovation.

Birmingham, Cardiff University, and other collaborators in the U.K. and the United States, CLEETS features experts from Discovery Partners Institute, University of Illinois Chicago, and University of Illinois Urbana-Champaign, all part of the University of Illinois System. Leading the way in addressing global

climate challenges, the U of I System ensures faculty and students experience international collaborations to help better society while also creating a climate- and world-focused workforce.

'SOLUTIONS ARE LOCAL'

Along with researchers at the University of CLEETS aims to speed up the creation of fair, useful, and safe-from-cyber-attacks clean energy transportation by engaging government, the private sector, and communities in research, education, and problem-solving.

> "Climate change is a global problem, but its solutions are local," said Ashish

Sharma, climate and urban sustainability lead at DPI and global center director. "Through these joint awards, we will test and quantify the anticipated impact of policy change scenarios to reduce carbon emissions from road transportation while also supporting economic opportunity, workforce resilience, and public health."

UP FIRST. ELECTRIC VEHICLES

The first official CLEETS output focuses on cybersecurity in a booming tech sector: electric vehicles. Two of the CLEETS co-principal investigators presented their "OCPPStorm: A Comprehensive Fuzzing Tool for OCPP Implementations" at the Network and Distributed System Security Symposium early in 2024.

"Widespread EV adoption is important for combating air pollution and climate change in both the CLEETS-focused Great Lakes megaregion and West Midlands and South Wales in the U.K.." said Rigel Gjomemo, DPI research scientist and UIC computer science research associate professor.



"However, cybersecurity risks often accompany the adoption of new technology. And those risks linger until the technology matures."

The threat is real.

"The data exchange between a vehicle and charging station is vulnerable to cyberattacks, offering the chance for cybercriminals to steal drivers' personal data and cause excessive loads on the power grid that supplies the charging stations," said Omer Rana, Cardiff University professor of performance engineering who specializes in distributed systems and machine learning.

STRONGER CYBERSECURITY

Enter the CLEETS team's creation. OCPPStorm. It identifies cyber weaknesses in the widely used Open Charge Point Protocol. OCPP enables the connection between charging stations and service providers for essential functions such as starting charging sessions and monitoring energy usage.

OCPPStorm requires minimal expertise and overhead for charging station companies' and utilities' use.

Improved charging station security can help gain consumer confidence in EVs.

"Charging station security is essential as vehicle manufacturers add EVs to their fleets and offer more affordable options to consumers and industry," Rana said.

THE POSSIBILITIES

For CLEETS, that's the tip of the proverbial iceberg.

"Collaborating internationally through one research center offers opportunities for researchers to bring together ideas, cultures, and industry expectations," said Venkat Venkatakrishnan, UIC computer science professor and DPI director of research. "Combining complementary skills and datasets enhances research and positively impacts both countries.

"It's highly rewarding for researchers and students to co-create solutions like OCPPStorm through this center. What we end up creating is more than just the sum of the parts."

The research team is preparing to partner with a charging company to test the OCPPStorm tool.

WHAT'S NEXT WITH THE **UNITED NATIONS?**

The CLEETS team is hosting a session at the UN General Assembly Science Summit this fall to advance dialogue with international academic, private and public communities. The summit serves as an essential platform for the partnership's work to accelerate the global decarbonization of energy and transportation.

> **Explore CLEETS-GLOBAL-CENTER.ORG**



Ashish Sharma



Omer Rana



Rigel Gjomemo



Venkat Venkatakrishnan

26 U.S. CLEETS TEAM MEMBERS

25 U.K. CLEETS TEAM MEMBERS

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FACULTY THROUGHOUT U OF I SYSTEM SPOTLIGHT HOW ARTS EMPOWER OUR FUTURE

Music's power: Culturally competent leaders who drive innovation, progress

By Yona StamatisUIS Music Program director

Leading the University of Illinois Springfield Music Program fills me with a profound sense of pride and deep excitement for the future.

For the last five years, I have had the privilege of both helping the next generation emerge as musical leaders and molding the music program into a critical component of a UIS liberal arts education.

I decided to devote my life to music as an undergraduate student at Columbia University. My years of training in classical violin performance were newly enriched by coursework in ethnomusicology, a discipline that taught me about music as a sociocultural phenomenon. I came to understand that music is far more than a pastime or a form of entertainment. Music exists at the very intersections of power. access, and justice. In my

life and in my career, I was determined to engage music as a means to help make the world a better place.

Whether directing, playing, or educating,

icial issues of our time

dering some of the most pressing

To this end, UIS Music
Program faculty aim to
help students cultivate
transferable career and
life skills, enabling them
to emerge as culturally
competent leaders who drive
innovation and progress.

"(We) aim to help students cultivate transferable career and life skills, enabling them to emerge as culturally competent leaders who drive innovation and progress."

Beyond the classroom, my colleagues and I have helped evolve the UIS Music Program into a hub for deep collaboration and knowledge exchange within the greater Springfield-area community, enriching everyone involved.

With an insatiable drive to build and innovate as my guide, I continue to be excited for the future of music at UIS.

Convergence: Art and design, artificial intelligence



By Jena MarbleUIUC clinical assistant professor
of graphic design

Many art and design students have come to fear the seemingly inevitable rise and domination of the robots.

- With artificial intelligence in the mix, will I get a job after graduation?
- Who should get credit—the artist or the algorithm?
- What are the ethics of this new landscape?

Many questions are unanswered, but the truth remains that design is a process, not just a result. Our University of Illinois Urbana-Champaign School of Art & Design courses help students grasp the crucial significance of that process—to understand that

design must be intentional and meaningful.

We are not just creating things that look nice.

After exploring and reflecting on the convergence of design and AI, I'm confident in reassuring my students. Here's what I tell them:

"While AI can help us envision new possibilities and develop ideas, it will never replace you.

"Generative AI isn't your competitor—it's your creative collaborator. It's a springboard for inspiration, a tool in your toolkit, a brainstorming partner to help you conceptualize in new and innovative ways."

From my perspective, art and design have never been this exciting or this accessible.

Despite what sometimes feels like an uncertain future, I am steadfast in my belief that human creativity, design, and the arts will continue to flourish.

On the stage: Opportune union of sight, sound at UIC



By Yasen Peyankov UIC Theatre Department head

The University of
Illinois Chicago Theatre
Department serves a special
purpose on our campus. Of
all the arts, theatre is the
one that speaks the most to
our shared humanity.

There is nothing more thrilling and emotionally engaging than to sit in a dark room and watch fellow human beings share stories that touch all of us. That's the experience I had when I watched our production of Urinetown: The Musical this spring.

Our theatre department doesn't have a musical theatre program, yet we decided to produce the first musical in our program's history. Director Monty Cole was deeply passionate about this.

The production's premise was silly, strange, and distant, but also somehow not so far off.

In recent years, its indictment of greedy capitalistic systems told with a wink and smile is all too familiar and present. Not only that, but it's a musical that creates memorable moments from bold character and acting choices over technical dancing prowess.

This perfect ensemble piece allowed us to collaborate and express our opinions of the world. It also gave us our first meaningful collaboration with the Music Department.

I'm thrilled to say the show sold out all performances and was our biggest box office hit to date.

Some UIC students realized for the first time that we have a theatre that produces extraordinary work. It also brought many patrons from the community who raved about the production. So gratifying that the reach of our special purpose ballooned.

New Design: Common Ground in the Future



OPERATIONS SPENDING IMPACT

RESEARCH SPENDING IMPACT **SPENDING IMPACT**

SPENDING IMPACT

COMPANY IMPACT

SPENDING IMPACT

SPENDING IMPACT

IMPACT

SUPPORTED

TOTAL ECONOMIC IMPACT

OIS SYSTE

FOR EVERY \$1 SPENT...

STUDENTS GAIN IN LIFETIME EARNINGS

TAXPAYERS GAIN IN ADDED TAX REVENUE & PUBLIC SECTOR SAVINGS

SOCIETY GAINS IN ADDED INCOME & SOCIAL SAVINGS







University of Illinois System







