RESEARCH
AND
GRADUATE STUDIES
ANNUAL REPORT FISCAL YEAR 2022
Message from the associate vice president

Fiscal year 2022 (FY22) represented a year of continued change in the Office of Research and Graduate Studies. There was a great deal of turnover in personnel, and we welcomed several new staff members. In addition to the support we provide internally as a university, external sources of funding make substantial contributions to the advancement of faculty scholarly activities, student experiential learning, and university outreach. The work made possible by such funding supports the core values of Illinois State University, most directly the values of learning and scholarship, civic engagement, and collaboration. Furthermore, the research, creative activities, and educational outreach made possible by external support are integral parts of the University’s direction, objectives, and actions outlined in the University’s strategic plan, Educate·Connect·Elevate. External support is one factor in a number of rankings for the University, including our Carnegie classification as a High Research Activity Doctoral Institution (R2). Support comes through a variety of channels (e.g., grants, contracts, agency dollars, foundation support, etc.) and for a number of functions (e.g., research, instruction, public service, etc.). This annual report attempts to capture grants and contracts support as well as highlight the work of our interdisciplinary centers, the Office of Student Research, and the Graduate School.

Several activities were points of pride from the previous year, including:

- continued supplemental funding for University Research Grants (URGs), the main source of internal support for faculty research;
- participation in helping secure approximately $29.8 million in external funding to projects for FY22 and beyond;
- submission of 210 proposals through Research and Sponsored Programs and 174 awards;
- the appointment of a director of the Graduate School, Dr. Noelle Selkow;
- the first in-person Research and Creative Scholarship awards ceremony in April 2022;
- the holding of the University Research Symposium in the newly renovated Bone Student Center; the first in-person event since 2019. Three hundred students participated with 218 in person (103 undergraduates and 115 graduate students) and 82 choosing an e-poster option (28 undergraduate, 54 graduate);
- a fantastic student-led research lecture series co-sponsored by the office;
- the finalization of pooled fringe benefits charged to restricted and foundation funds and subsequent policy update;
- several prominent awards from the National Endowments for the Humanities and the Arts;
- the Illinois Tutoring Initiative, supported by a state contract, began offering tutoring statewide to help students who had fallen behind during COVID-19;
- increased efforts in engaging community and corporate partners to support and license our work and increase interaction with our faculty and graduate students;
- the Office of Student Research continued to promote and celebrate student research on campus, continuing the new student research support fellowships, adding more grant programs, extending programs to include graduate students, and continuing an Image of Research competition.

As we move into FY23, we expect to see even more progress. As one example, former Vice President for Academic Affairs Provost, and current Interim President, Dr. Aondover Tarhule, has announced a bold multi-year program to support multi-disciplinary teams. A group has been charged with strengthening support with corporate partners, including support of students and research. Many announced shifts and policy changes have been announced in the federal landscape, and more may come following the fall election cycle. I look forward to working with our many partners to keep improving and innovating. Thanks for reading.

Craig C. McLauchlan
Associate Vice President for Research and Graduate Studies
Professor of Chemistry
The Graduate School has taken the past year to plan and improve. The pandemic has placed initiatives on hold while we navigate the year. Our graduate students are strong, resilient, and eager to learn. While our total overall graduate enrollment took a small dip in fall 2021, mostly due to international student visa approval issues, we are happy to say that our enrollment for fall 2022 has taken a turn in the positive direction.

Here are a few highlights from the past year:

- **New programs**: There were three new approved graduate programs, including a new B.S.N. to Ph.D. program in nursing, an online master’s in English education, and a master’s in computer science.

- **Student recruitment**: We’ve expanded our reach for student recruitment, working with a firm to advertise our graduate programs across the state.

- **Strategic planning**: The Graduate School hired Dr. Jeri Beggs to connect with departments, faculty, and students on campus to begin data collection for a new strategic plan.

- **Campus partners**: We continue to partner with campus units to enhance our students’ experience.

We have several goals in 2022 and our guiding principle always goes back to: How can we best advocate for graduate students?

### Three Minute Thesis (3MT)

Brittania Howe had a big night on February 24, 2022. She won first place and the People’s Choice Award at the Graduate School’s Three Minute Thesis (3MT) competition, and then almost immediately rushed off to lead the dress rehearsal for Legally Blonde, the musical she directed which was opening the following night.

“I’m a bit surprised (about winning). I can’t wait to tell my children,” said Howe, an M.F.A. directing candidate, who has a 5-year-old son and a 9-year-old daughter. “This has been a great opportunity to distill all the research theories that I’ve tried in my practice of directing this production and this thesis project. And it’s really brought to the surface what my goals are as an artist.”

Howe’s presentation, “Take It Like a Man, Exploring Gender Disparity in the Workplace through the Musical Legally Blonde,” focused on the work she did preparing the cast for a musical that explores feminist themes. And she explained to the audience how she brought the production up to date from its debut in 2001.

“This show was written and originally cast by predominantly white actors. So, we asked ourselves who is being left out of the story. This led us to cast racially diverse and gender-nonconforming actors in roles that historically they haven’t been considered for to create a sisterhood of different voices,” Howe said. “When working with the actors, I used the rehearsal room as a laboratory using techniques and exercises that freed the actors to physicalize a presence of empowerment.”

“Theatre for social change is a call to action. It demands that we examine ourselves in the mirror. I believe that if we study societal issues like this one and attempt to find a solution through the arts of theatre, music, and laughter, it can encourage empathy and stimulate change.”

Howe was one of seven graduate students to compete in the sixth annual event that challenges participants to see who can best explain their research to a general audience in three minutes or less. Each student was limited to a single static slide and livesreamed their presentations from the location of their choice.
ORGS investments

- Over $730K in support for Research and Creative Scholarship in FY22
- Additional support through personnel and support from colleges and units

University Research Grants (URG)

Over $430K awarded in URG funding in FY22
Some colleges supplement further
Funding for 87 investigators reported
Most awards and $ to Assistant Professors
Funding acts as seed
- External funding requests in many cases
- Scholarly outputs expected in all

2022 University Research Symposium

- First in-person attempt since spring 2019
- 300 total participants in Bone Student Center
- Morning and afternoon sessions
- In-person and e-poster options
- Best participation since 2019, but not fully recovered

Writing support

Twenty attended three-day writing retreat at Lake Bloomington
Ten events held on Fourth Fridays in FY22
- 109 unique attendees, representing Milner Library and all six academic colleges
- 34 departments/schools represented
Twenty-three total (17 unique) faculty supported through book subvention and publication/exhibition support funds
AWARDS

Outstanding University Researchers

The Outstanding University Researcher Award recognizes faculty whose research is acknowledged at the national or international level for its quality and contribution to the profession or discipline.

Kathryn Sampeck, Department of Sociology and Anthropology

Kathryn Sampeck (B.A., M.A., University of Chicago; Ph.D., Tulane University) is a professor of anthropology at Illinois State University and an associate with the DuBois Research Institute at the Hutchins Center for African and African American Research at Harvard University. Sampeck uses multidisciplinary approaches to investigate a variety of topics such as taste, cultural landscapes, race, literacy, money, and commerce in American commodities in the early modern world. She has devoted years of archaeological and historical research to understanding the cultural history of chocolate, and as a board member of the Fine Cacao and Chocolate Institute, advocates for a more equitable and transparent chocolate-cacao value chain. Her archaeological endeavors are community-based, including co-directed projects with the Tribal Historic Preservation Office of the Eastern Band of Cherokee Indians. She co-edited, with Stacey Schwartzkopf, the 2017 volume Substance and Seduction: Ingested Commodities in Early Modern Mesoamerica. She has published numerous articles in leading peer-reviewed history, anthropology, archaeology, and geography and Latin American Studies journals. Forthcoming works include Rich: Cacao Money in Mesoamerica and Afro-Latin American Archaeology: An Introduction. She currently holds a Fulbright to the United Kingdom for research at the British Library and has held two previous Fulbrights.

Justin Vickers, School of Music

Professor Justin Vickers is a British music researcher who specializes in the music, life, and endeavors of 20th century composer Benjamin Britten and his spouse, the tenor Peter Pears. As a 2020-2021 U.S. Fulbright Scholar to the United Kingdom, Vickers focused on completing his first monograph, The Aldeburgh Festival of Music and the Arts: A History of the Britten and Pears Era, 1948–1986, commissioned by The Boydell Press. Vickers was recently named co-editor of Elizabeth Maconchy in Context with Lucy Walker (forthcoming, Cambridge University Press). A new project that will result in a co-edited volume with Joy H. Calico, Childhood and the Operatic Imaginary, has been awarded a 2022 Explorer Seminar funded by Harvard University’s Radcliffe Institute for Advanced Study (summer 2022). Together with Philip Reed, Vickers is editing a memoir of the first Aldeburgh Festival manager, Elizabeth Sweeting, alongside her correspondence with Britten (The Britten Press, 2023). He is co-editor of Benjamin Britten in Context (Cambridge University Press, 2022) and Benjamin Britten Studies: Essays on An Inexplicit Art (The Boydell Press, 2017) with Vicki P. Stroeher. He has contributed to The Sea in the British Musical Imagination (The Boydell Press, 2016) and Literary Britten: Words and Music in Benjamin Britten's Vocal Works (The Boydell Press, 2019), and has multiple Britten articles in print or at press. Vickers has been a regular contributor to programming at The Red House, Britten's heritage home and archive in Aldeburgh on the Suffolk coast; he has performed there in recital and lecture-recitals, appeared on the From The Red House podcast, and in public talks, as well as writing essays for the annual exhibition books "A Circle of Support": Britten and Women (2022), "Such an artist to write for": Inspiration and Collaboration (2020-2021), Britten in America (2018), Queer Talk: Homosexuality in Britten’s Britain (2017), and Britten’s Words (2015). His additional research focuses on Britten's song and the creative process, and the 35-year history of the English Opera Group, among other midcentury composers and subjects in the British Isles.

University Research Initiative Awards

The University Research Initiative Awards are presented to faculty who, within their first five years at Illinois State University, have initiated a promising research agenda early in their academic careers.

Brea Banks, Department of Psychology

Matt Caplan, Department of Physics

Luke Russell, Department of Family and Consumer Sciences

Michelle Shropshire, Mononcollege College of Nursing

Melinda Snodgrass, Department of Special Education

Outstanding University Creative Activity Awards

This award is given for outstanding creative work. Creative contributions include but are not limited to the following: painting, sculpture, film, drama, musical composition, choreography of a dance, poetry, a novel, creative nonfiction, and creative media programming. The contribution(s) must have been recognized in the field as having national and/or international significance. This award is not designed to recognize a single major work, but consistent and sustained contributions to the profession, discipline, and field.

John Stark, School of Theatre and Dance

John Stark is a professor of design in the Illinois State University School of Theatre and Dance. In 2017, he was named the artistic director of the Illinois Shakespeare Festival. He received a B.S. from Wayne State College and an M.F.A. in scene design from the University of Nebraska-Lincoln. Stark joined Illinois State in 1991 after teaching at Illinois Wesleyan University and Arizona State University where he was named College of Fine Arts Distinguished Teacher of the Year. He is a member of the United Scenic Artists Local 829 and has designed professionally for Chicago Theatre companies including Red Orchid Theatre, Victory Gardens, Seanuchi Theatre, Drury Lane Theatre, The Next Theatre, Noble Fool Theatricals, and Famous Door Theatre where his design of The Living was awarded the Joseph Jefferson Award for Scenic Design. He has designed 36 productions for the Illinois Shakespeare Festival. Regional credits include, Indiana Repertory Theatre, The Garden Theatre (Winter Garden, Florida), The Sacramento Theatre Co., Nebraska Repertory Theatre, Pennsylvania Center Stage, Diablo Light Opera (Walnut Creek, California), Actors Theatre of Phoenix, Chililplay, (Tempe, Arizona) and Actors Lab of Scottsdale. Stark has also worked professionally in St. Louis. His design of Way to Heaven for the New Jewish Theatre was nominated for a St. Louis Theatre Circle Award in 2013. In 2011, John designed the world premiere of Falling at Mustard Seed Theatre. In 2012, Falling (also designed by John) opened Off-Broadway at the Minetta Lane Theatre receiving three Drama Desk nominations. He is currently designing the set for a single major work, but consistent and sustained contributions to the profession, discipline, and field.
married to Illinois State Professor of Acting Lori Adams. They have two artist children: Anna, a Brooklyn-based dance artist and arts administrator; and Nathan, a professional actor who is currently in the Internation ThespianFest acting program at the Bristol Old Vic Theatre School in Bristol, United Kingdom.

Tuyen Tonnu, School of Music
Vietnamese American pianist Tuyen Tonnu is known for her sensitive command of timbral color, her singing lyricism, and striking style. She has graced the world’s stages with solo and chamber music concerts in the U.S. as well as Asia and Europe. As a champion of new music, Tonnu’s performances have garnered praise for their powerful and insightful interpretations. Her collaborations have included premieres and works by Hans Otte, Tristan Murrail, Sheila Silver, Libby Larsen, Adrienne Elisha, Jeffrey Mummford, Martha Horst, and Lukas Lägerti, among others. For the past two decades, she has been the foremost interpreter of the piano music of the late Egyptian American composer Hālim El-Dabh, presenting the premiere performances of many of his works. El-Dabh’s first piano concerto was composed for and dedicated to her. In 2001, Tonnu was one of 10 musicians selected from the U.S. to perform in Alexandria, Egypt for the inauguration of the Bibliotheca Alexandrina.

Other notable performances included collaborations with the Escher String Quartet and the Stony Brook Contemporary Chamber Players, the world premiere of Martha Horst’s Piano Concerto No. 1 with the Illinois State University Symphony Orchestra, and the U.S. premiere of Roque Cordero’s Piano Concerto No. 1 with the Texas Christian University Sympho- ny Orchestra. In September 2020, Tonnu’s solo commercial album, Roque Cordero: The Complete Works for Piano Solo was released on the American/British label Albany Record. The CD has received rave reviews in Fanfare: The Magazine for Serious Record Collectors (March/April 2021) and in the American Record Guide (March/April 2021).

Tonnu is associate professor of piano at Illinois State University. She earned her degrees from Pacific Lutheran University, Eastman School of Music, the Cleveland Institute of Music, and Stony Brook University. Her teachers and coaches have included James Avery, Daniel Shapiro, Anne Epperson, Thomas Hecht, Christina Dahl, Gilbert Kalish, and Sergei Babayan.

Creative Activity Initiative Award
This award shall be given to recognize faculty members who have initiated promising creative productivity early in their academic careers. Creative contributions include but are not limited to the following: painting, sculpture, film, drama, musical composition, choreography of a dance, poetry, a novel, creative nonfiction, and creative media programming.

Dr. Michael Gizzi, Department of Critical Justice Sciences
Dr. Christopher C. Mulligan, professor of analytical chemistry, joined the Illinois State University Department of Chemistry in 2008, where his research group is focused on applying and adapting portable mass spectrometric (MS) devices for use in areas of societal need. Through his research, Mulligan seeks to demonstrate the performance, impact, and practicality of portable MS systems featuring ambient ionization methods for use in forensic evidence screening, the law enforcement/first response communities, and in environmental contaminant monitoring. Mulligan’s collaborative and interdisciplinary research on portable MS systems has been funded by the National Science Foundation (NSF), National Institute of Justice (NIJ), and Research Corporation for Scientific Advancement. He has conducted field research with the Army Corps of Engineers, Forensic Technology Center of Excellence (FTCoE) at RTI, U.S. National Guard Civil support teams, and various local and state-level police agencies. His research in areas of societal need was acknowledged by back-to-back selections to the 2017 and 2018 “Power List” by the Analytical Scientist Magazine and the 2021 American Society for Mass Spectrometry PUI Research Award.

Dr. Jamie R. Wieland is an associate professor in the Illinois State University Department of Management and Quantitative Methods. She received her B.S. in industrial engineering and management science and economics from Northwestern University and her M.S. and Ph.D. in industrial engineering and operations research from Purdue University. Wieland’s research interests are in applied statistics and computational modeling for purposes of decision analysis, policy evaluation, and systems optimization. Her research in the forensic sector has been supported by two National Institute of Justice (NIJ) grants, where she assessed the financial viability (via cost-benefit modeling) and error probabilities of broad field implementation of portable instrumentation for forensic evidence processing. In the College of Business, she teaches statistics, operations management, and applied tools for business decision making.

Dr. Michael Gizzi is a professor of criminal justice sciences and holds a Ph.D. in political science from the University at Albany, SUNY. He taught criminal justice and political science at Colorado Mesa University from 1995 until 2008, when he came to Illinois State. Gizzi’s research is diverse and focuses on privacy, vehicle searches, narcotic dog sniffs, and the intersection of technology and law. He also writes and researches on the usage of qualitative data analysis techniques. His interest in technology and law led him to collaborate with Drs. Mulligan and Wieland on the policy sides of the use of the portable mass spectrometer. Gizzi’s most recent books are The Practice of Qualitative Data Analysis: Research Examples Using MAXQDA with Dr. Stefan Radlher (MAXQDA Press, Berlin, 2021), and The Fourth Amendment in Flux: The Roberts, Crime Control, and Digital Privacy with Dr. Craig Curtis (University of Kansas Press, 2016). He uses qualitative and mixed methods methodologies in his work and is a certified trainer in the use of MAXQDA computer-aided qualitative data analysis software in the social sciences.
Dr. Tina Williams’ research seeks to change perception of underemployment

By Evan Linden

Imagine that you have years of experience in your field, but the only job that you can find after some time away from the workforce is an entry-level position. Or, that you studied physics, but the best job that you can be hired for is in sales.

Dr. Tina Williams, interim chair and associate professor of the Department of Management and Quantitative Methods, specializes in studying this phenomenon, referred to as underemployment. Williams published her first paper on underemployment in 2009—in the middle of the largest economic meltdown since the Great Depression.

In her research, Williams connects underemployment to diversity, equity, and inclusion (DEI). Williams also examines the outcomes of overqualification in the workplace. She was inspired to study these areas after facing underemployment. She was inspired to study these areas after facing underemployment. She was inspired to study these areas after facing underemployment. She was inspired to study these areas after facing underemployment.

“Before I went back to earn my Ph.D., I had to make a decision as to whether or not I would take a job that would pay me 40% less than I made at my previous job,” said Williams. “I decided not to take the job, and I realized when I went back to school that not everybody has that privilege. What does work look like for people who were required to take that job, understanding that they have made more in the past at a job where they had more responsibility and prestige?”

This revelation prompted her initial research question: How do job attitudes and behaviors differ between the overqualified and adequately qualified? After finding that overqualification is a complex and polarizing issue in the workforce, Williams structured her research question: “Not all people who are overqualified are in that situation because they are forced to be; there are people who are overqualified because it fits with their lifestyle,” said Williams. “So, the question becomes, ‘How do job behaviors, attitudes, and outcomes look when you have a person who is voluntarily underemployed compared to a person who is involuntarily underemployed?’”

Williams defines underemployment as the inability to secure adequate employment according to the individual’s specifications. There are five dimensions to underemployment.

The first dimension of underemployment is education, where one has more education than their job requires. The second dimension, experience, is a similar concept—one has more experience than their job requires. The third dimension is wage underemployment, which occurs when one makes less than they did at a previous job.

Job field underemployment occurs when the best position one can find is in a different field than they have experience in, while job status underemployment occurs when one is unable to secure full-time work.

“People who are experiencing job status underemployment will often have multiple part-time jobs trying to achieve adequate employment according to their preferences,” said Williams. “That creates a whole host of other issues.”

In a 2016 paper titled “Reimagining Overqualified Human Resources to Promote Organizational Effectiveness and Competitive Advantage,” published in the Journal of Organizational Effectiveness, Williams and her co-authors posited that organizations could benefit from hiring overqualified candidates who are voluntarily underemployed.

Additionally, Williams urges organizations to use data to solve socioeconomic inequities such as wage underemployment.

“The gender wage gap can be considered using the lens of underemployment. It sits at the intersection of gender and socioeconomic diversity,” said Williams. “While the gender wage gap is complex, we have the means to investigate it. Individual organizations have the data, so let’s evaluate that data and see if there are disparities between what’s paid for the same job for people of different genders. We can even go further; let’s look at people of different races, ages, sexual orientations, nationalities, degrees of ability. If we find problems, let’s fix them.”

“Dr. Williams is a voice for all students on campus, regardless of their background,” said Distinguished Professor of English Roberta Trites. “Dr. Williams listens to students and colleagues who have been historically marginalized and then uses her creative skills as a scholar of organizational behavior to develop programs that help address those problems.”

Dr. Tina Williams

Scan this QR code to learn more and read the full article in Redbird Scholar.
FY22 awards

Projected amount ($)

- Federal
- Federal Flow Through
- Local
- State
- Industry
- College or University
- Other Non-profit

Number of awards

- $29.75M

Number of awards by size

- 19 from SAF
- 18 awards from Biological Sciences
- 14 from Ag, Geo

- 8 awards > $1M
- 51 $0 awards in FY22 (29%)

Award by activity type

- 174 awards in FY22
- 50% research

FY22 projected federal awards by agency

- Federal and federal flow through $19.11M of $29.75M total
- Approx. 64% combined

- Education, $10.8M
- Health, $0.78 M
- Energy, $1.89 M
- NSF, $3.5 M
- Library of Congress, $1.0 M
- Other*, $1.1 M

Awards at a glance
# Submissions and Awards
## by College and Department/School
### Fiscal Year 2022

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<th>No. of new awards</th>
<th>Total expected amount awarded</th>
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*Non-academic offices within the VP for Academic Affairs and Provost, VP for Finance and Planning, and VP for Student Affairs.
By Evan Linden

Did you know that tattooing was afad among elites in the late-1800s in Europe and the United States? Did you know that Rowland H. Macy, Winston Churchill, and even the British Royal Family were tattooed? Some of the oldest bodies that have been recovered also have tattoos, including Ötzi the Ice Man, who had 57 of them.

None of this is news to Dr. David Lane, assistant professor of Criminal Justice Sciences. Lane grew up “surfing, skateboarding, around a hardcore punk scene that included lots of heavily tattooed people.” His friend’s brother became a tattoo artist, and eventually, so did other friends. “It was always around my social circle,” he said.

While finishing his Ph.D. studies, Lane had mentors encouraging him to study tattooing. He resisted for a while, and then realized that they had a good idea.

While the art of tattooing is not new, the body of research around it is still relatively recent. Most of the research that does exist focuses on tattooed bodies. “I woke up one morning and realized that I didn’t want to read another article about people’s bodies and tattoos,” said Lane. “I realized the tattoo artist angle was very underexplored in the research, and I decided to dive in.”

Lane’s new book, The Other End of the Needle: Continuity and Change among Tattoo Workers (Bucknell University Press, 2020), focuses on how tattoo artists sustain their world.

“There is no clear-cut, linear path to becoming a tattoo artist,” Lane said. “Typically, you go to a tattoo shop, get tattooed, spend time convincing people there that they want to have you around.”

There are tattoo schools, but most tattoo artists view them as financial scams. “It’s more accepted to do an apprenticeship for free and pay your dues. It is to show that you are dedicated,” said Lane.

Tattooists must learn and get feedback from other artists; having other artists regard them legitimately is a big part of the word-of-mouth advertising that is necessary to be successful. Essentially, tattoo artists need their identities verified by other members of the occupation to prosper.

“One of the things that makes the tattoo industry so interesting is that there is really no formal institution or professional development group in place,” said Lane. Many conventional professions and occupations require members to have formal schooling or various credentials to be effective within the field.

Despite the industry having no labor unions, official guide-

“(The popularity of tattooing) is not a surprise, because it values human connection and authenticity. It allows people to carve out a little bit of themselves and build their own identity.”

The shopless are the bottom of the tattoo stratification system. The shopless are “all those cast as outsiders by the established tattoo world,” said Lane. They are typically untrained or self-taught. Scratchers are “folk devils who established tattooists pin the evils of tattooing upon. Shopless and scratchers are pejorative terms related to the tattoo world; no one admits to being part of this group.”

Lane said tattooing is more popular now: “This is not a surprise, because it values human connection and authenticity. It allows people to carve out a little bit of themselves and build their own identity.”

Humans have been getting tattooed for thousands of years. In his new book, Dr. David Lane explores the world of tattoo artists.

lines, or strong professional associations in place, there is still a high degree of continuity in the work and a set of core values that is prevalent across the industry. “Because so many artists learn the occupation through apprenticing, they learn to value the past and the history of the industry,” Lane said. “It is common for artists to reference its history and past masters of the industry since they learn a cultural code that helps them to make sense of the world around them. It is a cultural code that values tradition.”

During his research, Lane developed the typology of different types of tattooists:

• Legends or masters have high degrees of skill and “have established themselves in the collective memory of the occupation,” said Lane. “They have large followings of people that consider them to be the epitome of a tattoo artist.”

• Artists and craftsmen are underneath legends and masters. Craftsmen value the traditional way of doing things, including passing traditions on from mentor to mentee. “Contemporary tattooists work within established channels to uphold these traditions as an honorific component of the occupation,” said Lane. Artists use tattooing as a medium to explore their artistic talents and value creative and artistic freedom. “There is overlap between craftsmen and artists. Artists rely on the craftsmen to produce tools and materials. Craftsmen rely on artists to create new aesthetics and push the boundaries of the craft.”

• The shopless and scratchers are at the bottom of the tattoo stratification system. The shopless are “all those cast as outsiders by the established tattoo world,” said Lane. They are typically untrained or self-taught. Scratchers are “folk devils who established tattooists pin the evils of tattooing upon. Shopless and scratchers are pejorative terms related to the tattoo world; no one admits to being part of this group.”

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Scan this QR code to learn more and read the full article in Redbird Scholar.
Understanding the physical education teacher education pipeline

By Kara Snyder

As a professor in the School of Kinesiology and Recreation (KNR), Dr. Emily Jones is finding new ways to get to know the student body through her research. She focuses on the concept of belonging when it comes to recruitment and retention of students in the physical education teacher education (PETE) major.

“We want to be proactive and intentional about understanding our student body and who we are recruiting to become future teachers,” said Jones, who arrived at Illinois State in fall 2017. She was awarded a University Research Grant from the College of Applied Science and Technology (CAST) in 2018 to study what motivates PETE students to choose physical education at Illinois State.

The grant-funded project’s goal was to understand how students walked through the process of considering Illinois State, as well as the factors that influenced their decision-making to apply and enroll. “We could not continue to use passive recruitment tactics. We knew that we needed to be strategic in our efforts to attract and retain students into our specific programs,” Jones said.

The research team embarked on a national survey of PETE students. Using a social capital framework, the survey asked students to reflect on their educational experiences and address any areas for improvement, including attracting a more diverse student population. “We weren’t losing our diverse students. We weren’t attracting them to begin with,” Jones explained.

What started with the CAST University Research Grant project has now grown to include a research team with faculty members from the University of Illinois at Urbana-Champaign, northeastern University, Springfield College, and East Tennessee State University working alongside Jones. “Collectively, we are all focused on diversifying the pipeline of teacher educators,” she said. “We need to think about how we are preparing these future teachers to teach all students, including being prepared to talk about diversity, inclusion, and social justice issues in the classroom,” said Jones.

While the formal research project is ongoing, Jones shared that there are likely inherent or social barriers to pursuing a career in PETE or teacher education in general. “Coming at it from a strengths-based perspective, we want to know what sort of support they experienced, and perhaps most importantly—how do they see themselves as a future educator and valuable part of students’ lives?” Jones said.

She hopes the research informs significant change. “We will need to consider the kind of policies we have in place that are prohibitive instead of empowering,” she said. “When I do the work, I always ask myself, am I better? Can I only be better tomorrow based on what I have learned today.”

Interested in learning more about Jones’s research or the physical education teacher education major? Visit kinrec.IllinoisState.edu to learn more.

Illinois State University is one of 15 member hubs of the Illinois Innovation Network (IIN). The IIN is a network of public universities formed in 2019 to “ensure Illinois’ role in the 21st Century knowledge-based economy.” The vision of IIN is to drive inclusive and integrated research, innovation, and economic development across Illinois. The mission is to foster collaboration, increase capacity, and integrate systems in education, research, and innovation by connecting people, organizations, and resources. Illinois State was appropriated $3 million of the $500 million capital project, with the majority of the project going to support the formation of Discovery Partners Institute (DPI) in Chicago.

FY22 represented minimal progress in the capital portion of the Hub’s project. As the community started to resume some activities, the COVID-19 pandemic still had a tremendous impact on the ability to meet with local partners. The developer was forced to change the cost structure of our lease for the location in Uptown Normal where our business startup incubator was to be housed, which made the deal untenable. We had a Stevenson ACED Fellow for a second year who worked to keep the project’s momentum and keep our partners on track. The Center for Math, Science, and Technology led the efforts to develop a maker-space curriculum, if not lead the planned facility.

In the state-wide IIN efforts, Illinois State University was a major participant. Some of those efforts in FY22 included:

- Faculty and students presented at the 2021 IIN Sustainability Conference.
- Illinois State was part of statewide proposals for major funding opportunities from the National Science Foundation (NSF) and Department of Commerce and Economic Opportunity (DCEO).
- Illinois State faculty partnered with faculty at other IIN hubs to propose and get seed funding for collaborative projects.
- Illinois State also hosted the first in-person IIN Council Meeting since 2020 and participated in the STEAM Expo at the Illinois State Fair.

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FY22 Research Lecture Series: Graduate student’s virtual lecture series explores how we engage with photographs

By Tyler Emken

Second-year graduate student Holly Filsinger's virtual lecture series, “Experiencing Images: How the Visual Shapes Our World,” has given her a unique opportunity to share her natural curiosity and passion for research with the Redbird community.

“The topic and the theme of the series was related to a lot of the research I was doing and things that I’ve been interested in that have taken place across many different disciplines at ISU,” Filsinger said.

The Jamestown, New York, native is studying visual culture and researching cultural and generational trauma in contemporary art. Filsinger began developing the series in February 2021 after seeing a call for proposals for a lecture series curated by a graduate student on the Milner Library website.

The series, which was supported by the office of Dr. Craig McLauchlan, associate vice president for Research and Graduate Studies, featured distinguished speakers who explored individual and collective engagement with photography. The series dealt with themes of civic spectatorship, surveillance, and the construction of race; image production and representation; and trauma and memory.

Filsinger hosted two speakers in the fall. Dr. John Louis Lucaites, a professor emeritus of rhetoric and English at Indiana University, presented “A Museum Without Walls: Photo Exhibitions and Civic Spectatorship,” and “White Sight: Visual Politics of Whiteness” was presented the following month by Dr. Nicholas Mirzoeff, a writer and professor of media, culture, and communication at New York University.

“These topics are relevant to everyone in some form,” Filsinger said. “When we start to self-reflect on the images we take and consume, we start to walk through the world differently.”

Filsinger intentionally kept the topics of discussion broad so that the presenters felt they could speak openly about their experiences and give the audience the opportunity to relate those experiences to their own lives.

“It’s a very specific process how you go about reaching out to people and communicating what you want from them while also leaving them space for interpretation,” Filsinger said.

To start producing speakers for the series, Filsinger initially turned to her own scholarship and highlighted a few potential names she felt could best speak on some of the selected topics. She sought guidance from University Galleries Director and Chief Curator Kendra Paitz, with whom she conducted an independent study. Paitz helped Filsinger with contacting speakers, marketing the events, and converting them to an online format due to the COVID-19 pandemic.

“It’s been really great working with a student who is making it happen,” Paitz said. “The range of speakers and topics she has been able to bring in has been great.”

Filsinger said Assistant Professor Byron Craig, in the School of Communication, helped her identify potential speakers, form ideas for lecture topics, and made sure she kept pushing forward.

“It is a real pleasure to work with Holly. She is extremely intelligent, wants to address every single detail, and works tirelessly to ensure what she visualizes comes to fruition,” Dr. Craig said.

Paitz notes that Filsinger’s work with the series and as a researcher is being noticed by Illinois State faculty, who are consistently impressed with the connections she has been able to make on campus and across the country.

“We talk a lot about individualized attention and our roots as a teaching university, and I think this series exemplifies that,” Paitz said. “A student is realizing her ambitious goal of organizing a yearlong fully funded speaker series, and faculty and staff across multiple units are providing funding, support, and assistance.”
Stevenson Center for Community and Economic Development

Criminal Justice Coordinating Council (CJCC)

Our contracted work with the McLean County courts continues into its 12th year. We receive data monthly and we present to the CJCC or its executive committee monthly. The CJCC is comprised of judges, law enforcement, the State's Attorney and Public Defender, Court Services, county administration, social service agencies, and advocates.

Illinois passed bail-reform legislation earlier in 2022; it took effect January 1, 2023. In partnership with Loyola University's Center for Criminal Justice, we began an examination of the consequences of leaving well-heads uncapped in California to telehealth during the pandemic. Melissa Quimby (Sociology) was the College of Arts and Sciences nominee for the James L. Fisher Outstanding Thesis Award. Her thesis is titled ‘Worker Burnout as Injury: Policy implications for the AI Sector.’ Another student was a finalist for the Image of Student Research competition/event.

Center for Collaborative Studies in Mathematical Biology (CCSMB)

The Center for Collaborative Studies in Mathematical Biology (CCSMB) had one of the most active and successful years since its inception. One of the defining activities of CCSMB is its celebrated undergraduate research workshop, called Cross-Institutional Undergraduate Research Experience (CURE). The 2021 CURE workshop was held online due to COVID-19 restrictions. However, the organizers were able to break the monotony of holding sessions on Zoom. Instead, the workshop was held on a virtual meeting space on GatherTown with a grant obtained from the Center for Integrated Professional Development (formerly CttlT). The participants—both students and faculty mentors—have praised the new innovative approach.

In 2022, the CURE workshop was held in person, hosted by the University of North Carolina Asheville (UNCA), jointly organized by CCSMB and the Department of Mathematics of UNCA. Students and faculty were hosted for an exciting workshop which included intensive classes on research methods, cutting-edge research projects, along with sessions on scientific writing and programming. Each day also included fun-filled activities. The student participants will return to present their research results at the 15th International Symposium on Biomathematics and Ecology Education and Research (BEER-XV).

Office of Student Research

Although the Office of Student Research (OSR) was three years old in 2021–2022, it enjoyed a lot of firsts. In our first year coordinating the Barry Goldwater Scholarship competition, one of our candidates, Ian Freeman (Psychology), an OSR grantee from Summer 2020, won this nationally prestigious award. In February, we held our first in-person Image of Research Competition at University Galleries, where 22 finalists displayed their images, and 11 students received $1,200 in cash prizes. Among the graduate students, Elliot Lusk (Biology) took the first-place prize with “Psychosocial Songbird Cerebellum,” and Bethany Worlhey (Agriculture) won second place with her altered photograph “Worth Every Penny: Establishing Pennyxress in Illinois Agricultural Systems.” In the undergraduate category, psychology student, Katelyn Turton, won first place for “Unraveling the Consequences of Human Longevity” and, in second place was Shaniya Barnett (Biology) with “Protein Zoo.” These students, winners of the “People’s Choice” award, and those who earned an honorable mention, received cash prizes. Finally, in 2021, OSR began offering new grant programs including the BirdFEEDER and OSR Travel awards. The BirdFEEDER program provides small grants of up to $500 for both graduate and undergraduate students who need funding for experimental materials, participant incentives, or travel to conduct research. The OSR Travel grant helps students to gain experience presenting papers and posters at professional conferences or to participate in juried performances and exhibits. The OSR Travel Grant program ($300) is open to both undergraduates and graduate students combined with other university funding, these funds help our Redbird researchers take flight!

Cultivating curiosity, asking questions, collecting data, and analyzing findings are all part of the research process, but research means little unless the results are shared so that others can learn from it. Synthesizing and presenting one’s original work is a key part of the scholarly endeavor, which is why participation in the University Research Symposium is required of students who receive FireBird Grants through the Office of Student Research. FireBird Grants provide students with the opportunity to conduct intensive, independent research under the guidance of a faculty mentor. Last summer, students used these funds to track invasive species in the Moab dessert, Utah; develop VR models to help senior citizens age-in-place; investigate the genetic mutations leading to Charcot-Mauriac-Tooth disease; and more. Often, the scholarly dissemination of this work occurs long after the initial grant period. Yet, our 2022 undergraduate grantees have already shared their research at regional and national conferences of professional associations, including the American Education Research Association, the Association of Technology Management and Applied Engineering, and the Geological Society of America Northeastern Section.

The faculty at Illinois State make student research happen through their effective mentoring. OSR was pleased to facilitate a mentoring skills Summer Institute “Effective Mentoring for Student Success.” Kudos to professors Paxia Cheng (Mathematics), Kevin Edwards (Biology), Lydia Ryel-Illankon (Educational Administration and Foundations), David Lane (Criminal Justice Sciences), and Sercan Sengtin (Creative Technologies) for completing the curriculum.

20 undergraduates from CAS, CAST, and WKCFA; received $70,000 awarded FIREBird Grants.

•  13 students from (CAS, CAST, and WKCF) received AY 2021-22 grants.
• 13 students from (CAS, CAST, and WKCF) received AY 2021-22 grants.

BirdFEEDER Grants: $4,000 awarded for research supplies and incentives

OSR Travel Grants: $3,300 awarded for travel to professional conferences

Image of Student Research exhibit and reception at University Galleries

Since the Center for a Sustainable Water Future was approved by the Office of the Provost in May of 2018, its activities...
have focused on three areas: teaching, research and creative activities, and community engagement. The center has been involved in a variety of activities, including the activities highlighted in the overview below of the center's work in FY22.

Teaching
The center developed an innovative interdisciplinary core course for the minor that also carries general education credit. The course is innovative because it is truly interdisciplinary, integrating approaches and perspectives from the natural sciences, the social sciences, and the humanities to introduce students to water as a global issue. It has been team-taught by a social scientist and a natural scientist every spring semester beginning in spring semester 2021. We are not aware of examples of other classes team-taught by colleagues from different departments, and this interdisciplinary model for delivering the course remains unusual and unique. The course is currently being offered every spring semester (spring 2022 is the second time it has been offered). As of fall 2022, after only two offerings of the course with a max enrollment of 40 students, the minor in water sustainability has 17 students enrolled.

Research and creative activities
Efforts to foster interdisciplinary water research in FY22 have included securing an Illinois Innovation Network grant in collaboration with faculty from the University of Illinois, planning a series of water-themed collaborative research discussion opportunities, and securing Fell Trust funding for the Canal by Canal exhibit and lecture and hosting the exhibit and lecture on World Water Day in March of 2022. Additionally, the Water Center collaborated with the Office of Student Research to co-sponsor two student research grants that focus on water in FY22.

Community engagement
Efforts to do community outreach and promote community-engaged research and teaching include beginning to develop connections to stakeholders in Illinois, including the Illinois Farm Bureau and the Kaskaskia River Watershed As-

Center for Mathematics, Science, and Technology (CeMaST)
During the 2022 fiscal year, the Center for Mathematics, Science, and Technology (CeMaST) continued collaboration on several grant-funded projects, all of which advance STEM education within and beyond the University. For example, CeMaST staff and three undergraduate interns iteratively developed a 4-H project book, Cover Crop Science, in support of the USDA-funded IPRFER (Integrated Pennycress Research Enabling Farm & Energy Resilience Project). This book was 4-H adopted in Illinois in fall of 2021, leading to 77 kids showing cover crop projects at county fairs in Illinois in 2022. Another example is NSF-funded Project EDDIE (Environmental Data-Driven Inquiry & Exploration), through which college/university science faculty create flexible classroom teaching modules using large, publicly available datasets to engage students in quantitative reasoning. Project EDDIE also hosts professional development workshops for faculty on fostering quantitative reasoning using the modules. CeMaST continues to seek collaborators and funding for projects such as these to fulfill its mission to empower, conduct, and support STEM education and scholarship across the K-16 continuum.

CeMaST also supports equitable STEM participation at Illinois State in a variety of ways. CeMaST serves as the organizational home to the STEM DEI Taskforce, which seeks to pursue policies, procedures, and programs that contribute to establishing and maintaining equity, inclusion, sense of belonging, and diverse viewpoints across the STEM units at Illinois State. CeMaST collaborates with institutional efforts, such as the Growth Change Team, to provide intriguing STEM-focused professional development opportunities for faculty/staff, in February, this led to a seminar delivered by Dr. Ebony McGee on her book, Black, Brown, Braised: How Racialized STEM Stifies Innovation. Together with University College, CeMaST supports the operation of STEM Alliance, which supports STEM majors who identify with a group that is marginalized in or minoritized by mainstream STEM. STEM Alliance events include career days, field trips, mentoring by STEM faculty, financial assistance, and support for engaging in undergraduate research.

CeMaST reaches out to the local community to foster STEM learning experiences and build STEM literacy. This year was the inaugural year of “The Green Screen,” a film series drawing attention to the climate crisis cosponsored by the Office of Sustainability and CeMaST. CeMaST also hosts the High School Research Symposium, in which students from around Illinois visit Illinois State for a day to present their research in a poster competition, as well as Illinois Summer Research Academy, in which high school students to mentored STEM research for a week during the summer.


Mathew Hagaman shows students how to make ink from pennycress oil.

GEMS (Girls Excelling in Math and Science) making ink from Pennycress oil.

World Water Day lecture in Milnor Library
Restricted expenditures

FY22 expenditures still dominated by emergency relief funding $53M of approximately $73.5M in restricted spending

Colleges
- Education spent $7.94M
- $6.39M for CAS.

Departments
- EAF spent $5.67M then
- BSC with $3.65M and
- MCN with $1.82M
Chemistry professor’s research advances conversation in analytical science

By Nick Erickson

Dr. Jeremy Driskell’s research has landed major grants and been a part of some significant work that has had an immediate positive effect on public health.

The professor of chemistry, who has been at Illinois State University since 2011, secured $440,000 from the Department of Defense to help soldiers exposed to illness or bioterrorism, working to increase the speed of detecting and identifying viruses. He has partnered with other Illinois State scholars on a $300,000 grant from the National Institute of Justice to create a device that would enable investigators to gather forensic evidence from the field to accelerate on-site drug analysis technologies. As a postdoctoral researcher at the University of Georgia, he worked with a group of infectious disease experts and became particularly interested in solving biological problems. Those experiences led him to the research projects he has worked on while at Illinois State. They have largely focused on developing bioanalytical tools and improving detection technologies.

According to his website, Driskell’s research “focuses on the development of novel diagnostic and biological assays by interfacing chemistry, nanomaterials, and biology.” His research also looks at the functions of surface-enhanced Raman scattering (SERS), antibody-antigen binding kinetics, and novel ligands. These complex scientific tests allow for faster analysis and the ability to better break down complex information in substances.

“Our overall, long-term goal for all the work we’re doing is focused on developing point-of-care diagnostic assays,” Driskell said. An assay is a process of analyzing substance. “Hopefully, this can lead to the development of a simple modification method that can be applied to other protein systems,” said McKenzie Riley, a graduate student in Driskell’s lab.

Driskell’s lab is particularly enticing to students who want to pursue health-related, bioanalytical research. His groups run parallel with one another, meaning there is a subgroup working on the basic chemistry and another working on application.

He encourages students to conduct hands-on research and ask a lot of questions. “Identifying those areas of greatest need where you can potentially make the greatest impact is what we do,” he said.