ANNUAL REPORT

2018

THOMAS S. AND HARVEY D. WILMETH ACTIVE LEARNING CENTER

LEARNING

DISCOVERY

ENGAGEMENT

PURDUE
UNIVERSITY

Libraries

LETTER FROM THE DEAN

Throughout the rest of this year and most of 2019, Purdue University is celebrating its Sesquicentennial, "150 Years of Giant Leaps," an homage to Neil Armstrong's profound statement when he first stepped onto the moon 50 years ago. The phrase also pays tribute to the giant leaps Boilermakers have made across every field of endeavor—aeronautics to agriculture, engineering to education, business to athletics, technology to human sciences—since Purdue was established in 1869.

In this annual report, it is my pleasure to introduce you to the many ways Purdue University Libraries faculty and staff are contributing, and will continue to contribute, to the University's 150-year legacy. With a search for a new Dean of Libraries underway, the implementation of expanded teaching activities, an ongoing commitment to information-literacy research, a cutting-edge Libraries' and active-learning facility in the Wilmeth Active Learning Center, a keen focus on undergraduate research, leadership in data science and digital humanities projects and initiatives, plus much, much more, Purdue Libraries faculty and staff are well positioned to continue to make indelible footprints on Purdue's path toward even greater achievements in learning, engagement, and discovery.

Rhonda Phillips
Interim Dean of Libraries
Dean of the Honors College
Purdue University

Purdue University Libraries

Archives and Special Collections; Aviation Technology Library; Black Cultural Center Library; Hicks Undergraduate Library; Humanities, Social Science, and Education (HSSE) Library; Library of Engineering and Science; Mathematical Sciences Library; Print Repositories; Roland G. Parrish Library of Management and Economics; and the Veterinary Medical Library

Contents

CHAO CAI—ASSISTANT PROFESSOR

Chao Cai joined Purdue Libraries in September 2018 after completing his Ph.D. at Purdue University in plant biology. In Purdue Libraries, he serves as the plant sciences information specialist and the liaison for plant science research groups on the West Lafayette campus. In this role, he promotes research and instruction on information and data literacy in plant science and bioinformatics. He collaborates with plant science groups in facilitating research needs related to bioinformatics, as well as provides consultation services in data-management and data-analysis strategies. Dr. Cai will also co-teach a data-management course in Spring 2019.

MATT HANNAH—ASSISTANT PROFESSOR, DIGITAL HUMANITIES

Matthew Hannah joined Purdue Libraries in March 2018 and is leading an effort to launch a Digital Humanities Studio in the Humanities, Social Sciences, and Education (HSSE) Library, which will serve as a hub for faculty and students who want to apply or explore digital tools and methods for research and teaching. The space will feature computers with DH software, a Maker Space (including 3D printing resources), and a book scanner and provide a space for humanists and social scientists to collaborate on digital projects. Dr. Hannah is collaborating with the School of Interdisciplinary Studies to launch both graduate and undergraduate certificates in Digital Humanities and digital scholarship. His own research focuses on the quantitative analysis of texts, cultural network analysis, Critical Digital Humanities, and Public Humanities.

IGNACIO A. SÁNCHEZ—ASSISTANT PROFESSOR

Ignacio Sánchez joined Purdue Libraries in September 2018, and he is a business information specialist in the Roland G. Parrish Library of Management and Economics. Previously, Sánchez served as the business research and digital services librarian at Columbia University. While there, he developed specialized workshops in the areas of business research, the Bloomberg Terminal, marketing, consumer data, entrepreneurship, and economics research. His work to expand the library's role in data research at that institution resulted in greater collaboration not only with the business school's faculty and students, but also with other areas of the university. His research interests include the future of business librarianship, digital literacy, online learning, and the cross section of data and the libraries.

DANIELLE WALKER—ASSISTANT PROFESSOR

Danielle Walker joined Purdue Libraries in July 2018 as the agricultural sciences information specialist. She focuses on teaching information courses related to agriculture. Previously, Walker was at the National Library of Medicine (NLM), where she was a member of the team responsible for MedlinePlus.gov, the national consumer health-information website. Prior to her NLM experience, she was a librarian trainee at the National Agricultural Library and later served as an acquisitions and electronic resources librarian. Her research interests are in digital agriculture, health literacy, collection development, and data ethics and privacy.
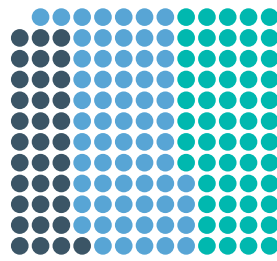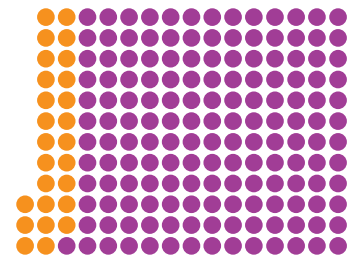
BY THE NUMBERS
PURDUE LIBRARIES

PERSONNEL AND STUDENT WORKERS

- Faculty
- Professional
- Clerical/service
- Grad students
- Undergrad students

PURDUE E-PUBS

17.4 MILLION
downloads and counting
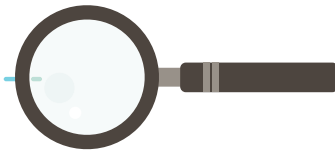
3,450 registered researchers

3,254 data management plans

1,291 research projects

478 grant awards

*as of 11/18/18

PURDUE UNIVERSITY RESEARCH REPOSITORY (PURR)

FACULTY PUBLICATIONS

12 average # of annual books/book chapters (2015–18)

29 average # of annual peer-reviewed journal articles (2015–18)
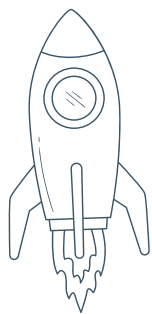
PURDUE UNIVERSITY ARCHIVES AND SPECIAL COLLECTIONS

2,556 total # of archival and manuscript collections

16,913 cubic feet *does not include e-Archives

205 archival and manuscript collections acquired in 2017–18

e-Archives usage in FY2018:
31,957 visits
240,567 page views

COLLECTIONS

4,645,406
printed volumes and electronic books

178,631
electronic and print journals

400,000+
government documents

86,000+
microforms

650,000+
volumes in print repositories available for next-day delivery

TEACHING

16,856
total students reached

111
total credit courses taught in 2018

Data represents credit courses taught by Libraries faculty as instructor or co-instructor of record and students reached through embedded teaching.

512
embedded instruction sessions in FY18 (curricular)

465
co-curricular engagement activities in FY18

LIBRARY SPACE

98,046
sq ft study space

2,864
seats

320,767
total sq ft
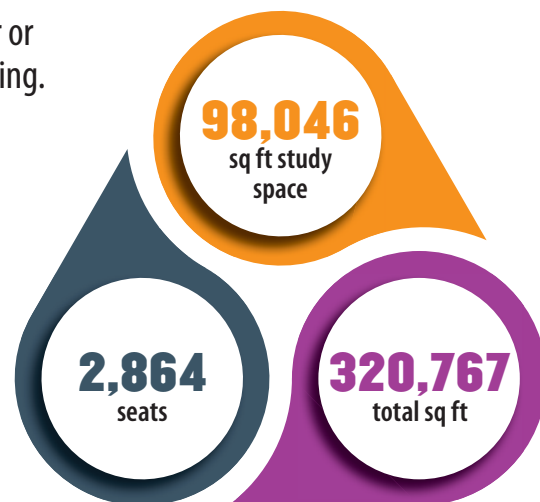
GRANTS

$9,023,202
total $ grants awarded *since 2012, includes sponsored and non-sponsored programs

Communicating the Stakes of Climate Change

At a conference in Bonn, Germany, late last year, Jason Reed and a few of his Purdue University colleagues convinced government officials to play a game.

If you are wondering why on Earth people from Purdue would do such a thing, Earth is exactly why they did. Here's some context… The conference was the Bonn Climate Change Conference, a midyear working meeting between the UN Climate Change conferences, the "foremost global forums for multilateral discussion of climate change matters"; the government officials were climate negotiation delegates; and the video game, "Earth Remembers" is a unique teaching and learning tool developed within a research project that explores "the relationship between global temperature targets, a hot topic in the recent Paris Agreement, and global climate tipping points…."

Reed (pictured right), an assistant professor and a health sciences information specialist in Purdue Libraries, is among the members of the Purdue University faculty working on this project, "Climate Tipping Points: Gaming Climate Futures," led by principal investigator Assistant Professor of Political Science Manjana Milkoreit.

Along with three other funded projects, the project is part of Purdue's "Breaking Through: Developing Multidisciplinary Solutions to Global Grand Challenges" internal grant opportunity, a three-year program that "enables multidisciplinary teams to tackle grand challenges in new ways." Supported through funding from the Andrew W. Mellon Foundation, the program also "embeds policy experts, publishing professionals, and Libraries faculty in the scholarly research and communication process, in order to provide researchers with expert assistance in communicating results directly to the public and key stakeholders." (See www.purdue.edu/breaking-through/ for more information.)

Reed has been part of "Climate Tipping Points: Gaming Climate Futures" since a few short months after he arrived at Purdue in late 2016. The "Breaking Through" program began in August that year and will continue to fund the four projects through May 2019.

"We spent the first year collecting data, because the first thing we needed to know is what climate negotiators know about climate tipping points. We're working on a paper right now to present the results of that project," Reed noted.

Jason Reed

The Highest Stakes

Through the project, Purdue and external researchers at Utrecht University and Glasgow Caledonian University (GCU) commissioned GCU undergraduate-student game developers to create "Earth Remembers." At the Bonn Climate Change Conference, "Gaming Climate Futures" team members were able to engage a few climate negotiation delegates to play the game. Other officials, including non-government organization (NGO) officials, as well as a group of students, played "Earth Remembers," too.

"In the game, the players take on roles to represent different countries. As the representative of a specific nation, the player will make funding decisions for that country, so the player considers how much to allocate for non-environmental-related projects, such as infrastructure, healthcare, defense—all the things governments have to fund. Then, in the game, the players allocate money toward mitigation and adaptation for climate change, as well as money toward a net energy technology. If it is real climate negotiation delegates playing the game, we ask them to represent another country besides their own. That way, they can see the results of their decisions from the perspective of another nation," Reed explained. "They are allotted 10-15 minutes to talk within their alliances, which are based on real-world alliances. For example, a player can discuss

funding allocation ideas with other country representatives in the same alliance. They can also talk with representatives from countries in other alliances. This provides the opportunity for countries that do not have a lot of money to have input with nations with more financial resources; they can advocate for their larger-nation counterparts to pledge more funds to help the environment."

Once the players lock in their allocation decisions, the game takes the players to a screen that represents what the world will look like in five years.

"The game will show where we, as humans, are on the path to the outlined global temperature targets, which call for humans to limit the global average temperature rise to between 1.5 and 2 degrees above that of the pre-industrial age," Reed added. "With those results, based on the percentage chance of a tipping point occurring (which is based on the temperature), we assess whether or not we have come closer to—or even surpassed—a climate tipping point. In the situation (within the game) that we have surpassed at a tipping point, we will then discuss the real-world effects."

Reed noted the game can simulate what could happen, based on sustaining the global temperature target (or surpassing the target range), as far as 50 years into the future.

He points to the world's threatened coral reefs as an often-discussed example of negative outcomes resulting from nearing or surpassing climate tipping points. The disappearance of these extremely biodiverse ecosystems will have economic, social, and health consequences, according to the International Union for Conservation of Nature (IUCN, www.iucn.org/resources/issues-briefs/coral-reefs-and-climate-change).

The "Gaming Climate Change" researchers have plans to continue to tweak and improve the "Earth Remembers" game, as well as recruit even more climate negotiation delegates to play it at upcoming climate change conferences and events. They are still working through their plans to seek funding to extend the research project, as well as how to further develop the game for possible use by educators in high school and college-level classrooms.

Critical Data Studies—Data Mine Learning Community

There is a lot of buzz about data-driven research and "Big Data" at Purdue and, in general, in the business and education sectors across the U.S. Through the University's Integrative Data Science Initiative launched this year, Purdue researchers aim to be at the "forefront of advancing data science-enabled research and education by tightly coupling theory, discovery, and applications while providing students with an integrated, data science-fluent campus ecosystem."

There is growing acknowledgment across sectors that reliance on automated and data-driven decision making, ubiquitous data collection, and the networked nature of daily life

Kendall Roark (left), Bethany McGowan (center), Danielle Walker (right)

has profoundly impacted human relationships, trust in public institutions, and power imbalances across societies. This is where Critical Data Studies, or CDS, comes in: CDS is an emerging interdisciplinary field that addresses the ethical, legal, socio-cultural, epistemological, and political aspects of data science, big data, and digital infrastructure.

At Purdue, faculty from a few areas have come together to collaborate and work with students in the Critical Data Studies cohort of the Data Mine Learning Community. The collaboration includes faculty in the Purdue Libraries—Kendall Roark (left), Bethany McGowan (center), Danielle Walker (right); Honors College—Elizabeth Brite, Jason Ware, and Lindsay Weinberg; Department of Anthropology—Laura Zanotti and Andrew Flachs; and Department of Statistics—Mark Ward, who is the leader of The Data Mine.

Students from any major can apply to become part of the 2019–20 Critical Data Studies—Data Mine Learning Community cohort. Students accepted into the CDS cohort will employ critical frameworks and methodologies to engage in scholarly and public conversations about the role of data science in society.

The cohort members will each take six credits (total) of critical data studies-themed seminars and engage in a faculty-led research experience. Opportunities to engage with the larger campus and CDS community through the monthly Critical Data Studies seminar forms a key component of this cohort.

Kendall Roark // Assistant Professor // Purdue Libraries

Pete Pascuzzi

Bioinformatics for Boilermakers

Purdue Libraries Assistant Professor Pete Pascuzzi helps researchers dig deeper into their research data. A biochemistry and bioinformatics expert, Pascuzzi is making an impact in Purdue University's contributions to biological and biochemical research by teaching faculty and students how to use web-based and open-source tools—tools they can use to better analyze and understand their data.

"Pete's unique perspective and skill set bridge the traditional roles of the library, "i.e., information management and analysis, with an important area of modern biology, bioinformatics, and big data analysis," explained James Fleet, Distinguished Professor, Purdue University Department of Nutrition Science.

Fleet came to know Pascuzzi through a National Institutes of Health-funded research project, "Big Data Training for Translational Omic Research," a collaboration with Min Zhang (Department of Statistics) and Wanqing Liu (Wayne State University).

"I had heard about Pete's skills as a bioinformatician and an educator, and I knew he was the piece we needed to round out our team," Fleet said. "His contribution to our course was necessary for its success. In addition, he has been instrumental in establishing core bioinformatics and data management/analysis courses for the biochemistry department."

In the recent past, Pascuzzi developed the CellMiner Companion application, one of the open-source tools he

teaches researchers to use. According to Omicstools (where his application is available online), it "enables researchers to explore the output of CellMiner queries. The data from multiple files is summarized, assembled into a single data matrix, z-score normalized, clustered, and visualized both as a heatmap and dendrogram."

CellMiner is a database and web application developed by the National Cancer Institute. Researchers can query the database for gene expression and drug sensitivity data for cancer cells; however, a single query can generate more than 100 files. Many researchers lack the skills to integrate this data, Pascuzzi noted.

"Generating a plot, from publicly available data on cancer cells, isn't revolutionary. What is revolutionary is that I was able to do it myself—and I am able to teach just about anybody how to do something like that," he explained. "The technology and data access have moved so quickly that
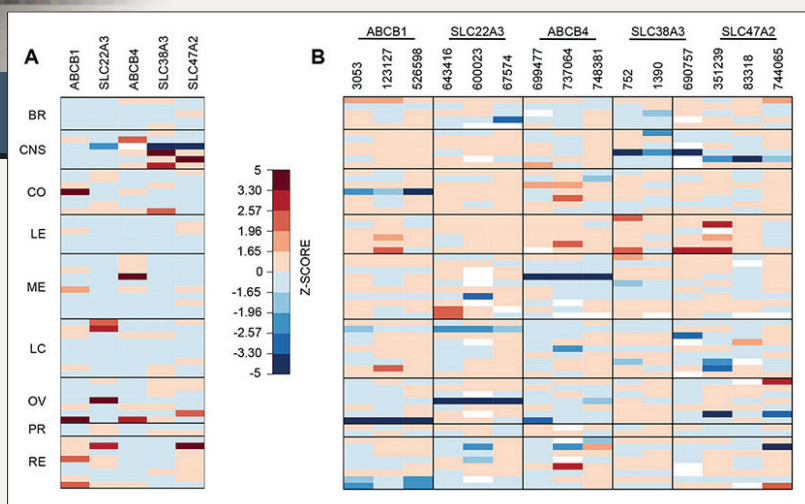
projects like that have become trivial. A decade ago, that would have been a major project. Now it is just all out there."

Pascuzzi also teaches 400–600 level courses in both biochemistry (BCHM) and information and library science (ILS), including the new ILS 595 course, "Data Management at the Bench" (which he co-teaches with Purdue Libraries Professor Megan Sapp Nelson).

"With the work I do here at Purdue, I really want to make an impact on the science, but more importantly, having been a graduate student, I have a lot of empathy with people who get stuck in a place because they don't have the data skills they need," Pascuzzi said. "So I have always made a lot of effort to understand what the graduate students need, and that is what motivates a lot of the teaching I do."

Heatmap image courtesy of Pete Pascuzzi. "A gene expression pattern for 21 transporter genes was retrieved from CellMiner and visualized with CellMiner Companion." Image is a figure from the article, "CellMiner Companion: an interactive web application to explore CellMiner NCI-60 data" (www.ncbi.nlm.nih.gov/pubmed/27153600).

Inspiring Achievement

The Marshall and Susan Larsen Leaders Academy in the Krannert School of Management provides an ideal place for Purdue Libraries Associate Professor Ilana Stonebraker to teach Purdue students. The Academy, according to its website, "provides high-achieving students with enhanced academic opportunities and learning experiences to help them become top performers in the world of business." The program creates "a culture of achievement"—a phenomenon that Stonebraker, as an instructor of the Management 110 course offered to students in the Academy, not only fosters and sustains in her teaching, but also one she takes to heart in the pursuit of top performance in her own chosen field.

Ilana Stonebraker

In late September, Stonebraker was among 12 faculty members inducted into the Purdue University Teaching Academy as a new Teaching Academy Fellow. She is the first ever Libraries faculty member to be inducted into the elite program, which recognizes Purdue faculty for their outstanding and scholarly teaching in graduate, undergraduate, or engagement programs. This recognition is just one among many

honors Stonebraker has racked up over the last couple of years. In June 2018, she was one of 10 individuals selected by the Tippy Connect Young Professionals (TCYP) in the organization's annual Top 10 Young Professionals Under 40 Award program. This past summer she was recognized by the American Library Association (ALA) Library Instruction Roundtable as an author of one of the Top Twenty Library Instruction Articles of 2017. (She was recognized for the same thing in 2016 for a *different article*.) In early 2017, she was named a "Mover & Shaker" in *Library Journal*'s annual roundup that honors individuals making significant impacts in libraries and in education around the world.

While the accolades are rewarding, she noted, it is her work—like teaching the highly motivated students in the Larsen Leaders Academy—that really inspires her.

"I like to figure out where students are and help them build bridges to achieve their dreams, to help them imagine and then try things they never would have imagined themselves doing before," she explained. "One of the ways I do this is through encouraging them to explore the ways they use information in their decision-making processes."

Stonebraker has been at Purdue since 2012, and she has been teaching in Krannert since 2013. In addition to her teaching course load, she serves as one of Purdue Libraries' business information specialists in the Roland G. Parrish Library of Management and Economics. She also researches how individuals use information in their studies and in their work and applies the knowledge she gains from that in her teaching.

"That is how I introduce myself to my students. I tell them, 'I teach information literacy, and I research how people use information. Based on that, I can teach you skills that others cannot teach you here at Purdue,'" she explained. "Knowing how to use and apply information is increasingly important in a 21st-century economy. People in business, particularly, need to know how to use and apply information quickly. That is basically data analytics."

Stonebraker is among several Libraries faculty who either teach or co-teach credit courses at Purdue in a variety of departments. She proudly points out that librarians tend to be highly engaged instructors who have been developing and practicing effective active-learning techniques and approaches to instruction for many years (perhaps even before "active learning" became an important practice in education).

"Librarians make interesting teachers because we think systematically about problems. Our brains are set up for inputs and outputs," she added. "Our default is active learning. You can't really teach students how to research and use information without actively engaging students in research and information use activities."

LIBRARIANS AND LEARNING INNOVATION
IN PURDUE'S IMPACT PROGRAM

Clarence Maybee

Michael Flierl

Transforming OSHA material to make it engaging for Purdue students studying construction management is a daunting task. But, according to Purdue Libraries Associate Professor Clarence Maybee and Assistant Professor Michael Flierl, through IMPACT—Purdue University's "Instruction Matters: Purdue Academic Course Transformation" program formally established in 2011—Libraries faculty and staff have helped other Purdue faculty members do just that: make what may seem like tedious (but nevertheless integral) content motivating for college students.

One example is Flierl's work with James Jenkins (associate professor of construction management in the Purdue Polytechnic Institute) to redesign a construction management course. Through the course, students are able to earn important career-advancing certification from the Occupational Safety and Health Administration (OSHA); however, federal law requires faculty teaching such courses to base their pedagogy on specific OSHA materials.

"When Professor Jenkins and I initially met, he showed me a manual printed in green and black ink, then said, 'This is what my students have to deal with. They are just not engaged with this material,'" Flierl explained. "Through our work together in IMPACT, we changed that. Professor Jenkins and I created a variety of different ways to make the content the students were required to learn more dynamic. For example, we incorporated information literacy concepts into hands-on, gaming activities, as well as developed open-ended problems for them to solve."

Flierl's work with Jenkins is just one illustration of how the campus-wide IMPACT program has been employed at Purdue. Highlighted in *The Chronicle of Higher Education*'s October 21 "Education's 2018 Innovators Special Issue," IMPACT was described by George D. Kuh, professor emeritus of higher education at Indiana University's Center for Postsecondary Research, as a "textbook illustration of how to successfully deliver timely, substantive, high-quality

professional-development experiences over an extended period of time to a particularly discerning audience."

At the tactical level, through their work in the program, faculty learn how to refine learning outcomes and are equipped with new and innovative tools to engage their students, Maybee explained.

"Libraries faculty have been involved with the program from the very beginning," he said. "Of course, librarians are interested in the information literacy part of learning and improving instructional design to incorporate information literacy, which improves the learning experience if you do it right. But that isn't the only thing we have done and are doing in the program. As Michael mentioned, we help instructors think through their pedagogy. We have had a lot of success with that."

According to the IMPACT website, since 2011, "IMPACT has grown into an institutional transformation program positively impacting every college/school with nearly 9 out 10 of all undergraduate students taking at least one IMPACT course." The latest data from the program (listed at the bottom of the IMPACT website, www.purdue.edu/impact) show that more than 580 courses have been transformed and over 330 Purdue instructors have participated in IMPACT.

Maybee, who based his 2018 book *IMPACT Learning: Librarians at the Forefront of Change in Higher Education* (published by Elsevier), said he has been working in the program, along with colleagues from the Center for Instructional Excellence, ITaP (Information Technology at Purdue), as well as faculty from across the University, since he joined IMPACT in 2012. Their investment is proving to be fruitful for faculty and students. *The Chronicle*'s piece states, "[a]ccording to a recent outside evaluation, Impact-affected courses generally have higher end-of-course final grades and fewer students who withdraw or earn Ds and Fs."

"In this collaboration, we have used information literacy concepts and instructional design principles to help transform such foundational courses as COM 114 ("Fundamentals of Speech Communication"), English 106, and Tech 120 (a foundational course in technology), which are important building blocks for thousands of Purdue students," Maybee added. "Overall, Libraries faculty, and the many others involved in IMPACT here at Purdue, have enhanced students' learning experiences significantly."

Amy Childress, Director

JJ Sadler, Associate Director

OUR OFFICE OF UNDERGRADUATE RESEARCH

Angie Welshimer, Administrative Assistant

OFFICE OF UNDERGRADUATE RESEARCH
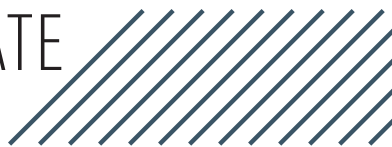
Amy Childress and her staff in the Office of Undergraduate Research (OUR) at Purdue University are on a mission to promote and expand experiential learning for undergraduate students through research experiences, creative endeavors, and scholarship with skilled mentors.

"Studies show that undergraduate students who engage in research are more likely to graduate, more likely to pursue graduate education, and have more successful careers after graduation," explained Childress, who serves as the director of OUR. "We are connecting students with opportunities to learn beyond traditional classroom activities and gain skills applicable to both research and non-research careers."

OUR has many benefits for Purdue faculty and staff, too, including maintaining the OURConnect online match portal that helps research mentors recruit students interested in research projects and creative endeavors. In addition, through OUR, Childress and her small but mighty team (which includes JJ Sadler and Angie Welshimer) offer scholarships and grants for students and awards for mentors. They consult with faculty and staff on program management and grant proposals, as well as promote a campus-wide community of practice and provide assistance for small-scale undergraduate research programs along with offering other support resources.

OUR was launched in July 2017, and Childress and her staff have hosted well-attended and ongoing research events and activities, such as the Undergraduate Research Seminar Series, the Research Roundtable, the Fall Undergraduate Research Expo, and the Spring Undergraduate Research Conference. This past summer, OUR became part of the Libraries, resulting in a dynamic collaboration between two vital resource areas for undergraduate students, faculty, and staff at Purdue.

"The partnership between OUR and Purdue Libraries creates an ideal foundation for undergraduate research across our University," said Provost and Executive Vice President for Academic Affairs and Diversity Jay Akridge. "This is the next step in the development and expansion of undergraduate research experiences at Purdue, and it will build on the successful launch of OUR by integrating the resources of Purdue Libraries into OUR programming and support."

Located in the Hicks Undergraduate Library, the OUR is easily accessible to students within the Libraries' facilities.

"The collective activities of the OUR and Libraries faculty strengthen the University's commitment to providing high-quality experiential learning opportunities for undergraduates and encouraging mentorship from Purdue's broad range of researchers and scholars," Childress noted. "This increased collaboration with Libraries faculty and staff, who provide students with the research tools necessary for so many disciplines and publish the *Journal of Purdue Undergraduate Research,* complements the work of the OUR to deliver research support to students."

THOMAS S. AND HARVEY D. WILMETH ACTIVE LEARNING CENTER (WALC)
THE FIRST YEAR

Since opening in August 2017...

1,658 # of course sections taught

229 # of departments offering courses

1,058 # of faculty teaching

69,122 # of students enrolled in courses

S. AND HARVEY D. WILMETH ACTIVE LEARNING CENTER

91%
OF PURDUE STUDENTS USED THE WALC IN 2018

NOW HIRING

ARCHIVES AND SPECIAL COLLECTIONS
NOTABLE ACQUISITIONS

The archivists in Purdue University's Archives and Special Collections (ASC) acquire, preserve, and provide access to rare and unique primary-source collections to support research and teaching. Over the past year, ASC acquired noteworthy materials ranging from 15th century rare books and medieval manuscripts to 21st century modern archives and personal papers. The following items highlight recent acquisitions in rare books and manuscripts, including ASC's collecting areas of distinction: the Barron Hilton Flight and Space Exploration Archives, the Betsy Gordon Psychoactive Substances Research Collection, the Susan Bulkeley Butler Women's Archives, Purdue University archives, faculty, and alumni papers.

Sammie Morris // Professor // University Archivist // Head, Purdue Archives and Special Collections
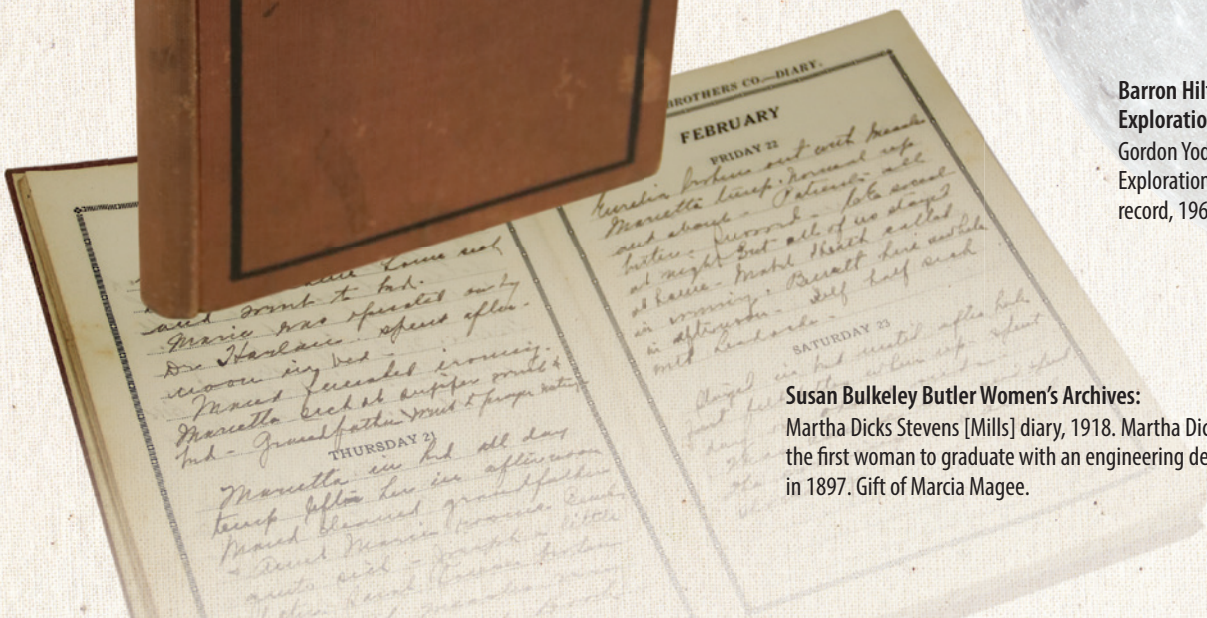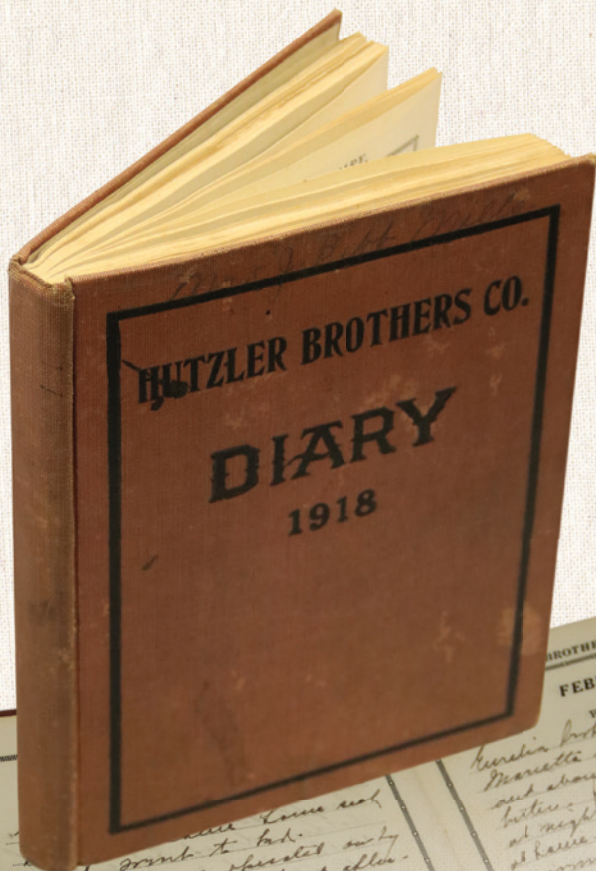
Rare Books:
Chained book. *Summa Theologica* (Book 3, Part 1) by Florentinus Antoninus. Venice: Nicolas Jensen, 1477.

Early Manuscripts:
Summa de Sponsalibus et de Matrimoniis by Joahannes Andreae.
Treatise on the legal ramifications of betrothal and marriage in the
Middle Ages, circa 1450–1475.

**Barron Hilton Flight and Space
Exploration Archives:**
Gordon Yoder Collection of Space
Exploration Memorabilia, 45 rpm
record, 1969. Gift of Gordon Yoder.

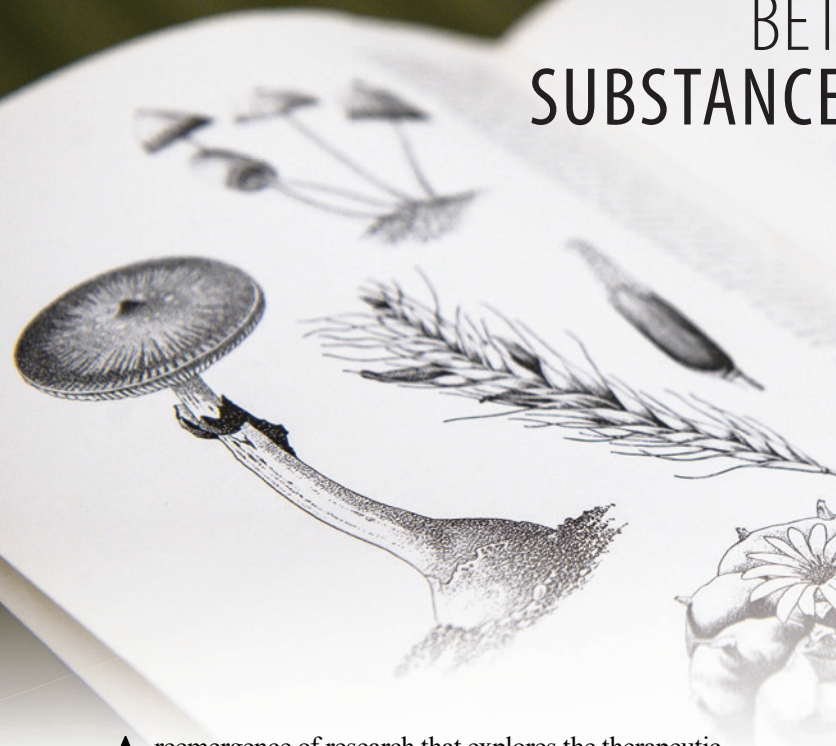**Susan Bulkeley Butler Women's Archives:**
Martha Dicks Stevens [Mills] diary, 1918. Martha Dicks Stevens was
the first woman to graduate with an engineering degree from Purdue,
in 1897. Gift of Marcia Magee.

BETSY GORDON PSYCHOACTIVE SUBSTANCES RESEARCH COLLECTION

Stephanie Schmitz

A reemergence of research that explores the therapeutic potential of psychedelics is attracting a growing number of scholars to Purdue University's newly named Betsy Gordon Psychoactive Substances Research Collection. First established in 2006 with generous funding provided by the Betsy Gordon Foundation, the Collection is comprised of archival materials that document the history of psychoactive substances and their applications for medicine and healing. Presently, such research institutions as the Johns Hopkins School of Medicine, New York University, and the Harbor-UCLA Medical Center are revisiting research (carried out from the 1950s to the 1970s) that explores the efficacy of such substances as psilocybin (found in hallucinogenic mushrooms), MDMA (ecstasy), and LSD in treating addiction, obsessive-compulsive behaviors, cancer distress, depression, anxiety, and post-traumatic stress disorder.

Recently, with Gordon's additional support, the archive and an archivist position were named eponymously. Stephanie Schmitz was named the first Betsy Gordon Psychoactive Substances Research Archivist at Purdue (effective July 1, 2018), and she will continue to lead and grow collections relating to the history of psychedelics research.

"I am pleased to be able to help in developing an archive centered on the work of so many dedicated chemists, scientific researchers, and clinicians who have worked in the field of psychoactive substances," noted Gordon. "As we have learned from the past, psychoactive substances hold untold potential in the area of reducing human suffering and healing. With such an archive, and through sharing with other universities and research institutions, all the work can be collectively stored and shared through this collection at Purdue," she added.

In 2006, Gordon and David Nichols, Professor Emeritus of Pharmacology at Purdue, recognized the need to create a collection of primary-source materials on the history of psychoactive substances research. According to Head of Purdue Archives and Special Collections Sammie Morris, the growth of the collection has increased dramatically over the last 12 years.

"The scholarship and learning that have resulted from the use of this growing collection would not be possible without Gordon. Through her support, we offer the premier archival collection of its kind in the United States. It is the only major research collecting effort in the nation specifically centered on acquiring the original, historical primary-source papers of researchers in the field," Morris noted. "Other libraries and museums have some collections on this topic, but no other academic institution has been dedicated to collecting these types of one-of-a-kind, original documents, images, and artifacts comprehensively. These items are critical to supporting an understanding of the history of psychedelics research."

The endowment of the archivist position allows the collecting effort to expand and ensures the sustainability of the collection into the future, Morris added. The collection benefits researchers in a diverse array of disciplines, attracting historians, anthropologists, chemists, and clinical psychologists. Scholars have traveled from around the world to consult the collection, and faculty and students at Purdue routinely use the collections for teaching and learning.

Image: Article on "The Hallucinogenic Drugs" from a 1964 issue of *Scientific American*. Image courtesy of the Purdue University Archives and Special Collections

DEAN'S ADVISORY COUNCIL

When I was asked to attend as a guest at a meeting of the Purdue University Libraries Dean's Advisory Council (DAC) in Spring 2015, I thought I may help advise then Dean of Libraries and Esther Ellis Norton Professor James Mullins about books. At that meeting, Purdue Agronomy Professor Darrell Schulze delivered a short presentation about how he collaborated with the Libraries' geographic information systems (GIS) team to create a tablet-enabled geospatial, interactive representation of soil samples throughout the Midwest. After a few minutes of playing with the app, it occurred to me that the Purdue Libraries encompass a little bit more than books and periodicals. Maybe the vision for our Libraries should be that of a high-value enabler of the use of information in every single department of Purdue University! At that point, I knew I wanted to be part of that vision.

Purdue Libraries Dean's Advisory Council, Spring 2018.

The following Fall 2015 meeting of the Dean's Advisory Council, Dean Mullins invited me to officially join the DAC. Today, I serve as the chair.

Many years ago, the Council was established to act as a sounding board for the Dean of Purdue Libraries, as well as for that individual's faculty and staff. Our advisory group is comprised of more than 20 individuals across the country, with experience in various areas of industry and academia. Our common bond is a passion for advancing the leadership at Purdue, specifically through the competence of library and information science and the transformation underway in the digital domain of information.

Two times a year, we take part in working sessions, during which we share perspectives on key projects and initiatives. A recent milestone for the University was the revolutionary launch of the Wilmeth Active Learning Center (WALC)—

a student-centered facility that, for the first time in higher education, marries library space with versatile, active-learning classroom space. From beginning to end, our council was very engaged in the project, adding insights about the importance of making WALC a key component for student research and learning.

Our role in advising Purdue Libraries' personnel enables us to help further position the Libraries in areas at Purdue critical to student learning, faculty and student research and discovery, and engagement with the Purdue community and beyond. These areas include, but are not limited to, information and data literacy, archives, data science, instructional development, and information services. As an advisory group, it is our mission to assist in maintaining an indispensable resource to support learning and research of all students and faculty at Purdue, as well as to make an impact in a cost-effective manner. We are confident that our focus on continuous improvement is supporting the goal of reaching "one brick higher."

Robert Boehnlein // '84, B.S. Computer and Electrical Engineering // Chair // Purdue Libraries Dean's Advisory Council

THE LIGHT AT THE END OF THE TUNNEL

by Nanette Andersson // Director // Purdue Libraries Facilities

The final stage of the Purdue Libraries' right-sizing project is close to completion. The multiyear project included the shuttering of six subject-matter libraries scattered across campus, the consolidation of many of the materials (from the closed Libraries) in the Library of Engineering and Science now situated in the Wilmeth Active Learning Center, and the long-term housing of the overflow materials in the newly expanded Hicks Repository.

The closed Libraries covered roughly 69,000 SF and contained around 700,000 pieces of material. This volume of materials is significantly more than we can house in the open stacks in the now consolidated Library of Engineering and Science; thus, we were tasked with finding a new home for the materials, as they need to continue to be accessible for scholarly research. Located one level below the Hicks Undergraduate Library, the Hicks Repository is now nearly double in size, growing from 24,000 SF to more than 40,000 SF.

Along with the benefit of the newly renovated, expanded space, another major advantage of remodeling this area below the Hicks Library is the proximity to the West Lafayette campus. Because we are not storing the items at a remotely located facility, Hicks Repository staff will be able to provide requested materials quickly, typically within a 24-hour timeframe.

Hicks Repository now fills the basement of the building, taking over two classrooms and some open study space for the expanded facility. During the demolition phase, the carpet, wall coverings, and ceiling were removed, leaving only the bare concrete walls and floors to accommodate shelving for the materials. We retained existing light fixtures to reap cost savings, and the walls were sealed with white paint to mitigate humidity concerns. Members of the Purdue Libraries Facilities' team have worked diligently to salvage, retain, and organize shelving from the closed libraries.

A new portion of the repository includes a 2,300 SF room designed to maintain special archival environmental conditions to accommodate the storage of valuable and sensitive archival materials collected and stored by archivists in Purdue Archives and Special Collections. The staff office was also refreshed with new paint and carpet, resulting in a more pleasant workspace.

While not glamorous, the repository expansion was a necessary remodel project to accommodate Purdue Libraries' extensive collection. The additional space will provide the space needed to store research materials for both present-day and future scholars for years to come.

Photos by Rebecca Wilcox, Purdue Marketing and Media

DIVING DEEP INTO DATA SCIENCE

In January 2018, *Forbes* contributor Louis Columbus declared the best job in America was that of a data scientist. Columbus based his declaration on Glassdoor's "50 Best Jobs in America" list and further explained "six analytics and data science jobs are included on the list for 2018." The six jobs are: data scientist, analytics manager, database administrator, data engineer, data analysis, and business intelligence developer (see https://bit.ly/2Rde1JC).

This reality—that there is a need and demand for professionals who have crucial data science skills—was a key factor in the Purdue administration's decision in 2017 to investigate data-related research and education projects. The result of that investigation and examination is the Integrative Data Science Initiative or IDSI.

"In light of the growing demand for broadly trained data scientists, Purdue University convened two nine-member Working Groups dedicated to research and education. The groups hosted four campus-wide forums, with approximately 180 total attendees," states the Integrative Data Science Initiative website (www.purdue.edu/data-science).

Officially launched in early 2018, the IDSI is "focused on advancing the frontiers of research and the application of data science to pressing, socially relevant issues, as well as new campus-wide, transformational data science education initiatives."

Last March, Purdue University faculty were encouraged to submit proposals for IDSI projects. The request for proposals (RFP)—and the subsequent awarded projects—"represent [the University's] first investment towards achieving the goals of the Integrative Data Science Initiative." Topic themes for this "first round" RFP had to examine health care; defense; ethics, society and policy; fundamentals, methods and algorithms; or cross-cutting data science-enabled research. IDSI officials encouraged "high-risk, high-payoff proposals that describe 'game changing, transformative ideas.'"

The RFP resulted in 52 separate, highly competitive proposals—including eight with Libraries faculty as

> **"Our vision is to be at the forefront of advancing data science-enabled research and education by tightly coupling theory, discovery, and applications while providing students with an integrated, data science-fluent campus ecosystem."**
>
> **— Purdue University Integrative Data Science Initiative**

either principal investigators, co-principal investigators, or researchers—addressing data science applications in the theme areas. Nine of the 52 proposals were selected for funding, and two of those nine were submitted by Libraries faculty and members of their interdisciplinary teams. The funded projects that include Libraries faculty are: "Engaging Data in the Humanities," submitted by Matt Hannah, assistant professor, Digital Humanities, Libraries; and Venetria Patton, professor, English and African-American studies; and "Foundation of the Data Mind: An Interlocking Approach," submitted by Milind Kulkarni, associate professor, electrical and computer engineering; Michael Fosmire, professor, Libraries; Dan Kelly, associate professor, philosophy; Wei Zakharov, assistant professor, Libraries; Sarah Huber, assistant professor, Libraries; and Taylor Davis, assistant professor, philosophy.

Engaging Data in the Humanities

In the "Engaging Data in the Humanities" project, the primary objective is to "develop data-centered curricula for students of the humanities," the researchers said. Prior to the awarded IDSI funding, however, Hannah, who joined Purdue Libraries last March, had already begun to establish a "Digital Humanities Studio" in the Humanities, Social Science, and Education (HSSE) Library.

"Many of the nation's top universities are investing resources in Digital Humanities initiatives, building labs, centers, and other spaces within academic libraries and populating them with strategic hires who have expertise in data generation, management, and visualization combined

with advanced humanities training. Library spaces have thus become destinations for faculty and students who want to supplement humanities scholarship with the affordances of digital tools and methods, and many libraries now offer educational opportunities through trainings, workshops, and classes. We are currently building such a program, housed in the HSSE Library, where we have dedicated space to a DH Studio in which courses and workshops can be taught regularly within a humanities and social-sciences environment," he explained.

According to Hannah, Libraries faculty are collaborating with the School of Interdisciplinary Studies to launch graduate and undergraduate certificate programs in Digital Humanities. These programs will promote data management and analysis as crucial skills for humanities scholarship, and the new DH Studio will support this work.

Foundation of the Data Mind

In the "Foundation of the Mind: An Interlocking Approach" project, the researchers are working to create "three, one-credit courses that combine to meet a set of core competencies in data science." Faculty in the Purdue Libraries, College of Engineering, and Department of Philosophy will teach the courses, and the courses will cover principles of data management and organization, data analysis and visualization, and ethical and social implications of data science.

The first course, ILS (Information and Library Science) 195, "Introduction to Data Management," will provide a foundation in the concepts of data organization, management, preservation, and publication. In the course, students will develop the skills to locate, access, transform, and evaluate data to answer research questions. The second course, ECE (Electrical and Computer Engineering) 295, "Introduction to Data Analysis," will be a broad introduction to data analysis and modelling. The third course, PHIL (Philosophy) 195, "Ethics of Data Science," will provide a framework for identifying ethical issues and thinking clearly about ethics in practical contexts, as well as practice applying this framework in the analysis of case studies.

Learn more about Purdue University's Integrative Data Science Initiative at www.purdue.edu/data-science.

Editor's Note: *Content for this piece was sourced from the IDSI website and the proposals for the "Engaging Data in the Humanities" and "Foundation of the Data Mind: An Interlocking Approach" projects.*
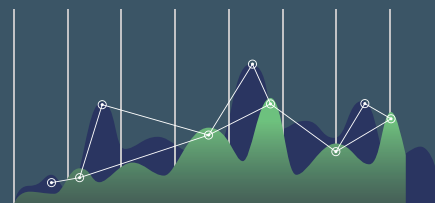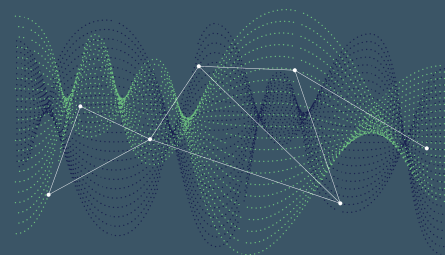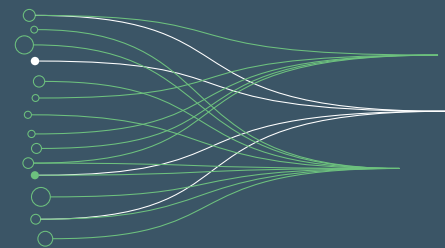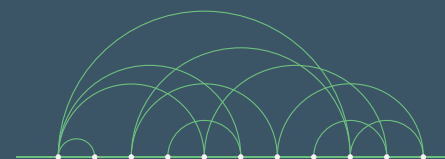
PURDUE UNIVERSITY
PRESS

Justin Race Named Director of Purdue University Press

A new leader has taken the helm at the Purdue University Press. Justin Race was named director in October and began his new role November 12. Race was formerly the director of the University of Nevada Press. During his tenure there, he doubled the content output and grew sales by more than 30 percent in just over three years. Race began his career in publishing in acquisitions with the Lexington Books imprint, Rowman and Littlefield.

"Justin has an excellent track record of driving success as the leader of another university-based press," said Interim Dean of Libraries and Dean of the Honors College Rhonda Phillips. "We are pleased that Justin has joined the Purdue University Press."

Race received his B.A. in political science from Tufts University and his M.A. from the Committee on Social Thought from the University of Chicago.

"Purdue University Press has a rich tradition, not only of producing worthwhile and quality content, but also of being an innovator in today's rapidly changing publishing landscape," Race noted. "I am delighted to join the team and excited to be a part of the future of the Purdue University Press."

2018 Year in Review

The *Journal of Purdue Undergraduate Research* (JPUR) published its eighth volume in August 2018. JPUR was established to publish outstanding research papers written by Purdue undergraduates from all disciplines who have completed faculty-mentored research projects. Undergraduate students run the journal through mentorship via the Purdue University Press and unique partnerships with other areas of campus, including the Purdue University Libraries, Marketing and Media, and the Purdue Online Writing Lab. Publication of JPUR is sponsored by the Office of the Provost.

Total downloads of the journal are more than 104,000 and it is used by readers in 181 countries.

Top 10 Countries Using JPUR:

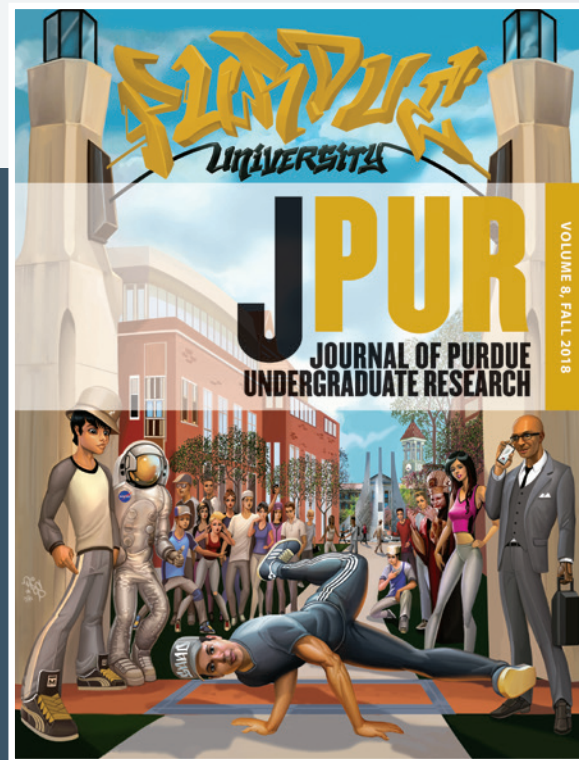| United States	China	India	United Kingdom	Canada	Germany	Philippines	France	Republic of Korea	Australia

The respected and long-tenured Jewish Studies journal *Shofar: An Interdisciplinary Journal of Jewish Studies* successfully reinvented with new editors, an updated look, and new triannual schedule. The first issue of the "new" *Shofar* was published in March 2018.

Saving Lives in Auschwitz: The Prisoners' Hospital in Buna-Monowitz by Ewa K. Bacon, published in January 2018, was chosen by Lewis University in Romeoville, Illinois, as their First-Year Common Read for the 2018–19 academic year. Approximately 650 students will read and discuss the book throughout the year, and they will engage with the author who is a professor emerita of the university.
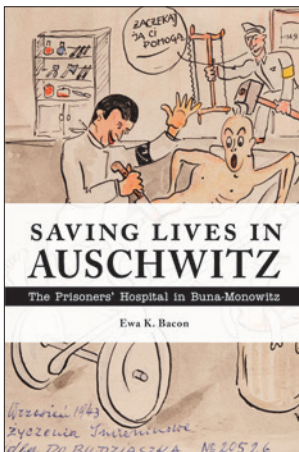
A revised and expanded edition of the popular biography *Calculated Risk: The Supersonic Life and Times of Gus Grissom* by George Leopold released in September 2018. This revised edition includes a new afterword written by the author who, at the invitation of Gus Grissom's brother, Lowell, attended the public and private NASA observances of the 50th anniversary of the Apollo 1 launch pad fire. The dedication of the new tribute exhibit to the fallen crew of Apollo 1 at the Kennedy Space Center in Cape Canaveral, Florida, includes photos of Grissom, which were first published in *Calculated Risk.*

Bryan Shaffer // Sales and Marketing Manager // Purdue University Press

Purdue e-Pubs

Purdue e-Pubs is the open access, online text repository for Purdue University. Funded through the Purdue Libraries and operated through Purdue University Press, Purdue e-Pubs provides online publishing support for original publications as well as hosting for Purdue-affiliated scholarly documents.

→ **17.4M TOTAL DOWNLOADS AND COUNTING**

→ **4,703 NEW ITEMS UPLOADED IN FY18**

→ **2.03M DOWNLOADS IN FY 18 (5,568 DOWNLOADS PER DAY)**

→ **58,700 TOTAL ITEMS IN THE PURDUE E-PUBS REPOSITORY**

→ **48,262 INSTITUTIONS DOWNLOADED ITEMS FROM THE REPOSITORY IN FY18; OF THOSE 54% WERE EDUCATIONAL INSTITUTIONS; 36% WERE COMMERCIAL INSTITUTIONS; THE REMAINING 10% WERE FROM GOVERNMENT, MILITARY, AND OTHER ORGANIZATIONS.**

150 YEARS OF
GIANT LEAPS
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