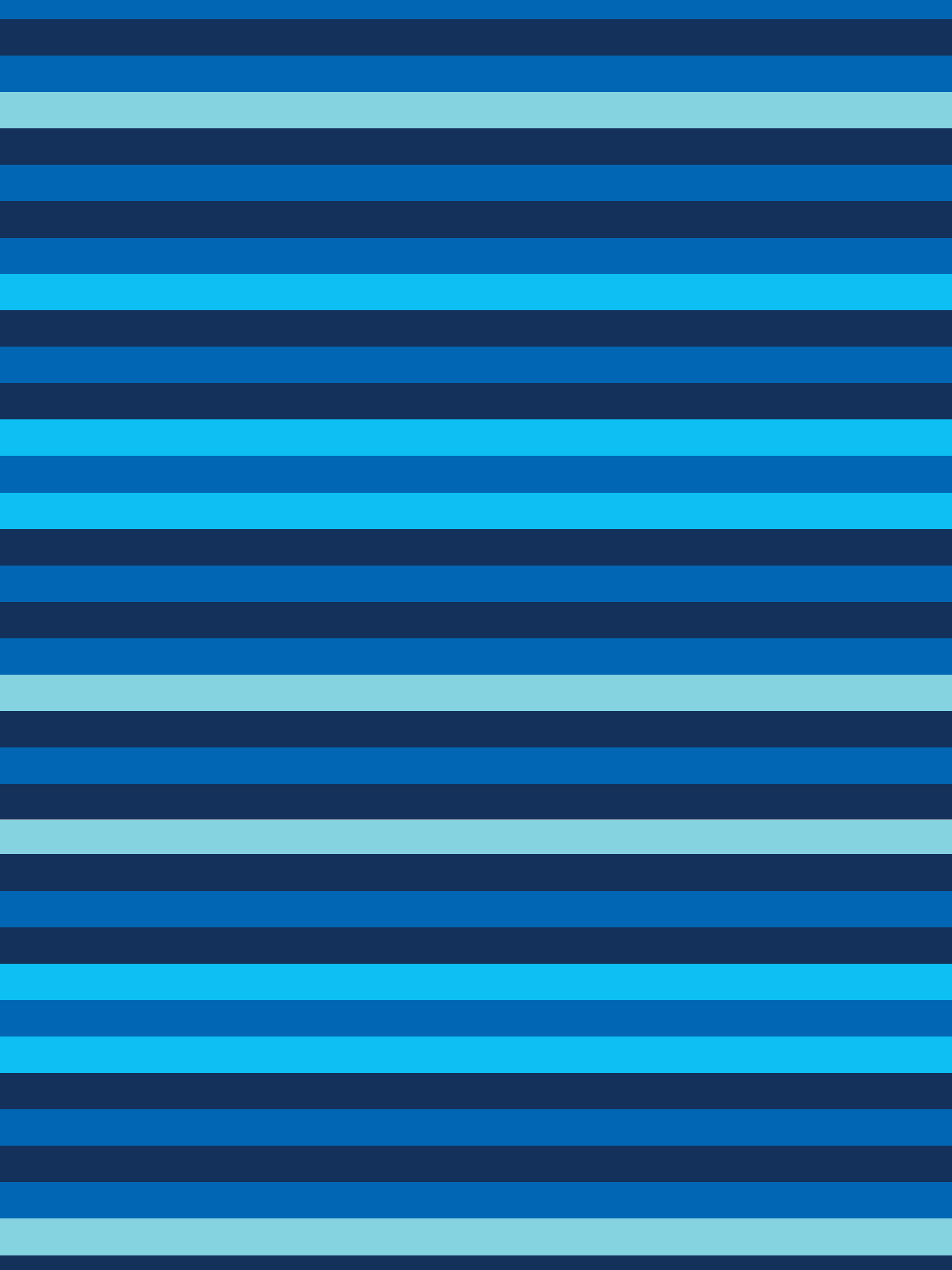




**INDIANA STATE
UNIVERSITY**

**OFFICE OF SPONSORED PROGRAMS
2021-2022 Annual Report**



CONTENTS

Welcome	2
Executive Summary	3

Featured Programs

Reducing Impact of COVID-19 on Education	4
Falling in Love with Algebra and Geometry	4
Accelerated Learning for Early Readers.....	6
Building Intergenerational Community Partnership Through Music.....	7
Researchers Investigate Lipid and Pesticide Variation in Honey Bees and their Harvested Pollen	9
Fruit Tree Orchard Expansion at the Community Garden.....	10
Sycamore Pantry Supported by Sodexo Stop Hunger Foundation.....	11
Grant Supports Start-up of Japanese Language Program	11

Follow-up Stories

Lisa Phillips: Past and Present Research Supports Documentary	12
SPARC: Sycamore Physician Assistants Rural Care Program.....	13
Michael Williamson: Contrast Pavement Marking Safety Benefits	14

Statistics

Award Amount by Funding Source	15
Number of Awards by Funding Source.....	15
Total Funds Submitted and Awarded	16
Total Projects Submitted and Awarded	16

Awards	17
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WELCOME

Welcome to the Office of Sponsored Programs' Annual Report for the fiscal year ending June 30, 2022 (FY22). I am proud of what has been accomplished this year with a total staff of only five: actually 3 support staff and 2 graduate assistants. The Office of Sponsored Programs (OSP) handles all pre-award functions connected to external funding that comes into the university, this is separate from gifts made to University Advancement. This means we assist with finding grant opportunities for faculty, staff, and students in support of research, creative projects, academic programs, and community collaborative projects. Once a grant opportunity is selected for an application, OSP staff assists with grant development. Only the Project Director (PD) or Principal Investigator (PI) can write the narrative description of what and how the project will be implemented but there are a lot of pieces and editing that go into a successful proposal, for which we have much experience with and are here to help.

When a grant award is received OSP assists with finalizing the grant agreement, much like a contract between the university and the funding agency. Once that is completed the PD/PI then completes their awarded project. Usually, at this point, we lose touch with the project teams which is sad. But this year we are trying something new. We have revisited several of the awards that were reported in the FY21 Annual Report to follow up on the first year of the implementation of the projects. It was wonderful to hear of each project's success.

We are looking forward to working with a new group of grant applicants in FY23. We hope you will bring us your ideas so that we can help you find funding to make your project happen.

Liz Metzger
Director, Office of Sponsored Programs



Executive Summary

This annual report reflects the Office of Sponsored Programs (OSP) operations from July 1, 2021, through June 30, 2022. OSP processed a total of 51 awards totaling \$9.7 million and assisted with 62 proposal submissions. This was a significant decrease compared to over 100 submissions each of the previous two years. Sixty-eight percent of the drop in submissions can be attributed to a reduction in graduate student submissions; a drop from 28 graduate research proposals in FY21 to 2 in FY22. Although the number of submissions were down, the total number of awards stayed about the same due to the fact that many multiple-year awards are paid in 1-year increments.

The total amount of awards of \$9.7 million is the highest since FY15 when ISU received a total of \$10.1 million in grant awards. (FY21 had a total of \$15.1 million in awards, however, this reflected a one-time award of \$9.0 million from Lilly Endowment, Inc. and \$6.1 million in other awards.) Some of that increase can be attributed to COVID-19 Relief Funding from federal, state, and foundation sources. Ten awards totaling a little over \$1.6 million were received by faculty and staff to provide support to students and the community in their recovery from the impacts of the pandemic.

Finally, OSP added two new graduate assistants in FY22. Sabina Adu-Wusu is a doctoral student in the department of teaching and learning. She is assisting with the annual report and writes grant award announcements for media releases. Cameo Hildreth is working on her master's degree in speech pathology. She assists the Institutional Review Board (IRB) Committee by prescreening protocol documents prior to IRB's review of the protocols.

STAFF

Liz Metzger

Director

Lori Ashcraft

Sponsored Programs Coordinator

Marlene Burns

Contracts and Grants Specialist

Sabina Adu-Wusu

Graduate Assistant

Cameo Hildreth

Graduate Assistant



Left to right: Marlene Burns, Cameo Hildreth, Lori Ashcraft, Liz Metzger, Sabina Adu-Wusu

Reducing Impact of COVID-19 on Education

In the summer of 2021, the Indiana Department of Education released the grant opportunity: *Student Learning Recovery Grant*. Proposed projects for this funding were required to focus on K-12 students who were experiencing some level of learning loss due to the disruptions caused by the pandemic. This includes students who had fallen behind acquiring anticipated grade-level academic skills and knowledge or were at risk of falling behind.

Two faculty submitted proposals and both received awards. Dr. Winnie Ko's project targeted middle school mathematics and Dr. Judy Sheese's project targeted early readers (K-2).

Falling in Love with Algebra and Geometry

The *Building Love for Algebra and Geometry* project initiated in the Fall of 2021 by Dr. Yi-Yin "Winnie" Ko, an Associate Professor of Mathematics Education in the Department of Mathematics and Computer Science, is helping reduce mathematics apprehension by students at the South Vermillion Middle school located in Clinton, Indiana. Dr. Ko's aim with the project is to help students who fell behind in these subjects during the COVID-19 pandemic to catch up, as well as promote overall students' learning and understanding of algebra and geometry concepts. The project received a \$183,706 award from the Indiana Department of Education in FY21 to implement origami-based activities as part of the South Vermillion Middle School's two-year accelerated program, where students chosen by teachers as needing the most support in learning algebra and geometry concepts are coached to use these research-based interventions to improve their learning. This line of inquiry has resulted in an article published in *The Mathematics Teacher: Learning and Teaching PK-12 (MTLT)*, a widely read practitioner journal from the National Council of Teachers of Mathematics (an organization whose 60,000+ members include K-12 mathematics



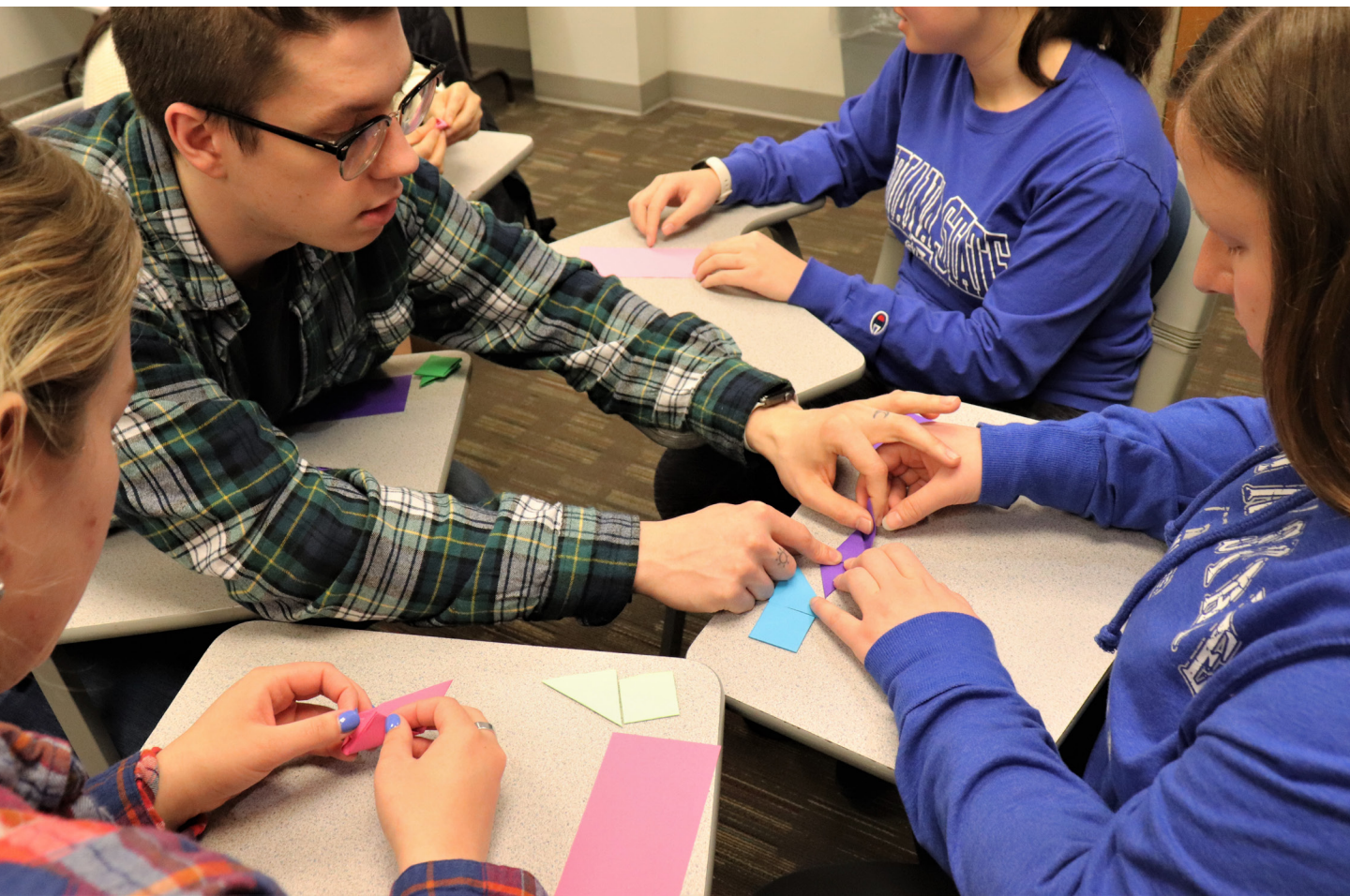
Dr. Yi-Yin Ko

teachers, mathematics teacher educators, and mathematics education researchers). Also, two conference presentations from this project will be given at the 2022 National Council of Mathematics Teachers Regional and Exposition in Baltimore and the 2023 Research Council on Mathematics Learning in Las Vegas.

Building Love for Algebra and Geometry infuses fun-based hands-on activities into mathematics, a subject generally considered technical, and helps students to think outside their comfort zones and conceptualize ideas they are working on, thereby enabling critical thinking and building interest in the subject. This conceptualization enables an understanding of the reasons behind mathematical concepts for deeper and richer learning.

The project currently implements four series of activities to provide opportunities for students to develop positive attitudes toward mathematics, recognize their strengths of mathematical thoughts, enable critical thinking, and generally build a love for the subject as they learn mathematics in several ways. The activities include creating *Tangram* pieces to make different shapes that help calculate the areas of the shapes created; making *Operation Squares* to enable hands-on activity to create and solve problems focusing on computational standards in mathematics; making *One-Straight-Cut Origami* which focuses on geometry ideas looking at symmetry and transformation; and creating *Pythagorean Spiral* to help with geometry and measurement.

The Program Coordinator of the *Building Love for Algebra and Geometry* project, Connor Goodwin, explains that students who used to have negative perceptions about mathematics in school are now willing to try and enjoy learning the subject. Adding that students' ability to figure out the shapes involved in origami among other activities enables critical thinking and perseverance. According to him, "understanding the concepts helps students understand why they will get a problem right or wrong and this boosts their morale and even helps them in their everyday life when they grow up."



Connor Godwin showing ISU student volunteers how to fold origami shapes

Goodwin, who is also a graduate of mathematics from Indiana State University, expresses excitement about the evolving hands-on nature of this type of learning explaining that his personal experience with mathematics when growing up was about “do this, get the right answer, then move on, without an understanding of the concepts of why procedures are being followed.” He notes that even though he loved mathematics when growing up, he and most of his peers during their lower grade levels, were more focused on getting the right answers and when they did not, panicked about their difficulties.

The need for students to perceive mathematics positively and “love” the subject has been the topic of research for decades as negative perceptions affect students’ attitudes and perseverance to succeed in the subject. Research shows that the perception of students towards mathematics is

a huge determining factor in their attitude toward the subject and this perception is influenced by factors such as the level of difficulty in grasping concepts, and even when these concepts are grasped, students easily forget what they have learned. According to a paper presented at a UGC (University Grants Commission) sponsored National Seminar on *Pedagogy of Teachers Education-Trends and Challenges* in 2015, students’ interest, self-efficacy beliefs, and task value beliefs related to mathematics are influenced by whether they “like” the subject or not. And in the last couple of years, the COVID-19 pandemic has compounded the situation to cause substantial learning gaps due to disrupted and remote learning, as well as a lack of resources or support to maintain the goals of students with great academic needs in a virtual learning environment, among others.

Accelerated Learning for Early Readers

In the 2021 Fiscal Year, Assistant Dean and Director of Education Student Services, Dr. Judy Sheese, received a \$710,738 award from the Indiana Department of Education to implement an accelerated learning program that provides tutors for students identified as struggling in ten Title I schools in school districts within 30 miles of the Indiana State University campus. The goal of the project is to support the plans already in place by the Title I schools by providing additional reading strategy support for those students identified by their schools.



Dr. Judy Sheese

The project, which is a joint effort with the school districts, aims to work with schools in rural or economically disadvantaged areas where students may have been adversely affected by a lack of connectivity during the pandemic. Because schools employ a variety of assessments, including DIBELS, NWEA, iReady data, and Renaissance Learning, Indiana State University

(ISU) students were assigned in the fall of 2021 as tutors to work with the Reading Specialist in each school to use the assessment and evaluation processes identified by the schools. Currently, the project has expanded tutoring services to afternoon programs organized by community agencies that serve the designated Title 1 schools. These services include tutoring assistance for summer school, and continued community programs during the summer months. The funding will further provide training to families who want to support their children's reading outside the school day. These services will be available for subsequent semesters as well.

According to Dr. Sheese, the Bayh College of Education's Assessment Director will work directly with Reading Specialists or other designated persons in each school to gather data and help with any analysis the schools might request. Each school has approved the sharing of such data. Additionally, the Assessment Director will be available for consultations upon request.

The goal is that within the first year of the program, students within the program will demonstrate a 20 percent increase in phonological awareness, phonics, fluency, vocabulary, and comprehension as measured by the assessment method adopted by their school (NWEA, Dibels, or Renaissance Learning), and as measured by the beginning and end of year assessments. It is hoped that by the second year, the students will maintain the previous year's improvement and show an additional five (5) percent increase in phonological awareness, phonics, fluency, vocabulary, and comprehension as measured by the assessment method adopted by their school and as measured by the beginning and end of the year assessments.



Building Intergenerational Community Partnership Through Music

The Gift of Music: An intergenerational campus-community partnership enabled music student majors from Indiana State to connect better with an older generation, residents of the retirement community Westminster Village, Terre Haute. The project was a collaboration between Dr. Whitney Nesser, Associate Professor and Gerontology Program Director in Applied Health Sciences, and Dr. Scott Buchanan, Professor in the School of Music. The project was funded by a \$2,400 grant award from the Indiana Campus Compact and a \$600 cash match from the ISU Center for Community Engagement and implemented in the spring of 2022.



Dr. Whitney Nesser



Dr. Scott Buchanan

The semester-long project, which provided context for music students to connect better with the older generation audience and allowed the community to relate with the student performers, aimed to enhance music major students' "First Friday" performances (an activity implemented by the School of Music to expose students to live audiences) through additional learning and reflection. It also provided a keyboard as a sustainability piece that will remain in the retirement community for future performances.

Student performers including *The Women's Choir*, *Sycamore Flutes*, and *Steel Drum Ensemble* provided entertainment through musical performances on the "First Friday" of every month at the retirement community. Even though "First Fridays" were originally designed for students to perform live music at Westminster Village, *The Gift of Music* allowed students to learn about the interconnection of health, music, and aging. Students gained knowledge and perspective as evidenced by student evaluations following the performance on what a successful performance at Westminster Village means to them.

For most student performers, the success of their performances centered on how the audience enjoyed the performances as much as they enjoyed performing for the audience. One student stated that *"the audience seemed to enjoy the program, especially Martha!"* The student had the opportunity to engage with residents and got to know Martha. Another student states: *"Many people came up to me afterward saying they had such a good time."* These experiences made another student exclaim *"I thought everyone enjoyed the performance, both performers and audience. We would love to come back!"*

Dr. Nesser explains that *"there is a need for society to build upon our understanding of intergenerational connections – where we can appreciate*

and understand the gifts we each have to share at all stages of our lives." Dr. Nesser expressed appreciation for the support of the Office of Sponsored Programs at ISU with gratitude. *"OSP has been a supportive and helpful resource for the project from the beginning of the application process. I am so grateful for my OSP colleagues; they have been incredibly helpful to me in various ways since I started at ISU six years ago,"* Dr. Nesser explains.

Music is personal for Dr. Nesser as it helped her overcome health challenges after cancer. She mostly plays bass clarinet but has played the alto, tenor, and baritone saxophones as well as oboe and a little flute. Dr. Nesser said, *"I just believe there are healing properties to music."* The more she played the instruments, the better she felt and her health improved.

In discussing the essence of the partnership between ISU and the retirement community, the Director of Community Life for Westminster Village, Lauren Kelsheimer stated that *"the collaboration between ISU and Westminster Village positively impacted both seniors and students by creating*

meaningful and educational experiences for all.” She further noted that the project was in line with the mission of the retirement community to be “a vibrant and not-for-profit Life Plan Community inspiring residents and team members to maximize their lives and the lives of others.”

In a related development, research resulting from *The Gift of Music: An intergenerational campus-community partnership* co-authored by Dr. Nesser and Dr. Buchanan explores ways university students can engage with residents living in the senior community as an intergenerational program that brings individuals together across a continuum of age to share experiences. The research concludes that providing music in an intergenerational campus-community setting is beneficial not only for students but also for those who are residents in a senior living facility.

They suggest additional outreach efforts should be developed and implemented to continue increasing awareness for university students and the community.

The project brought together undergraduate music students, public health and music faculty, and the Westminster Village as partners to evaluate the need for live music from an intergenerational, student, and community perspective and ways to address those needs.



Researchers Investigate Lipid and Pesticide Variation in Honey Bees and their Harvested Pollen

Principal Investigator Dr. Aaron Gooley, Assistant Professor in the Department of Biology, and Co-Principal Investigator Dr. Zuyi Gooley received a grant award of \$2,992 from the Indiana Academy of Science for their investigation of fatty acid and pesticide temporal variations in honey bees and bee-pollen from managed apiaries in Indiana and surrounding areas. The investigation seeks to help improve the basic understanding of how diet-related risks to honey bee colony health vary throughout the year to improve management practices for bees. The investigators believed that honey bees' fatty acid composition fluctuates throughout the year with the quality and availability of collected pollen resources and that pesticide exposure may alter this temporal pattern.

According to the researchers, many lipids constitute fatty acids that are required by insects for development, reproduction, synthesis of trehalose and proline, and maintenance of colony hygiene. In honey bees, both saturated fatty acids—which serve as a compact form of energy storage that fuels flight during foraging, and unsaturated fatty acids—which provides energy, serve as an antimicrobial agent, and are components of cell membranes—are needed. Hence, the fatty acid composition can be a key indicator of the conditions and nutritional resource availability for honey bees. However, the honey bee can be exposed to pesticides while foraging which can greatly affect their functional activity and metabolism. As a result, the study aims to find out the association between honey bee nutritional status and insecticidal exposure through pollen. The



results will improve the basic understanding of how diet-related risks to honey bee colony health vary throughout the year and provide information that can be used to improve management practices for bees.

During the study, samples will be collected from eight hives of honey bees and bee-pollens from managed colonies every two weeks beginning April through November 2022. These managed colonies—apiaries—are located in Indiana, Southern Illinois, and Ohio.

Dr. Aaron Gooley, the Principal Investigator of the study whose research focus is on the ecology and conservation of small mammals, reptiles, amphibians, and pollinators has 14 peer-reviewed publications, five of which are on honey bees. He is also a beekeeper. The Co-Principal Investigator, Dr. Zuyi Gooley, is an affiliated scientist in the Department of Biology and is skilled in the field of environmental toxicology, environmental pollutant monitoring, analytical chemistry, and the use of associated equipment. Dr. Z. Gooley currently has ten peer-reviewed publications including five on honey bees.

The study will be completed by December 2023.



Dr. Aaron Gooley



Dr. Zuyi Gooley



Fruit Tree Orchard Expansion at the Community Garden

The Office of Sustainability and the Community Garden received a grant of 187 fruit trees and shrubs from the Fruit Tree Planting Foundation in partnership with Kroger Zero Hunger | Zero Waste Foundation and the Arbor Day Foundation valued at \$5,200. The grant enabled the expansion of the Community Garden into an orchard that will ensure the provision of more food groups and enhance diversity in the nutritional foods it provides to the surrounding community. In all, 80 fruit trees and 43 shrubs were planted in the ISU orchard, while 64 trees and shrubs were distributed to the community and volunteers who assisted with tree planting. The tree-planting event brought together people from the ISU campus, the community, and representatives from the Foundations.

The Fruit Tree Planting Foundation is an international nonprofit charity dedicated to planting fruitful trees and plants to alleviate world hunger, combat global warming, strengthen communities, and improve the surrounding air, soil, and water. Their programs strategically donate orchards where the harvest will best serve communities for generations.

The ISU orchard received ten species of trees native to Indiana from the Fruit Tree Planting Foundation, including pawpaw, serviceberry, redbud, American cranberry, black huckleberry, blueberry, apple, pear, cherry, and plum. The intent is that when these fruit trees mature, their products will be distributed across the community to support the continuing effort of the Office of Sustainability in donating fresh fruits to the local community. In 2020, during the gardening season, ISU donated over 3,500 pounds of produce to surrounding communities and hopes to donate more with the orchard.

The Community Garden, located on the northeast side of campus, opened in 2008 and has since grown to 165 plots for community members to use free of charge. Each gardener has access to communal tools and water, and in return, gardeners agree to tend to their plots and paths, plant only annuals, and refrain from using pesticides, herbicides, and fungicides. They each donate ten percent of their annual yield to local charities and commit four hours of service to the Community Garden.

Sycamore Pantry Supported by Sodexo Stop Hunger Foundation

Sycamore Pantry at Indiana State University received a grant award of \$1,000 from the Sodexo Stop Hunger Foundation. The goal of the grant was to help support efforts to eliminate hunger as a way of fulfilling one of the basic needs that may hinder students' quality of life and academic success. Retail Director of Sodexo Stop Hunger Foundation, Crystal Chandler-Obregon took the lead in pursuing this grant to help support ISU students' access



to nutritious, easy-to-prepare, and non-perishable food. Sycamore Pantry is managed by Student Health Promotion and is located in the Student Recreation Center, Room 131.



Left to right: Andy Morgan, Alicia Miller, Lauren Baines, Morgan Sanford, Crystal Chandler-Obregon, Dana Babel

Grant Supports Start-up of Japanese Language Program

The Department of Languages, Literature, and Linguistics received a grant award of \$27,300 from the Japan Foundation to support the hiring of a Japanese language instructor for the department's Japanese Language program. The department, which offers studies in modern and classical languages—Latin, German, Spanish, and French—linguistics, and TESL (Teaching English as a Second Language), had wanted to include Japanese in the list of foreign languages it offers but could not do so due to budgetary constraints. The intent of the grant program is to assist the



Dr. Ann Rider

university in starting up a Japanese language program by providing half the funds necessary to pay for a full-time instructor, with the university covering the other half of the costs. Following a national search, the instructor hired was Yukiko Takahashi. She received her Bachelor's Degree in Education from Hokkaido University of Education, Japan, and her master's degree in linguistics from California State University, Fullerton.

The Project Director of the grant, Dr. Ann Rider, explained that the hiring of Takahashi has helped grow the Japanese Language program. Not only has Takahashi developed and taught new courses at the intermediate and advanced levels, her hire has also led to inter-departmental/inter-college partnerships as well as the promotion of cultural aspects of Japan on campus and in the community. Takahashi has hosted and taught cultural activities and worked with graduate students to develop a thriving Japanese Club.

As part of the department's requirement, students of Language Studies must study abroad for a minimum of six weeks to experience the language within its native environment. This has led to the opportunity for two students to study abroad at Tokyo University in Japan in the 2022-2023 academic year. Takahashi has contributed to the department, university, and community

thereby promoting departmental goals. She has collaborated with some of ISU's deans to develop a study abroad collaborative program with two institutions in Japan; she has coordinated internship opportunities in Japan for students in the health care programs, and she met with Tokyo business leaders to host students for job shadowing opportunities and potential internships.

Follow-up Stories

Each of the following three projects was reported in OSP's Annual Report for 2020-21, however, each project was in the very early stages. Therefore, we have caught up with each project director to find out how their projects are going.

Lisa Phillips: Past and Present Research Supports Documentary

Last year, Dr. Lisa Phillips, an Associate Professor of History received funding to research economic inequality in America. Specifically, Reckless Bandon, LLC contracted with Dr. Phillips to provide her expertise on labor and wage data she has collected prior to this project, as well as collecting new data, including data related to Disneyland workers throughout the company's history. The data collection and analysis were used to support the production of a video documentary that tracks

the story of the proto-American corporation, Disneyland, for the purpose of examining America's dysfunctional and unequal economy.

The video documentary *"The American Dream and Other Fairy Tales"* directed by Abigail Disney and Kathleen Hughes was released in 2022. The film reexamines the story of modern American capitalism from the middle of the last century when wealth was shared more equitably, to today, when CEOs earn upwards of 800 times more than their average employees. The film has received numerous awards. It is hoped that the

film will initiate fresh debate addressing the current state of the inequality of American capitalism.

Congratulations to Dr. Lisa Phillips for being recognized for her scholarly work that examines the disparity of the American laborer past and present.



Dr. Lisa Phillips



SPARC: Sycamore Physician Assistants Rural Care Program

Last year, the Sycamore Physician Assistants Rural Care program, SPARC, received a 5-year grant totaling \$1,481,390 from the Health Resources and Services Administration (HRSA) to enhance the Physician Assistants' (PA) primary care experience by increasing the number of clinical rotation sites and/or clinical preceptors in rural and underserved communities offered to PA students. The grant project officially started on October 1, 2021. The first year of the project was spent on program development – curriculum and scholarship criteria— with program implementation to start in the Fall 2022 semester.

For the 2022-23 academic year, three first-year Physician Assistant students in the Department of Applied Medicine and Rehabilitation were awarded scholarships/awards under the SPARC program. Each student received a \$10,000 scholarship as well as \$1,000 to help with living expenses to be applied during their mandatory eight weeks of clinical rotations at a rural or designated Federally Qualified Health Center site in one of the SPARC counties. The scholars, Cassidy Dennin, Mackenzie Lubbehusen, and Anton van Metre are first-year students of the PA training program. As part of the scholarship requirement, the students will develop and implement a community education program

or outreach event focusing on pain management, opioid use disorder (OUD), or other mental health issues relevant to the community.

The scholarship is meant to provide an opportunity for students to participate in the effort to increase the number of PA students completing clinical rotations in rural and medically underserved populations. According to the program director, Doug Stevens, recruitment into the SPARC program is designed to attract students who are or have lived in rural or medically underserved communities, particularly veterans, who are then more likely to return to these areas to live and work as a provider of medical care.



Doug Stevens

During the grant's first year, funding supported faculty and consultants to review the current curriculum for mental health management, pain management, and OUD. An interdisciplinary faculty team representing the PA program, Occupational Therapy, Athletic Training, Social Work, Physical Therapy, and leaders from the Rural Health Innovation Collaborative developed specialized modules that enhance the program's current curriculum on these subjects. The curriculum map for pain management has been updated and reflects curricular recommendations from the International

Association for the Study of Pain. The curricular updates include foundational knowledge and application-based.

In subsequent years, three SPARC scholarships and stipends will be awarded each year, providing a total of twelve scholarships over the life of the project. The SPARC program also plans to implement simulation events that will allow students to experiment with knowledge as a way of experiential learning. Finally, the PA program hopes to improve healthcare access and quality by encouraging more healthcare providers to stay and practice in underserved areas of Indiana once their training is complete.



Seated, center, left to right: SPARC scholars Cassidy Dennin, Anton van Metre, and Mackenzie Lubbehusen. Others, clockwise from left: Holly Wolf, Priya Bakshi, Paula Jarrard, Beth Loudermilk, John Kiesel, Mike Walls, Douglas Stevens, Chelsea Elwood, Brittany Edmondson

Michael Williamson: Contrast Pavement Marking Safety Benefits



Dr. Michael Williamson

In FY 2021, Dr. Michael Williamson, Associate Professor of Engineering in the Department of Applied Engineering and Technology Management (AETM), was in the midst of his research on the benefits of Contrast Pavement Markings (CPM).

His first CPM research project for the Illinois Department of Transportation (IDoT), funded through the Illinois Center for Transportation at the University of Illinois, was starting its second year. In addition, Dr. Williamson received a second grant to conduct related CPM research for the Indiana Department of Transportation funded through the Joint Transportation Research Program at Purdue University, which had just started in early August 2021. A third proposal that was in the works at publication time was not selected for funding. This was a collaboration with the University of Missouri's Center for Transportation Innovation to the federal National Cooperative Highway Research Program.

The grant funds supported the hiring of a graduate student to assist in the research. Sumit Singh, a master's student at Indiana State University who joined the research project during FY22, brings computer science and programming skills to the project. The research required hours of literature review on pavement marking designs and Crash Modification Factors with a focus on CPMs' safety benefits, but none were found.

Data was collected and analyzed for six states including Illinois, California, Texas, Virginia, Pennsylvania, and Iowa. Crash Modification Factors were developed for three roadway types including four, six, and eight lanes at three crash severity levels, and total, fatal/injury, and property damage only. The results provide new proof that CPMs are a valuable countermeasure for reducing roadway departure crashes at all severity levels. The crash-reducing impacts of the CPM were identified to be 12 percent to 29 percent for total crashes, 7 percent to 19 percent for fatal/injury



Fig. 1. Lead/lag contrast strip



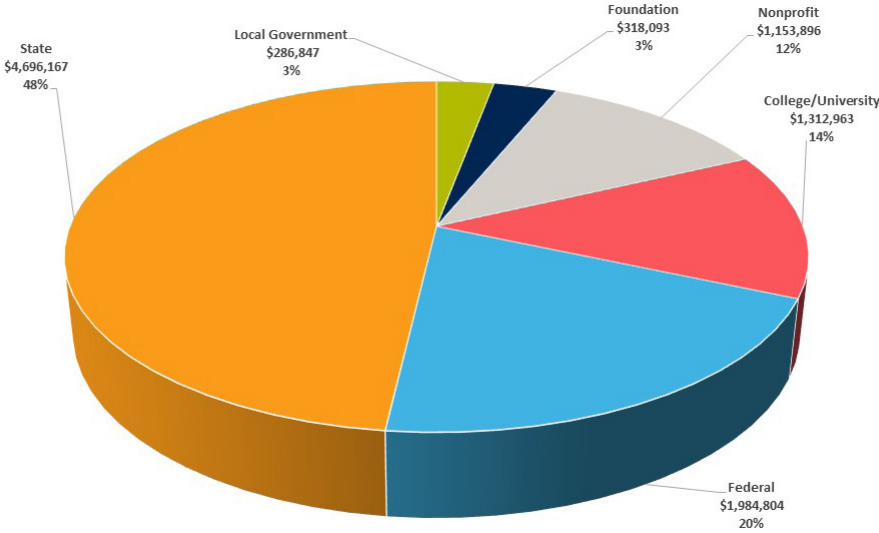
Fig. 2. Bordered contrast strip

crashes, and 5 percent to 16 percent for property damage crashes.

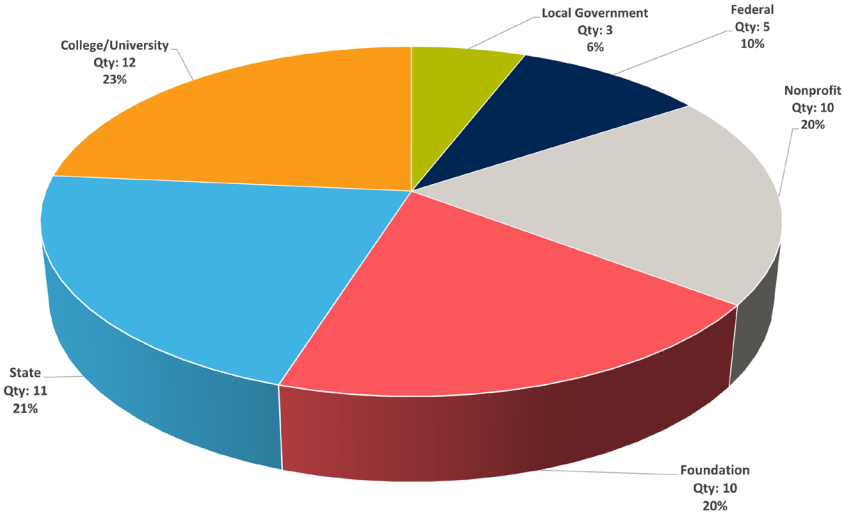
Dr. Williamson explains the Federal Highway Authority's Highway Safety Benefit-Cost Analysis guide guided the quantification of the benefits that can be expected from design changes in establishing a benefit-cost ratio for CPM. Adding that after quantifying the economic savings of reducing crashes at each severity level using Crash Modification Factor values developed for the project, the research revealed there is a high benefit-cost ratio of 62:1 when Contrast Pavement Markings are used.

The results are now being used by IDoT and other highway agencies to reduce crashes and save lives on roadways.

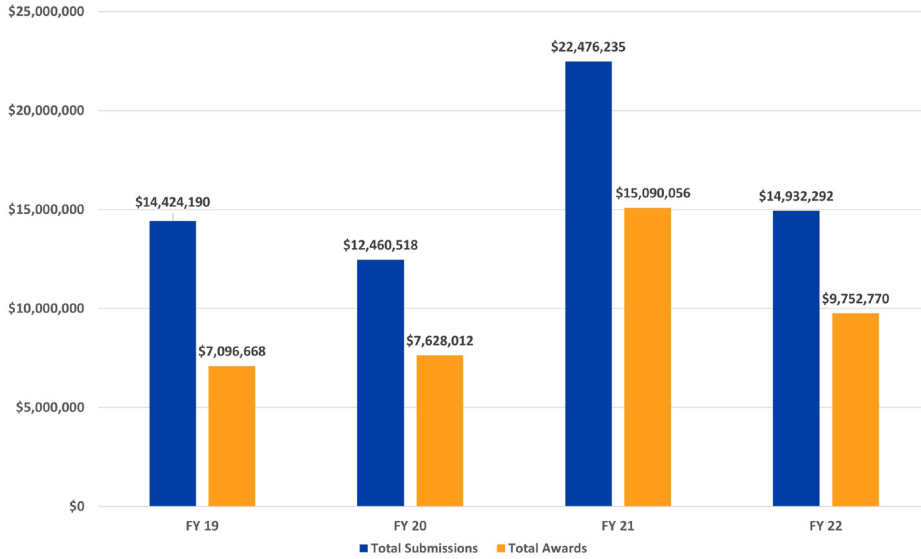
AWARD AMOUNT by Funding Source



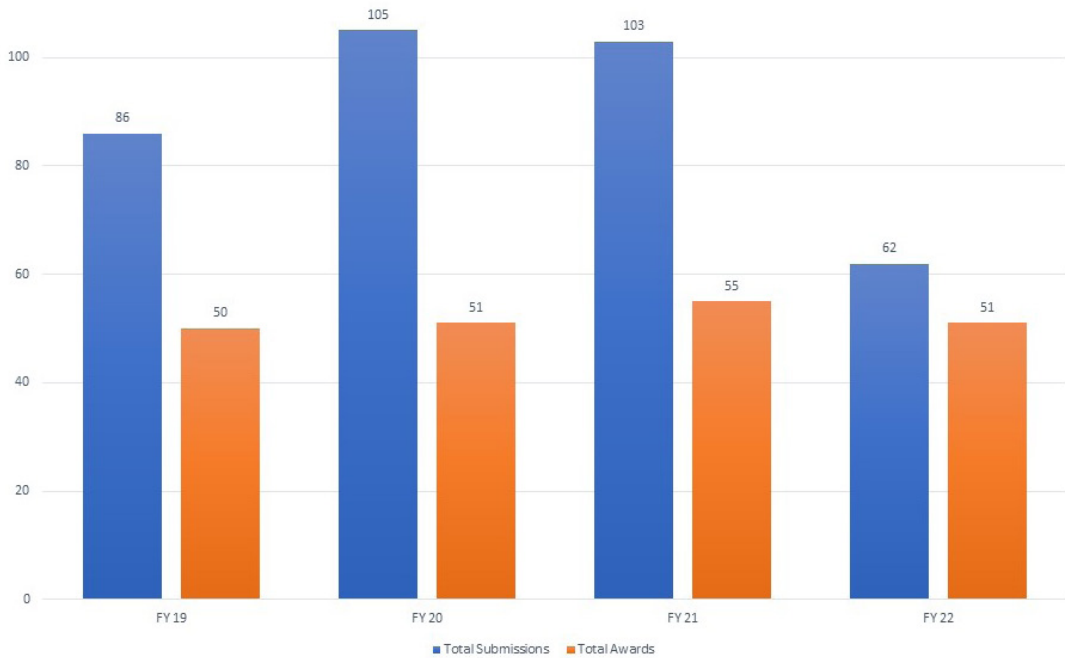
NUMBER OF AWARDS by Funding Source



TOTAL FUNDS Submitted and Awarded



TOTAL PROJECTS Submitted and Awarded



AWARD DETAILS

ACADEMIC AFFAIRS

Susan Powers, Associate Vice-President for Academic Affairs

Extending Teacher Creativity 2022: The 29th Summer Workshop for Teacher Creativity Fellows – A Proposal to the Lilly Endowment Inc., Lilly Endowment, Inc., Public Service, \$111,370.

COLLEGE OF ARTS AND SCIENCES

Katrina Babb, Instructor & Director, Center for Economic Education

Smart Indiana Personal Finance Program in Arthur, Illinois, Council for Economic Education, Public Service, \$60,000.

Aaron Gooley, Assistant Professor, Biology

Investigation of Fatty Acid and Pesticide Temporal Variation in Honey Bees and Bee-pollen from Managed Apiaries in Indiana and Surrounding Area, Indiana Academy of Science, Research, \$2,992.

Christopher Fischer, Associate Dean and Associate Professor, History

STEM Teach V, University of Indianapolis, Instruction, \$157,425.

Diana Hews, Professor, Biology

Indiana Bat Response to Missouri Department of Conservation's Forest Habitat Management, Missouri Department of Conservation, Research, \$117,111.

Jason James, Assistant Professor, School of Criminology and Security Studies

Co-PI: William Mackey, *Vigo County High Tech Crime Unit (HTCU)*, Vigo County Prosecutor's Office, Academic Support, \$231,847.

Yin Yin "Winnie" Ko, Associate Professor, Mathematics Education, Mathematics and Computer Science

Middle School Algebra and Geometry Learning Recovery, Indiana Department of Education, Public Service, \$183,706.

Ann Rider, Professor, Languages, Literatures, and Linguistics

Expansion of Japanese Language Program at Indiana State, Japan Foundation, Academic Support, \$27,300.

Scott Sterling, Associate Professor, Languages, Literatures, and Linguistics

Questionable Research Practices: The (un)ethical handling of data in quantitative humanities research, Uppsala University, Sweden, Research, \$40,000.

Jeffery Stone, Professor, Earth and Environmental Systems

Diatom analyses of Ologesailie Core 3A, Smithsonian Institution, Research, \$10,000.

SCOTT COLLEGE OF BUSINESS

Courtney Chipol, Regional Director for West Central Indiana Small Business Development Center

West Central Small Business Development Center 2021, City of Terre Haute, Public Service, \$30,000.

West Central Intentional Outreach Network (ION), Community Navigator Pilot Program, U.S. Small Business Administration, Public Service, \$1,000,000.

West Central Small Business Development Center Cares Act Amendment 2, Indiana Economic Development Corporation, Public Service, \$56,314.

West Central Small Business Development Center 2022, Indiana Economic Development Corporation, Public Service, \$25,000.

West Central Small Business Development Center Cares Act Amendment 3, Indiana Economic Development Corporation, Public Service, \$50,000.

BAYH COLLEGE OF EDUCATION

Holly Curtsinger, Director, Early Childhood Education Center

Empowering Preschoolers through Fine Arts, Wabash Valley Community Foundation, Day Nursery Fund, Academic Support, \$3,492.

AWARD DETAILS continued

Infant & Toddler Stabilization Grant, Indiana Family & Social Services Administration, Academic Support, Round 1 - \$115,542; Round 2 - \$191,582.

Pre-School Stabilization Grant, Indiana Family & Social Services Administration, Academic Support, Round 1 - \$121,579; Round 2 - \$201,270.

Vicki Hammen, Professor, Applied Clinical and Educational Services

Emotional Content and Expressive Language Complexity, Indiana Lions Speech and Hearing, Inc., Public Service, \$2,500.

Bruce Kulwicki, Executive Director Blumberg Center for Interdisciplinary Studies in Special Education

Fannie and Ben Blumberg 2022-2023, ISU Foundation, Academic Support, \$63,731.

Jennifer Mesanovic, Director, Promoting Achievement for Students with Sensory Loss (PASS) Project

Promoting Achievement for Students with Sensory Loss (PASS) Project, Indiana Department of Education, Public Service, \$403,325.

Indiana Special Education Assisted Licensure (I-SEAL), University of Indianapolis, Public Service, \$183,542.

Jolly Piersall, Director, Indiana Individual Education Plan (IEP) Resource Center

Indiana IEP Resource Center, Indiana Department of Education, Public Service, \$2,545,000.

Lisa Poff, Director, Indiana Deaf-Blind Services Project

The Indiana Deaf-Blind Services Project, U. S. Department of Education, Public Service, \$209,276.

Judy Sheese, Assistant Dean & Director of Educational Student Services

Accelerated Learning Recovery for K-2 Literacy, Indiana Department of Education, Public Service, \$710,738.

Power of Reading and Power of Math Summits, CenterPoint Energy Foundation, Public Service, \$40,000.

Power of Reading and Power of Math Summits, Duke Energy Foundation, Public Service, \$40,000.

COLLEGE OF HEALTH AND HUMAN SERVICES

Robin Bonifas, Professor & Department Chair of Social Work

Co-PI: Hailee Lauritzen, **BSW Child Welfare Scholars Program**, Indiana University, Instruction, \$30,000.

Kenneth Games, Professor & Acting Dean, College of Graduate and Professional Studies

Co-PI: Lindsey Eberman; **Union Hospital DAT Graduate Assistantships**, Union Hospital, Academic Support, \$67,910.

Co-PI: Lindsey Eberman, **Second Amendment to Clinical Affiliation and Graduate Assistantship Agreement**, Franciscan Health Lafayette, Academic Support, \$992,868.

Co-PI: Lindsey Eberman, **Clinical Affiliation, and Graduate Assistantship Agreement**, Culver Academies, Academic Support, \$100,128.

Caroline Mallory, Dean, College of Health and Human Services

Co-PI: Jackie Mathis, Director, West Central Indiana Area Health Education Center, **2021-2022 WCI-AHEC State Funding**, Indiana University, \$242,379.

Co-PI: Jackie Mathis, Director, West Central Indiana Area Health Education Center, **2021-2022 WCI-AHEC Federal Funding**, Indiana University, \$112,761.

Co-PI: Jackie Mathis, Director, West Central Indiana Area Health Education Center, **2022-2023 WCI-AHEC State Funding**, Indiana University, \$223,145.

Whitney Nesser, Associate Professor, Applied Health Sciences

Co-PI: Scott Buchanan, Professor, School of Music, **The Gift of Music: An Intergenerational Campus-Community Partnership**, Indiana Campus Compact, Public Service, \$2,400.

John Pommier, Professor & Department Chair of Applied Medicine and Rehabilitation

Co-PI: Doug Stevens, *Preparing Physician Assistants for Rural Practice: Sycamore Physician Assistant Rural Care Program (SPARC)*, Health Resources and Services Association, Research, \$296,247.

Matthew Rivera, Assistant Professor, Applied Medicine and Rehabilitation

Social Determinants of Health and Access to Athletic Training in the State of Indiana, Indiana Athletic Trainers' Association, Research, \$979.

COLLEGE OF TECHNOLOGY

Sheik Ferdous, Assistant Professor, Applied Engineering and Technology Management

Investigating Vibration Effects on Drill Casing Shapes for Mars Exploration, Purdue University/Indiana Space Grant Consortium, Research, \$22,836.

Maria Javaid, Assistant Professor, Electronics and Computer Engineering Technology

Engineering and Technology Summer Camp for High School Girl Students, Purdue University/Indiana Space Grant Consortium, Research, \$16,032.

James Smallwood, Professor & Dean, College of Technology

Professional Development for Career and Technical Teachers with Workplace Specialist I Certification, Ball State University, Public Service, \$12,000.

Michael Williamson, Associate Professor, Applied Engineering and Technology Management

Effectiveness of Contrast Markings on Roadways and Orange Markings in Work Zones, Purdue University/Joint Transportation Research Program, Research, \$172,715.

UNIVERSITY COLLEGE

Aaron Slocum, Director, Equity, Access, Retention, and Mentoring

Co-PI: Kara Harris; *Strengthening Institutions Program for Indiana State University: A S.M.A.R.T. Initiative for Student and New Faculty Mentoring*, U.S. Department of Education, Institutional Support, \$469,281.

UNIVERSITY ENGAGEMENT

Garrett Hurley, Director, Office of Sustainability

Indiana State University Fruit Tree Planting Foundation Application, Fruit Tree Planting Foundation, Public Service, \$5,200.

Cynthia Phillips-Sabla, Director, Community School of the Arts

Rock Camp! 2021, Indiana Arts Commission, Public Service, \$4,200.

Jessica Starr, Director, Center for Community Engagement

Osher Foundation Renewal Request, Osher Foundation, Public Service, \$25,000.

STUDENT AFFAIRS

Makenna Medley, Student Intern, Student Health Promotion

Period Poverty @ Indiana State University, Walmart Foundation, Public Service, \$1,000

Alicia Miller, Assistant Director, Student Health Promotion

COVID Ready Health and Safety Supplies, Indiana Collegiate Action Network, Public Service, \$5,047.

Sycamore Food Pantry, Sodexo Stop Hunger Foundation, Public Service, \$1,000.

BUSINESS AFFAIRS

Michele Barrett, Director of Public Safety & Chief of Police

Indiana State University 2022 Campus Activities, Vigo County Local Coordinating Council, Public Service, \$15,000.

Awards including funding to support undergraduate/graduate student researchers:

23

Total number of awards received in FY22:

51

Total number of proposals submitted in FY22:

62

Individual faculty/staff who submitted proposals in FY22:

39





**INDIANA STATE
UNIVERSITY**