



Board of Trustees

Research and Innovation,
Legal and Legislative Affairs
Committee

November 18, 2021

BOARD OF TRUSTEES OF NORTHERN ILLINOIS UNIVERSITY
Research and Innovation, Legal and Legislative Affairs Committee
10:00 a.m. – Thursday – November 18, 2021
Board of Trustees Room
315 Altgeld Hall

AGENDA

1. Call to Order and Roll Call
2. Verification of Quorum and Appropriate Notification of Public Meeting
3. Meeting Agenda Approval.....*Action*..... i
4. Chair's Comments/Announcements
5. Public Comment*
6. University Reports
 - a. *State Legislative Report*..... *Information*.....1
 - b. *Federal Legislative Report*..... *Information*.....3
 - c. *Sponsored Program Administration Quarterly Report* *Information*.....5
 - d. *Faculty Presentation*..... *Information*.....23
7. Other Matters
8. Next Meeting Date
9. Adjournment

*Individuals wishing to make an appearance before the Board should consult the [*Bylaws of the Board of Trustees of Northern Illinois University*](#), Article II, Section 4 – *Appearances before the Board*. Appearance request forms can be completed [online](#) in advance of the meeting or will be available in the Board Room the day of the meeting. For more information contact Crystal Doyle, ccoppel@niu.edu, Recording Secretary to the Board of Trustees, Altgeld Hall 300, DeKalb, IL 60115, 815-753-1273.

Anyone needing special accommodations to participate in the NIU Board of Trustees meetings should contact Crystal Doyle, ccoppel@niu.edu or (815) 753-1273, as soon as possible.

STATE LEGISLATIVE REPORT

August – October 2021

2021 Legislation Implementation Update

A non-comprehensive overview highlighting some of the recently enacted legislation impacting NIU.

Public Act 102-0570 Commission on Equitable Public University Funding

The purpose of the Commission is to, at a minimum, recommend specific data-driven criteria and approaches to the General Assembly to fund public universities adequately, equitably, and stably in this State and to evaluate the existing funding methods used for public universities. President Freeman will represent NIU on the commission along with faculty representative Simón Weffer, Associate Professor and Director of Undergraduate Studies in the Department of Sociology.

Public Act 102-0250 Feminine Hygiene

Menstrual hygiene products must be made available, at no cost to students, in the bathrooms of facilities or portions of facilities that are owned or leased by the university or over which the university has care, custody, and control and are used for student instruction or administrative purposes. The public universities' procurement officers are working with Illinois Public Higher Education Cooperative (IPHEC) for group purchasing to satisfy this law.

Public Act 102-0214 Higher Ed-Academic Major Report

Requires universities to provide each student, at the time the student declares or changes his or her academic major or program of study, a report that contains relevant, independent, and accurate data related to the student's major or program of study and to the current occupational outlook associated with that major or program of study. Universities may refer students to the Illinois Board of Higher Education (IBHE) College to Career website to satisfy this law.

2021 Legislative Veto Session

The House and Senate are convening as of the writing of this report. A verbal report on the Veto Session will be provided at the meeting.

State Relations Engagement

Strategic advocacy efforts have been underway to speed up the release of the funding for NICCS. In-person and virtual district meetings were held with every member of the NIU Caucus with the help of members of the NIU alumni advocacy network. The Caucus members, representing both parties and both chambers, drafted a letter of support to the Governor's Office requesting the release of the funding as soon as possible. The letter, signed by 20 members of the caucus, was sent to the Governor's Office on October 28. Also copied on the letter were Lieutenant Governor Stratton, Chief of Staff Caprara, Deputy Governors Manar and Mitchell, and First Assistant Deputy Governor Torres. Relentless advocacy will continue until the funding is released.

NIU hosted University of Illinois System President Tim Killeen and Interim Vice President for Economic Development and Innovation, Jay Walsh to discuss NICCS's progress and funding needs. NIU is represented on the Illinois Innovation Network (IIN) Policy Committee which is

developing strategies to advocate for the release of funding for all IIN Hubs and promoting the work taking place at the hubs.

FEDERAL LEGISLATIVE REPORT

This report covers the period of August through October 2021 and encompasses NIU equities across the federal government.

The Administration

On September 9, President Biden issued an Executive Order (EO) entitled [Ensuring Adequate COVID Safety Protocols for Federal Contractors](#). This EO and [implementation guidance](#) issued on September 24th appear to mandate that the employees of federal contractors be fully vaccinated for COVID-19 by December 8, 2021. NIU is working with our associations and colleagues across the state and country to analyze this guidance and consider next steps.

This quarter, the US Department of Education finalized and released to NIU a supplemental \$1.8M allocation in institutional COVID-19 relief funds from the third tranche of the Higher Education Emergency Relief Fund. This supplemental allocation was made available to all institutions that are eligible for the Strengthening Institutions Program at the US Department of Education, which includes NIU.

U.S. Congress

The primary focus of Congress this quarter was on negotiating the infrastructure bill and the reconciliation bill. I will report on the latest state-of-play during my remarks on November 18th.

As of this writing, congressional Democrats and the White House continue to negotiate a reconciliation bill that would form the cornerstone of President Biden's domestic policy agenda. Key aspects of the bill remain undecided including the overall spending level and programmatic priorities. Once these critical components of the bill are determined, it is estimated to take at least two weeks to draft the bill text and get it scored by the Congressional Budget Office.

As of this writing, the infrastructure bill has passed the Senate and is awaiting consideration in the House. While there is bipartisan support for the infrastructure bill, the politics of the moment are such that the House's consideration of the infrastructure bill needs to move in tandem with its consideration of the reconciliation bill.

Looming over all of Congress's work this Fall is the debt ceiling. Timed with the expiration of the current continuing resolution (see Appropriations), the federal debt limit will be reached on December 3rd. Congressional action will be needed by then to raise the debt ceiling and avoid a federal government debt default.

Appropriations

Congress continues its work on FY22 appropriations. The federal government is operating under a short-term continuing resolution that expires on December 3, 2021. The House and Senate have each made public all twelve of their FY22 appropriations bills. However, the bills were released without agreement from Senate Republicans – the support of ten of whom are required to pass the FY22 appropriations bills - and do not move Congress any closer to agreement on a FY22 budget. The Senate has not reached bipartisan agreement on overall defense and non-defense spending totals, continuing to delay the process of developing an annual budget. Failure to reach an agreement before the current continuing resolution expires on December 3rd could result in a one-year stopgap or another short-term spending measure.

All FY22 congressionally directed spending (Senate) and community project funding (House) – formerly known as earmarks – decisions have been announced by the Senate and House

Appropriations Committees. NIU has been allocated \$1.16M for two projects. In the Senate, NIU has been [allocated](#) \$500,000 from the Small Business Administration for a Workforce Development Initiative that will focus on food entrepreneurship, improving employment for underserved communities, and experiential learning opportunities, sponsored by Senator Durbin. As reported last quarter, in the House, NIU has been [allocated](#) \$660,000 from the National Oceanic and Atmospheric Administration (NOAA) for Understanding and Mitigating Future Weather and Climate Risks to Agriculture, sponsored by Congressman Adam Kinzinger. *All congressionally directed spending projects are contingent upon the relevant appropriations bills being passed by Congress and signed into law by President Biden.*

Federal Engagement with NIU

Recent and upcoming federal engagements with NIU include:

- August 31 – RFI Response to NASA. Vice President Blazey submitted comments in response to NASA’s RFI: *Advancing Racial Equity and Support for Underserved Communities in NASA Programs, Contracts and Grants Process*. The RFI is available [here](#).
- September 2 to 21 – NIU Alumni Advocacy for Double Pell Grant. In the largest alumni advocacy email campaign to date, 178 alumni sent 537 letters to 49 legislators in support of doubling the federal Pell Grant maximum award to \$13,000 annually.
- October 18 – Rep. Sean Casten speaks at NIU. Representative Sean Casten was a panelist for the CLAS Rebuilding Democracy Lecture Series event focused on climate change.
- October 20 – Public Comment Response to NSF. Vice President Blazey submitted comments in response to NSF’s request for public comments: *Committee on the Future of NSF EPSCoR*. The RFI is available [here](#).
- October 20 – Nomination of Professor Shonda Clay to NASEM Study. Vice President Blazey and Vice President Edghill-Walden nominated Professor Shondra Clay to serve on the National Academies of Science, Engineering, and Medicine’s study committee *Advancing Anti-Racism, Diversity, Equity, and Inclusion in STEM Organizations: A Consensus Study*.
- October 25 – Nomination of Professor David Gunkel to NAIAC. NIU nominated Professor David Gunkel for the newly created National Artificial Intelligence Advisory Committee (NAIAC). His nomination was supported by Senator Dick Durbin and Representative Robin Kelly.
- October 26 – SGA Advocates for Double Pell. Student Government Association leaders sent a letter to the Illinois congressional delegation in support of doubling the maximum federal Pell Grant award to \$13,000 annually.

SPONSORED PROGRAM ADMINISTRATION QUARTERLY REPORT

For the first quarter of Fiscal Year (FY) 2022, NIU received 72 sponsored awards totaling \$8.1M (Figure 1) (\$4.4M in research, \$514K in instruction, and \$3.1M in other sponsored activities (OSA)). Overall funding and the number of awards authorizing the funds are up compared to the same period last year. Overall funding is up by 75% with research funding up 80%, instruction by 5%, and OSA by 90%. The number of awards processed is up 95%.

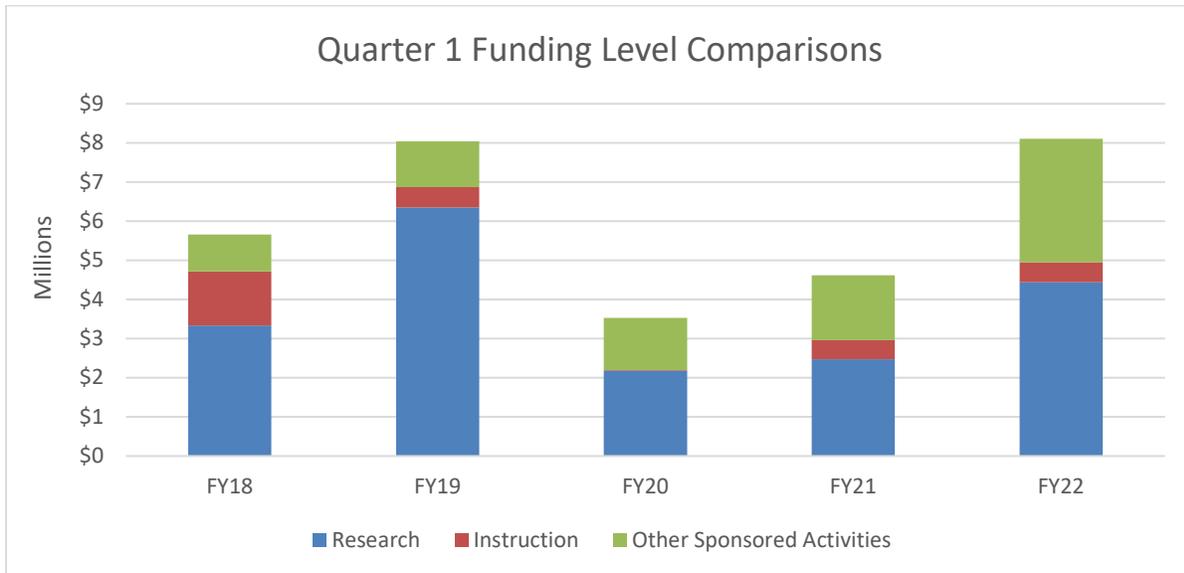


Figure 1

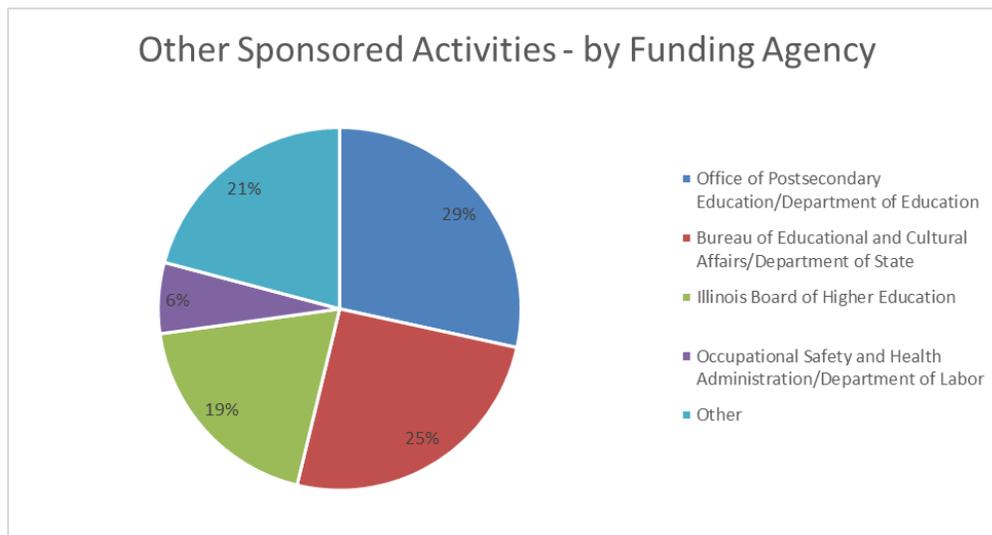


Figure 2

Note: Other category includes agencies contributing 1%-4% to the total.

Funding from three agencies comprises 73% of the first quarter's funding for Other Sponsored Activities. These agencies are the Office of Postsecondary Education/Department of Education (\$896K-29%), Bureau of Educational and Cultural

Affairs/Department of State (\$800K-25%), and Illinois Board of Higher Education (\$599K-19%) (Figure 2). The Office of Postsecondary Education/Department of Education included two awards to support the Center for Southeast Asian Studies and provide services to low-income, first-generation, and/or disabled students to foster flexible and affordable paths to obtaining

knowledge and skills in college. The Bureau of Educational and Cultural Affairs/Department of State provided funds to support an exchange program bringing teenagers and adult educators from the Philippines to the U.S. to learn about civic engagement and governance. Funding from the Illinois Board of Higher Education included additional COVID-19 funds from the Governor’s Emergency Relief Funding (GEER) program. GEER funds continue to support efforts to recruit and retain low-income, underrepresented, and first-generation students and close digital equity gaps resulting from the pandemic.

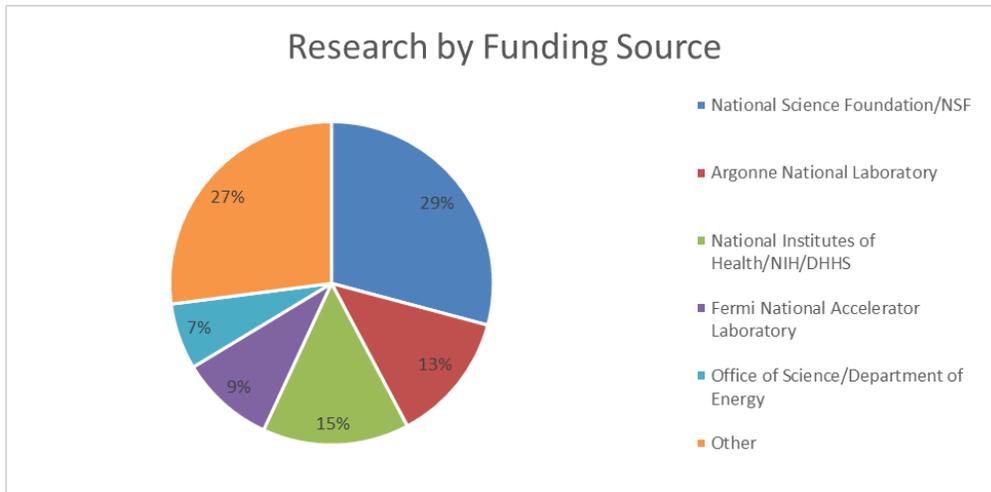


Figure 3
Note: Other category includes agencies contributing 1%-6% to the total.

The National Science Foundation (NSF) was a significant source of research funding this quarter, with NIU receiving six awards from the Foundation (Figure 3). The three highest NSF awards were secured by faculty in the Chemistry and

Biochemistry Department (\$612K) and the Geology and Environmental Geosciences Department (\$343K).

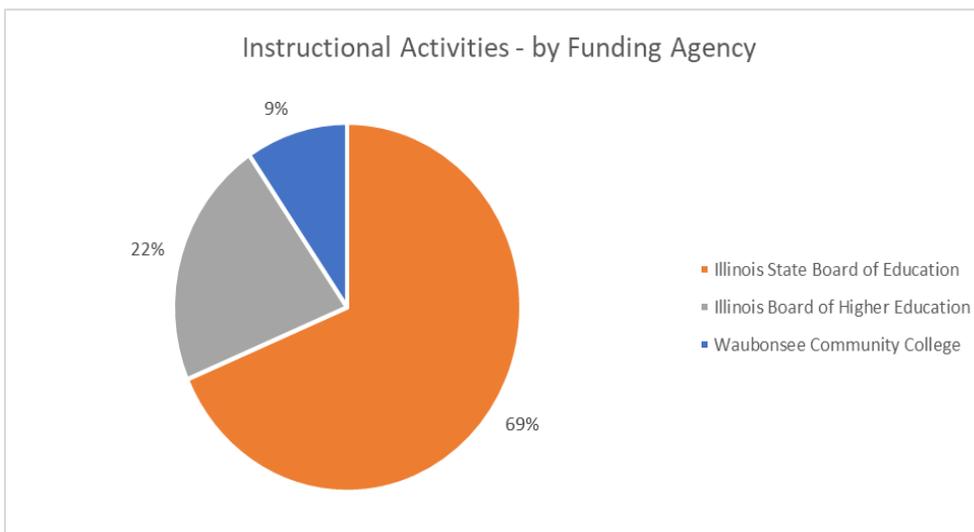


Figure 4

Three awards were received to support instructional activities, adding \$514K to NIU’s portfolio this quarter. The College of Health and Human Sciences – School of Family & Consumer Sciences were awarded \$353K from the Illinois

State Board of Education (Figure 4). The Graduate School received \$112K from the Illinois Board of Higher Education for NIU’s annual allotment of the Diversifying Higher Education Faculty in Illinois (DFI) program.

Funding across colleges and other university units reflects an increase of awards secured for the different types of funding categories (Table 1). The Division of Outreach, Engagement, and Regional Development increased the amount awarded compared to the first quarter of FY21 by 272% due to awards from the Office of Postsecondary Education/Department of Education for Upward Bound (\$821K). The College of Health and Human Sciences increased the amount awarded by 52% compared to the previous year due to awards from the Illinois State Board of Education (\$353K) for pre-school programming and National Institutes of Health (\$224K) for research. The College of Liberal Arts and Sciences increased by 69% with awards from the National Science Foundation/NSF (\$1.2M), Bureau of Educational and Cultural Affairs/Department of State (\$799K), and the National Institutes of Health (\$426K).

Table 1

College/Division	Instruction	Research	Other	Total – QTR. 1 FY 22	Total – QTR. 1 FY 21	% Change
Business	\$ -	\$ -	\$ -	\$ -	\$ -	---
Education	\$ -	\$ 93,372	\$ -	\$ 93,372	\$ 70,516	32%
Engineering and Engineering Tech.	\$ -	\$ 167,940	\$ -	\$167,940	\$571,575	-71%
Health and Human Sciences	\$ 352,949	\$ 224,151	\$ 22,999	\$600,100	\$394,669	52%
Law	\$ -	\$ -	\$ -	\$ -	\$ -	0%
Liberal Arts and Sciences	\$ -	\$3,844,174	\$1,129,845	\$4,974,019	\$2,945,161	69%
Visual and Performing Arts	\$ -	\$ 20,456	\$ -	\$ 20,456	\$ -	---
Outreach, Engagement, and Regional Develop.	\$ -	\$ -	\$1,287,388	\$1,287,388	\$ 345,950	272%
Other Academic Units	\$161,481	\$ 89,013	\$ 109,419	\$ 359,913	\$ 293,165	23%
Other University Units	\$ -	\$ -	\$ 604,860	\$ 604,860	\$ -	---
Total	\$ 514,430	\$4,439,106	\$3,154,511	\$8,108,047	\$4,621,036	75%

A full listing of all sponsored awards received for the first quarter follows.

ADMINISTRATION & FINANCE

Illinois Board of Higher Education for "Governor's Emergency Relief Funding (GEER)." Sarah Chinniah.

Award: \$549,893.00. Cumulative \$3,495,749.00.

October 1, 2021 - September 30, 2022. (Other Sponsored Activities) Student Service.

The proposal is to support efforts to enroll and retain low income, underrepresented, and first generation, students, that might otherwise not enroll or return due to the pandemic, including by closing digital equity gaps.

ANTHROPOLOGY

National Endowment for the Humanities/National Foundation on the Arts and Humanities for "Archeology Collection Assessment." Christy A DeLair.

Award: \$9,654.00.

September 1, 2021 - March 31, 2022. (Other Sponsored Activities) Other.

This project will provide an assessment of the archaeology collections of the Pick Museum and the Anthropology Department to better support preservation, organization, and ethical collections management.

National Park Service/Department of the Interior for "NAGPRA: Reassessing Collections at the Pick Museum of Anthropology." Christy A DeLair.

Award: \$90,000.00.

September 1, 2021 - August 31, 2023. (Other Sponsored Activities) Other.

This project will reassess NAGPRA related collections held by the Pick Museum of Anthropology and reopen consultations with Native American tribes to determine appropriate disposition and care for collections.

BIOLOGICAL SCIENCES

University of Illinois at Urbana Champaign for "Illinois waterfowl survey and investigations." Jennifer A Koop.

Award: \$38,290.00.

July 1, 2021 - June 30, 2022. (Organized Research) Applied Research.

The project aims to use accelerometers to detect signatures of nesting behaviors in Lesser Scaup. If successful, this tool will be used to study sub lethal effects of trematodes on Lesser Scaup breeding ecology.

CAREER SERVICES

Illinois Board of Higher Education for "Northern Illinois University FY2022 Cooperative Work Study." Catherine W Doederlein.

Award: \$50,000.00.

July 1, 2021 - August 31, 2022. (Other Sponsored Activities) Other.

The purpose of the project is to provide valuable career related work experiences to students that are applicable to their fields of study.

CENTER FOR BURMA STUDIES

Institute of Museum & Library Services for "Weaving the Past, Preserving the Future: Digitizing the Burma Art Collection." Catherine M Raymond/Carmin Berchiolly.

Award: \$49,419.00.

September 1, 2021 - August 31, 2023. (Other Sponsored Activities) Public Service.

A project to photograph the textiles from the Burma Art Collection and to make such objects available online to increase accessibility.

National Endowment for the Humanities/National Foundation on the Arts and Humanities for "Textile Rehousing Project of the Burma Art Collection." Catherine M Raymond.

Award: \$10,000.00.

September 1, 2021 - February 28, 2023. (Other Sponsored Activities) Other.

This grant would support improved collection care and practices and the rehousing of the textiles in the Burma Art Collection by providing funds for supply purchases and four visits from a textile preservation expert to provide guidance for the project.

CENTER FOR SOUTHEAST ASIAN STUDIES

Bureau of Educational and Cultural Affairs/Department of State for "Southeast Asia Youth Leadership Program." Eric A Jones.

Award: \$549,984.00. Cumulative \$1,593,047.00.

February 4, 2022 - March 30, 2023. (Other Sponsored Activities) Public Service.

This project will fund 60 students from ASEAN nations visiting the US and learning about civic engagement and good governance.

Bureau of Educational and Cultural Affairs/Department of State for "PYLP 2021: Engaging Young Advocates in Environmental Preservation and Peacebuilding." Rhodalyne Q Gallo Crail/Eric A Jones.

Award: \$250,000.00.

September 17, 2021 - December 31, 2024. (Other Sponsored Activities) Public Service.

Exchange program bringing teenagers and adult educators from the Philippines to the U.S. for exposure to/training in civic education, leadership, diversity, and community engagement, and preparation to conduct projects at home that serve a community need.

CHEMISTRY AND BIOCHEMISTRY

National Science Foundation/NSF for "MRI: Acquisition of a 400 MHz NMR Spectrometer for Research and Education." Evgueni E Nesterov.

Award: \$341,653.00.

July 1, 2021 - June 30, 2022. (Organized Research) Applied Research.

This proposal requests funding for the acquisition of a new high field NMR spectrometer at the Department of Chemistry and Biochemistry, to replace an aging and outdated 500 MHz NMR spectrometer currently operating at the department.

National Science Foundation/NSF for "Collaborative Research: Characterization of Transport Property and Microstructure of Battery Electrolyte via In Situ Spectroscopy." Tao Li.

Award: \$270,538.38.

September 15, 2021 - August 31, 2024. (Organized Research) Applied Research.

To develop in situ spectroscopic methods to characterize the transport property and the microscopic structure of battery electrolytes and investigate the correlation between the microstructure and mass transport in operating batteries.

Argonne National Laboratory for "Li Joint Appointment NIU ANL." Tao Li.

Award: \$75,027.68. Cumulative \$175,084.64.

August 16, 2021 - May 15, 2022. (Organized Research) IPA or Joint Appointment.

Funds are being used to support a joint appointment between NIU and Argonne National Laboratory for Dr. Tao Li.

Argonne National Laboratory for "Development of Energy Efficient Oxide Materials GRA Support." Tao Xu.

Award: \$15,857.00.

August 16, 2021 - August 15, 2022. (Organized Research) Applied Research.

The purpose of this funding is to support a GRA to develop a scaled continuous flow hydrothermal synthesis reactor technology that can synthesize thermochromic M phase VO₂ nanoparticles with size < 50 nm and yield at the level of kg/day.

University of Iowa for "Discovery and Development of Antifungal Acetyl CoA Synthetase Inhibitors." Timothy J Hagen.

Award: \$249,255.11.

April 1, 2021 - March 31, 2022. (Organized Research) Applied Research.

Our goal is to identify a lead ACS inhibitor scaffold along with a backup series for further pre-clinical development as broad spectrum antifungal drug candidates.

American Chemical Society for "Exploring Methane Activation and Conversion on Modified Chevrel phase Chalcogenides." Yingwen Cheng.

Award: \$63,241.00.

August 1, 2021 - July 31, 2022. (Organized Research) Basic Research.

We propose a fundamental study on a verifying the Chevrel phase chalcogenides as a new class of catalyst materials.

Argonne National Laboratory for "Fundamental Understanding on the Interaction Between Pt Alloy Electrocatalysts and Porous Carbon." Yingwen Cheng.

Award: \$15,997.00.

June 14, 2021 - October 31, 2021. (Organized Research) Applied Research.

The project is intended to understand at the molecular level the nucleation, growth and deposition of electrocatalyst under microfluidic environment, and the electrochemical activities of these electrocatalysts.

CHILD DEVELOPMENT & FAMILY CENTER

Illinois Network of Child Care Resource & Referral Agencies for "Statewide Prior Learning Assessment." Kristin E Schulz.

Award: \$4,000.00.

July 14, 2021 - December 30, 2021. (Other Sponsored Activities) Public Service.

Staff will participate in building a statewide Prior Learning Assessment system that utilizes cutting edge technology allowing the early childhood workforce to demonstrate competency achievement.

COLLEGE OF ENGINEERING AND ENGINEERING TECHNOLOGY

Fermi National Accelerator Laboratory for "PIP II Warm Front-End Power Cabinets and Ion Source GRA Support." Donald R Peterson.

Award: \$20,000.00.

July 15, 2021 - July 14, 2022. (Organized Research) Applied Research.

Funding is requested for GRA support to provide documentation, engineering and designed in the support of the Final Design of the ion source assembly with an emphasis on the design and fabrication of power cabinets for the ion source operation.

COLLEGE OF ENGINEERING AND ENGINEERING TECHNOLOGY

California Institute of Technology for "Jet Propulsion Laboratory subcontract." Donald R Peterson/Mansour Taherzadi.

Award: \$10,000.00. Cumulative \$30,000.01.

June 1, 2020 - May 31, 2021. (Organized Research) Applied Research.

Assist with the development of a rugged ultra-sensitive chemical sensor that provides for human safety, and with the development of wireless communicating network capability for an array of miniature CO₂ sensors.

COMPUTER SCIENCE

National Science Foundation/NSF for "Collaborative Research: PPoSS: Planning: SEEr: A Scalable, Energy Efficient HPC Environment for AI Enabled Science." Michael E Papka.

Award: \$39,999.00.

October 1, 2021 - September 30, 2022. (Organized Research) Applied Research.

This project will explore the foundational principles necessary to address the challenges involved in building a cross layer HPC environment for AI enabled simulations and expand our current team with complementary expertise to address these challenges.

Argonne National Laboratory for "High Performance Computing Research." Michael E Papka/Joe Insley.

Award: \$134,381.84. Cumulative \$475,399.08.

August 16, 2021 - August 15, 2022. (Organized Research) Applied Research.

The funds support research and development in high performance computing, including visualization and analysis of abstract datasets based on ALCF operational logs, quantum computing algorithms, and dashboard development for monitoring of systems.

Northwestern University for "Education and Outreach for SAGE." Michael E Papka/Joe Insley.

Award: \$22,174.18. Cumulative \$102,174.00.

October 1, 2020 - September 30, 2021. (Organized Research) Applied Research.

Funds are requested to design and build citizen science components for SAGE, reusable software components and cyberinfrastructure services to enable deployment of intelligent environmental sensors, including tutorials and documentation on components use.

CONTINUING PROFESSIONAL EDUCATION

Occupational Safety and Health Administration/Department of Labor for "Susan Harwood Training Grant Program Workplace Safety and Health Training on Infectious Diseases, Including COVID 19." Pettee Guerrero.

Award: \$199,550.00.

September 30, 2021 - March 31, 2023. (Other Sponsored Activities) Public Service.

Develop and deliver training to identify and prevent occupationally related infectious diseases, including COVID. Training will target small businesses at high risk from infectious diseases and workers with limited access to OSHA training.

EDUCATION SYSTEMS CENTER

Illinois Community College Board for "Innovative CTE Programming Grant." Jon Furr.

Award: \$100,000.00.

July 1, 2021 - June 30, 2022. (Other Sponsored Activities) Public Service.

To support ICCB and the Illinois community college system in the development and implementation of innovative CTE programming, including the improvement and innovation of professional development, technical assistance, and research on equity.

EDUCATIONAL TECHNOLOGY, RESEARCH AND ASSESSMENT

Office of Postsecondary Education/Department of Education for "Research on Social Justice, Education Equity, and Diversity Through the Lens of Taiwan's National Civic Literacy and Efficacy Initiative – Project SEED." Wei Chen Hung/Terry E Borg.

Award: \$93,372.00.

July 1, 2021 - July 1, 2023. (Organized Research) Applied Research.

The purpose of Project SEED is to conduct a series of collaborative research on civic literacy and efficacy as mediated by issues relevant to social justice, education equity, and diversity.

FAMILY AND CONSUMER SCIENCES

Illinois Network of Child Care Resource & Referral Agencies for "INCCRRA Module Development." Susan P Bowers.

Award: \$9,999.40.

July 1, 2021 - December 30, 2021. (Other Sponsored Activities) Public Service.

Faculty from Northern Illinois University will create scope and sequence charts for the Gateways to Opportunity Infant Toddler modules in collaboration with the teams who will be developing the modules.

Illinois State Board of Education for "NIU Preschool for All Expansion." Thomas W Pavkov.

Award: \$352,949.28. Cumulative \$1,058,049.00.

July 1, 2021 - June 30, 2022. (Instructional Programs) Instructional Programs.

This project will enhance cohesive and comprehensive early learning opportunities for preschoolers in the DeKalb community.

Illinois Network of Child Care Resource & Referral Agencies for "Gateways ECE 5 to PEL Bridge Taskforce." Walter, Melissa Cluca/Laura R Hedin.

Award: \$9,000.00.

July 16, 2021 - December 30, 2021. (Other Sponsored Activities) Public Service.

The PIs will participate in building a statewide pathway for the Gateways to Opportunity ECE Credential Level 5 to a Professional Educator License.

GEOGRAPHIC AND ATMOSPHERIC SCIENCES

National Oceanic & Atmospheric Administration/Department of Commerce for "Faster, Clearer, Stronger Communication and Action: Building IWT and Vulnerable Resident Connections to Improve Severe Weather Literacy and Outcomes." Alex M Haberlie.

Award: \$166,851.07.

September 1, 2021 - August 31, 2022. (Organized Research) Applied Research.

The goal of this project is to reduce tornado impacts on vulnerable Southeast residents, enhance tornado survivability, and develop solutions that bridge the gap between researchers, decision makers, integrated warning team members, and the public.

National Aeronautics & Space Administration/NASA for "Testing Early Mars Climate From Global Spatial Distribution of Valley Network Geomorphology." Wei Luo.

Award: \$108,978.00.

July 1, 2021 - June 30, 2022. (Organized Research) Basic Research.

The goal of this project is to test which climate scenario on early Mars is most consistent with the spatial distribution of valley network geomorphology (e.g., Hack's law exponent, basin hypsometry, circularity, and valley depth) on a global scale.

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

Columbia University for "Participation of MARIA ELENI CHRISTOPOULOU on IODP Expedition 396." Justin P Dodd/Maria Eleni Christopoulou.

Award: \$7,809.48.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

The IODP expedition 396 will drill the seafloor off Norway to decipher the volcanic activity and climate change. I will study the geochemistry of the sedimentary record to interpret past environmental conditions.

Columbia University for "Participation of Justin Dodd on Expedition 395." Justin P Dodd.

Award: \$23,687.00.

June 1, 2021 - May 31, 2022. (Organized Research) Applied Research.

To test hypotheses about the geochemical evolution of fluid rock interactions in basalt and overlying marine sediments, and the timing of plume influenced changes in North Atlantic Deep Water formation/circulation and global biogeochemical cycling.

National Science Foundation/NSF for "Collaborative Research: Sensitivity of the West Antarctic Ice Sheet to 2 Degree Celsius (SWAIS 2°C)." Justin P Dodd.

Award: \$343,260.00.

September 15, 2021 - August 31, 2025. (Organized Research) Applied Research.

This proposal outlines the US contributions towards the international partnership between seven nations to recover geological archives beneath the Ross Ice Shelf, Antarctica.

Columbia University for "Participation of Reed P. Scherer on IODP Expedition 396." Reed P Scherer.

Award: \$52,699.50.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

The IODP research vessel will drill the seafloor off Norway to decipher the history of volcanic activity and its role in major climate change events. I will study siliceous microfossils to interpret sediment ages and past environmental change.

GRADUATE SCHOOL

Illinois Board of Higher Education for "Diversifying Higher Education Faculty in Illinois (DFI) FY2022." Purushothaman Damodaran.

Award: \$112,500.00.

July 1, 2021 - June 30, 2022. (Instructional Programs) Instructional Programs.

NIU will administer grants awarded by the DFI Program Board to fellows at NIU under the DFI program.

ePost Global Shipping for "Improving Warehouse Operations for ePost Global Shipping." Purushothaman Damodaran/Christine V Nguyen.

Award: \$43,012.92.

September 15, 2021 - March 15, 2022. (Organized Research) Applied Research.

The project aims to improve the operations carried out at the warehouse to improve throughput and material movement.

National Science Foundation/NSF for "NSF GRFP Del Valle." Purushothaman Damodaran/Antonio B Del Valle/Holly Jones.

Award: \$46,000.00. Cumulative \$92,000.00.

July 1, 2021 - June 30, 2023. (Organized Research) Basic Research.

To determine the impacts that reintroduced bison have on grassland breeding birds at varying spatial scales throughout the three preserves that support wild bison in eastern tallgrass prairies.

Waubonsee Community College for "Graduate Student Placements at Waubonsee Community College." Purushothaman Damodaran.

Award: \$48,981.00.

August 1, 2021 - July 31, 2022. (Instructional Programs) Instructional Programs.

This project provides three Graduate Assistants to Waubonsee Community College to work under the Dean of Students in the areas of Student Affairs (two students), and the under the Athletics Manager to work with the Athletics Trainer (1 student).

MECHANICAL ENGINEERING

Fermi National Accelerator Laboratory for "Dark Matter Searches Employing Quantum Metrology." Iman Salehinia.

Award: \$9,928.17. Cumulative \$67,932.17.

August 16, 2021 - December 31, 2021. (Organized Research) Applied Research.

Professor Iman Salehinia will mentor a graduate student in the design and analysis of components for dark matter searches employing quantum metrology.

Argonne National Laboratory for "Modeling Support to Advance the Performance of Next Generation Batteries at Argonne." Kyu Taek Cho.

Award: \$14,794.92. Cumulative \$48,116.00.

September 16, 2021 - March 15, 2022. (Organized Research) Applied Research.

Funds are requested to provide the computational modeling/simulation support to improve performance of the batteries under development in Dr. Srinivasan's group at Argonne.

University of Illinois at Urbana Champaign for "Pretreatment of Densified Biomass within Scaled Shipping Containers." Nicholas A Pohlman.

Award: \$24,340.00.

July 1, 2021 - June 30, 2022. (Organized Research) Applied Research.

The capability of densifying and incorporating pretreatment chemicals on biomass will be tested in scaled versions of intermodal shipping containers that will be monitored during chemical conversion processes.

Fermi National Accelerator Laboratory for "PIP II Warm Unit Preliminary Design." Nicholas A Pohlman.

Award: \$70,000.00. Cumulative \$129,990.68.

August 16, 2021 - September 1, 2022. (Organized Research) Applied Research.

Funds are requested to advance the design of the PIP II focusing magnets at Fermilab.

Purdue University for "Human Assisted Robotic Sampling of Aquatic Invasive Species." Sachit Butail.

Award: \$11,878.00.

June 1, 2021 - May 31, 2022. (Organized Research) Applied Research.

The goal is to design and test of robotic sampling device for monitoring aquatic invasive species

Purdue University for "Behavior Based Classification of Aquatic Invasive Fish Species in Underwater Video." Tariq Shamim/Arunim Bhattacharya/Sachit Butail.

Award: \$6,999.00.

June 1, 2021 - May 31, 2022. (Organized Research) Applied Research.

The goal is to identify round goby from underwater video footage by encoding its movement pattern.

NORTHERN PUBLIC RADIO

Illinois State Library for "Northern Illinois Radio Information Service (NIRIS) FY22." Staci Hoste.

Award: \$28,273.30. Cumulative \$28,273.00.

July 1, 2021 - June 30, 2022. (Other Sponsored Activities) Public Service.

Funds are used to provide informational services for persons who cannot read conventional print due to visual or physical disability, and because individual libraries cannot provide such services.

P 20 CENTER

Illinois State Board of Education for "FY 22 Migrant Education Regular Year." Susana A Das Neves.

Award: \$59,119.00.

August 1, 2021 - June 30, 2022. (Other Sponsored Activities) Public Service.

Rochelle Migrant Education Program provides recruiting, tutoring, advocacy and other support services and supplies to migrant eligible children who remain within the local territory after the summer school program.

PHYSICS

Office of Science/Department of Energy for "High Performance Electron Sources: Numerical Methods and Beam Dynamics at the Precision Frontier." Bela Erdelyi.

Award: \$75,000.00. Cumulative \$220,000.00.

September 25, 2021 - September 24, 2022. (Organized Research) Basic Research.

Funds are requested to develop an efficient and accurate numerical method to fix the boundary layer instability and devise an indirect method for very low emittance and temperature measurements based on caustics of multi beamlet expansion.

Fermi National Accelerator Laboratory for "Electrical Integration Oversight for the Mu2e Project." David R Hedin/Nicholas A Pohlman/Vishnu V Zutshi.

Award: \$112,852.00.

May 18, 2021- December 31, 2022. (Organized Research) Applied Research.

The purpose of this funding is to support the Mu2e project which is responsible for the design, construction, and integration of electronics systems for the various detectors deployed for Mu2e.

Fermi National Accelerator Laboratory for "Development of the MU2E Preliminary Design." David R Hedin/Nicholas A Pohlman/Vishnu V Zutshi.

Award: \$122,075.00. Cumulative \$385,975.00.

January 1, 2022 - December 31, 2022. (Organized Research) Applied Research.

The purpose of this project is to support NIU's role in developing the Muon Beamstop, SiPM Characterization, and design of the Upstream Extinction Monitor.

National Science Foundation/NSF for "Searches for New Phenomena in the Higgs Sector at the LHC." Jahred A Adelman/Dhiman Chakraborty.

Award: \$250,000.38.

August 15, 2021 - August 14, 2022. (Organized Research) Applied Research.

Funds are requested to search for physics beyond the Standard Model using the ATLAS detector at the Large Hadron Collider.

Illinois Institute of Technology for "Chicagoland Accelerator Science Traineeship." Michael J Syphers/Philippe Piot.

Award: \$235,000.00. Cumulative \$605,000.00.
September 25, 2021 - September 24, 2022. (Organized Research) Basic Research.

Funds are requested to establish the proposed "Chicagoland Accelerator Science Traineeship".

Fermi National Accelerator Laboratory for "Resonant Extraction at Fermilab Muon Campus (support for PhD Program Aakaash Narayanan)." Michael J Syphers.

Award: \$52,642.00. Cumulative \$104,000.00.
September 1, 2021 - August 31, 2022. (Organized Research) Applied Research.

The purpose of this proposal is to further the development of the third integer, slow resonant extraction system to be used to provide such beams and verification of its performance by Fermilab PhD Accelerator Program student Aakaash Narayanan.

Argonne National Laboratory for "Synthesis, Single Crystal Growth and Diffraction Studies of Multiferroic and Functional Oxides." Omar H Chmaissem.

Award: \$39,705.32. Cumulative \$151,146.52.
September 1, 2021 - August 31, 2022. (Organized Research) Applied Research.

This proposal aims to develop the know-how and the precise control of design variables for new multiferroic materials and related functional oxides.

Office of Science/Department of Energy for "Enabling High Gradients Efficient Wakefield Accelerators with High Quality Shaped Electron Bunches." Philippe Piot/Xueying Lu.

Award: \$110,000.00.
June 1, 2021 - May 31, 2022. (Organized Research) Applied Research.

The proposal will develop methods to demonstrate efficient electron beam acceleration in high gradient wakefield accelerators. The research will include theoretical, numerical, and experimental investigations.

Argonne National Laboratory for "Development of a Damping Ring Free Electron Injector for Future Linear Colliders." Philippe Piot.

Award: \$8,525.00. Cumulative \$20,525.00.
September 1, 2020 - August 31, 2021. (Organized Research) Basic Research.

The purpose of the project is to finalize the conceptual design of a GeV class electron injector capable of attaining electron bunch with the required properties without having to rely on the currently envisioned 6 lm long damping ring parameters.

Fermi National Accelerator Laboratory for "Development of Innovative, High Energy, Magnetized Electron Cooling for an EIC." Philippe Piot.

Award: \$29,999.00. Cumulative \$85,998.00.

January 1, 2021 - July 31, 2021. (Organized Research) Basic Research.

Funds are requested to develop innovative, high energy, magnetized electron cooling system for an EIC.

Argonne National Laboratory for "Piot Joint Appointment NIU ANL." Philippe Piot.

Award: \$85,032.99. Cumulative \$165,726.67.

August 16, 2021 - May 15, 2022. (Organized Research) IPA or Joint Appointment.

Funds are being used to support a joint appointment between NIU and Argonne National Laboratory for Dr. Phillippe Piot.

Argonne National Laboratory for "Lu Joint Appointment NIU ANL." Xueying Lu.

Award: \$59,119.54. Cumulative \$134,313.19.

August 16, 2021 - May 15, 2022. (Organized Research) IPA or Joint Appointment.

Funds are being used to support a joint appointment between NIU and Argonne National Laboratory for Dr. Xueying Lu.

Office of Science/Department of Energy for "Innovative High Frequency Structures for High Gradient Wakefield Acceleration." Xueying Lu.

Award: \$107,999.78. Cumulative \$108,000.00.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

This program will explore a set of new research directions to demonstrate the full potential of structure based wakefield acceleration at high frequencies with high gradients.

Argonne National Laboratory for "Xiao Joint Appointment NIU ANL." Zhili Xiao.

Award: \$130,354.08. Cumulative \$297,649.16.

August 16, 2021 - May 15, 2022. (Organized Research) IPA or Joint Appointment.

Funds are being used to support a joint appointment between NIU and Argonne National Laboratory for Dr. Zhili Xiao.

PRECOLLEGIATE UPWARD BOUND

Office of Postsecondary Education/Department of Education for "Student Support Services Program Regular." Felicia R Bohanon.

Award: \$261,888.00. Cumulative \$523,776.00.

September 1, 2021 - August 31, 2022. (Other Sponsored Activities) Student Service.

This primary purpose of this award is to provide services to low income, first generation and/or disabled students to foster flexible and affordable paths to obtaining knowledge and skills in college.

***Office of Postsecondary Education/Department of Education for "Upward Bound Program."
Felicia R Bohanon.***

Award: \$558,557.96. Cumulative \$2,803,881.00.

June 1, 2021 - May 31, 2022. (Other Sponsored Activities) Public Service.

Funds will be used to identify, select and serve 120 low income, potential first generation college students who lack the adequate preparation to successfully pursue a postsecondary education and need academic support.

PRESIDENTS OFFICE

DeKalb County Health Department for "NIU COVID-19 Hotline with DeKalb County Health Department." Matthew J Streb.

Award: \$54,966.74. Cumulative \$187,000.00.

June 1, 2021 - December 31, 2021. (Other Sponsored Activities) Public Service.

NIU will manage COVID-19 hotline including providing recommendations for testing, isolation, quarantine and return to campus.

PSYCHOLOGY

National Institutes of Health/NIH/DHHS for "A Randomized Controlled Trial Examining the Impact of a Brief Attention Based Neurobehavioral Transdiagnostic Intervention on Acute Fear Response." Holly K Orcutt.

Award: \$426,237.00.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

This project is a randomized controlled trial examining the impact of a brief attention based neurobehavioral transdiagnostic intervention on acute fear response.

Winnebago County for "Research and Evaluation of the Winnebago County Adult Drug Court Program." Julie L Crouch.

Award: \$70,042.06. Cumulative \$273,522.31.

September 30, 2021 - September 29, 2022. (Other Sponsored Activities) Public Service.

NIU will serve as the primary research partner/local evaluator for the Winnebago County Adult Drug Court Enhancement Project.

Illinois Criminal Justice Information Authority for "Saving Blue Lives Through Training on Mental Health, Suicide, Resilience, and Peer Support FY22." Michelle M Lilly.

Award: \$83,999.00.

July 1, 2021 - April 30, 2022. (Other Sponsored Activities) Public Service.

The Saving Blue Lives Training offers a unique opportunity for law enforcement to learn about risk for PTSD and suicide, as well as how to increase resilience and offer peer support, from a team comprised of a clinical psychologist and a sworn officer.

PUBLIC ADMINISTRATION

Office of Postsecondary Education/Department of Education for "FULBRIGHT HAYS GROUP PROJECTS ABROAD Program." Kurt M Thurmaier.

Award: \$76,166.00.

July 1, 2021 - June 30, 2022. (Other Sponsored Activities) Public Service.

This project will take a group of students to explore language and culture in Tanzania and Kenya

Illinois Innovation Network for "Sustaining Illinois through Collaborative Governance: A Pilot Study of Water Systems Governance in Northeast and North Central Illinois." Thomas S Skuzinski/Kate Albrecht.

Award: \$29,932.43.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

A pilot study of cross boundary collaborative sustainability in the governance of water systems in thirteen Chicagoland metropolitan counties. Key deliverables include a Sustainable Governance GIS and a Governance Guidebook with in-depth case studies.

REPORT CARDS

Illinois State Board of Education for "ISBE CEDS Project." Alan D Clemens.

Award: \$79,999.92.

September 1, 2021 - June 30, 2022. (Other Sponsored Activities) Public Service.

This project involves development of a CEDS Production Data Warehouse.

SCHOOL OF INTERDISCIPLINARY HEALTH PROFESSIONS

National Institute of General Medical Sciences/NIH/DHHS for "The FoodMASTER Initiative: Supporting the STEM Learning Pipeline for Underserved, Minority Youth Through Informal Science Learning Environments." Melani W Duffrin.

Award: \$224,151.00. Cumulative \$929,233.00.

August 1, 2021 - July 31, 2022. (Organized Research) Applied Research.

This project investigates the impact of the FoodMASTER (Food, Math, and Science Teaching Enhancement Resource) Initiative on attitudes towards science among underserved minority youth in southern states to impact the health professions STEM pipeline.

SCHOOL OF ART AND DESIGN

National Art Education Foundation for "The State of Inclusion: An Investigation of Inclusive Pedagogical and Curricular Art Practices in K-12 Art Rooms for Students with Disabilities." Kelly M Gross.

Award: \$10,456.00.

July 1, 2021 - June 30, 2022. (Organized Research) Applied Research.

This research aims to gather information on current pedagogical and curricular practices in K-12 schools for inclusion regarding students with disabilities.

University of Arkansas for "A Large-Scale Review of Empirical Research on Socio Emotional Learning in Art Education." Kerry J Freedman.

Award: \$10,000.00.

July 1, 2021 - June 30, 2022. (Organized Research) Applied Research.

This proposal seeks support to conduct a comprehensive analysis of empirical research conducted on a single topic of study in the field of art education (nationally) over the last fifty years.

FACULTY PRESENTATION

Dr. Tao Xu, Professor in the Department of Chemistry, will provide a verbal presentation.