## NORTHERN ILLINOIS UNIVERSITY
### OFFICE OF SPONSORED PROJECTS

### SUMMARY OF GRANT/CONTRACT AWARDS – FISCAL YEAR 2015

October 1, 2014 – December 31, 2014

<table>
<thead>
<tr>
<th></th>
<th>THIS REPORT</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOLLARS AWARDED BY SOURCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Government</td>
<td>2,057,587</td>
<td>9,526,724</td>
</tr>
<tr>
<td>State of Illinois</td>
<td>1,474,913</td>
<td>2,017,181</td>
</tr>
<tr>
<td>Corporate</td>
<td>115,061</td>
<td>431,440</td>
</tr>
<tr>
<td>Public/Not for Profit</td>
<td>162,628</td>
<td>734,487</td>
</tr>
<tr>
<td>Foreign</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,810,189</td>
<td>12,709,832</td>
</tr>
</tbody>
</table>

| **DOLLARS AWARDED BY PURPOSE** |      |      |
| Instruction              | 762,005 | 1,984,881 |
| Research                 | 1,509,130 | 6,744,227 |
| Public Service           | 1,441,221 | 3,311,331 |
| Other Sponsored Activities* | 97,833  | 669,393  |
| **Total**                | 3,810,189 | 12,709,832 |

| **DOLLARS AWARDED BY COLLEGE** |      |      |
| College of Business      | 0     | 0     |
| College of Education     | 355,662 | 1,141,162 |
| College of Engineering and Engineering Technology | 212,861 | 2,103,788 |
| College of Health and Human Sciences | 63,463 | 185,191 |
| College of Law           | 0     | 0     |
| College of Liberal Arts and Sciences | 1,615,566 | 4,417,542 |
| College of Visual and Performing Arts | 7,800 | 10,300 |
| Outreach, Engagement, and Information Technologies | 1,424,698 | 2,586,873 |
| Other Academic Units     | 111,000 | 2,245,837 |
| Other University Units   | 19,139  | 19,139 |
| **Total**                | 3,810,189 | 12,709,832 |

ALLIED HEALTH AND COMMUNICATION DISORDERS

Award: $10,000.00.

Findings from the project will contribute to the general understanding of the role of subconcussive injury in the development of chronic brain damage in the absence of overt behavioral symptoms.

ANTHROPOLOGY

Award: $90,117.00.
September 1, 2014 - March 31, 2016. (Instructional Programs) Instructional Programs.

This project provides instructional and experiential area studies and Tagalog language learning for four weeks in the Philippines for K-12 and community college instructors, with a preference for recruiting from minority-serving institutions.

ART MUSEUM

Award: $7,800.00.

Funds will be used to support the Art Museum's 2014-15 season exhibitions and their related publication and educational program offerings.

BIOLOGICAL SCIENCES

Columbus Zoo for "Informing conservation management for an endangered species: filling in data gaps in demography and phenology of the Eastern Massasauga Rattlesnake (Sistrurus catenatus)." Eric Hileman/Richard B. King.
Award: $5,000.00.

The goal of this project is to gather demographic estimates from a centrally located population to fill in data gaps for the Eastern Massasauga Rattlesnake in order to improve conservation efforts for this at-risk species.

CENTER FOR CHILD WELFARE AND EDUCATION

Illinois Department of Children and Family Services for "FY15 Northern Region Permanency Enhancement Project." Angela Baron-Jeffrey.
Award: $50,000.00.
The purpose of this project is to guide the development and implementation of action plans to improve permanency outcomes and reduce the disproportionate representation of African American children among families served.


The purpose of this project is to promote academic success for every child who is a ward of the Illinois Department of Children and Family Services and children who have been adopted or are in subsidized guardianship.

CENTER FOR GOVERNMENTAL STUDIES


The Center for Governmental Studies at Northern Illinois University (CGS) will work with four Illinois farmers markets and area farmers to identify obstacles to farmer participation and higher market sales, develop mitigation strategies, and assist in implementing changes. Expected outcomes are larger farmers markets with increased market sales and more farmer participation.

CENTER FOR SOUTHEAST ASIAN STUDIES


Funds will continue to be used to support the Center for Southeast Asian Studies.

CHEMISTRY AND BIOCHEMISTRY


The purpose of this project is to develop thermal conductive and cooling nanocomposites, NIR shielding and reflecting nanocomposites, and processes for large scale production of graphene.

The purpose of this project is to prepare, characterize, and improve new materials for energy efficiency and environmental applications.

**COLLEGE OF ENGINEERING & ENGINEERING TECH, DEAN'S OFFICE**

Motorola Foundation for "NIU-Enhancing Engineering Pathways: An integrated Outreach and Mentoring Program to strengthen the STEM pipeline for female students from Middle School to College (Renewal)." Suma Rajashankar.
Award: $50,000.00.

The renewal proposal is more focused on sustaining the present program by providing newer hands-on opportunities to the middle school girls and by strengthening the mentoring chain.

**COMPUTER SCIENCE**

National Science Foundation for "CC-NIE Integration: Collaborative Research: EPSON: Embracing Parallel Networks and Storage for Predictable End-to-End Data Movement." Michael Papka/Venkatram Vishwanath.
Award: $279,928.00.

The goal of this project is to address the growing need in scientific communities to rapidly and reliably share large datasets among several distributed institutions.

**DIVISION OF RESEARCH AND INNOVATION PARTNERSHIPS, VPS**

Illinois Board of Higher Education for "FY 2015 Illinois Minority Graduate Fellowships (DFI)." Bradly G. Bond.
Award: $111,000.00.
August 1, 2014 - August 31, 2015. (Instructional Programs) Instructional Programs.

The purpose of this project is to support diversification of faculty at NIU.

**FAMILY, CONSUMER AND NUTRITION SCIENCES**

Cell Science Systems for "Food Elimination Based on ALCAT Testing and the Effects on Body Inflammation and Body Composition." Judith M. Lukaszuk/Masih Shokrani.
Award: $15,000.00.

The purpose of the project is to determine what effect food elimination, based on ALCAT testing, will have on body composition and on total body inflammatory markers.

Two Rivers Head Start for "Increasing the Capacity at Two Rivers Head Start Agency to Improve Parents' Knowledge and Behaviors for Active Living and Healthy Eating at Home." Julie Ramisch/Sheila Barrett/Beverly W. Henry.
Award: $10,000.00.
This project provides a training program about healthy eating and active living to Head Start family workers and parents, enhancing the parent monthly workshop format in a collaboration between Two Rivers and NIU.

GEOGRAPHY

Award: $8,331.00.

This study will quantify the amount and impact of tropical system related precipitation in Illinois, with a focus on drought, stream flow response, and latent effects on the following warm-season.

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

Award: $7,000.00.

Funds will be used to determine the potential influence the introduction of bison will have on water quality at Nachusa Grasslands.

INDUSTRIAL ENGINEERING

Award: $25,000.00.

Funds are requested to develop an integrated modeling framework to advance our understanding of complex interactions among the natural/environmental, physical, and social drivers contributing to drought severity.

Private Sponsor for "Quality Management Systems for a Private Sponsor." Purushothaman Damodaran,
Award: $20,061.00.

The purpose of this project is to aid a Private Sponsor in developing a quality management system that can contribute to the company's ISO certification.

Caterpillar, Inc. for "Aurora Bldg B – Powertrain Improvement through Simulation Modeling." Reinaldo Javier Moraga.
Award: $97,800.00.
The purpose of this project is to model different areas related to the Powertrain machining process in order to identify different factors affecting total cycle time, lead times, and work-in-process inventory.

LEADERSHIP, EDUCATIONAL PSYCHOLOGY AND FOUNDATIONS

Award: $296,133.00.

The goals for this project include expanding understanding of how practices employed in the delivery of Informal Stem Learning (ISL) activities are associated with cultivating youth interest and engagement and using these findings to inform practice.

Award: $20,488.00.

The major goal of the project is the development of induction and mentoring materials for new teachers and principals across the state of Illinois.

LITERACY AND ELEMENTARY EDUCATION

DeKalb County Community Foundation for "Literacy on the Lawn." Laurie A. Elish-Piper.
Award: $1,400.00.

The major goal of the project is to offer a community-wide family literacy event for the DeKalb/Sycamore area, with a special focus on low-income families.

Japanese Chamber of Commerce and Industry of Chicago for "Reaching Out through Art and Reading." Chris L. Carger.
Award: $5,041.00.

The major goal of Project ROAR is to develop receptive and expressive English language proficiency for bilingual learners in elementary school.

MECHANICAL ENGINEERING

Award: $20,000.00.

The purpose of this project is to provide testing services for General Motors relating to PVD coating process parameters.
NORTHERN PUBLIC RADIO

Award: $28,273.00.

Funds are being used to provide information services to the visually impaired.

NURSING AND HEALTH STUDIES

Chapin Hall for "Using Medicaid Claims Data to Support the Health Care Service Needs of Wards of Illinois DCFS." Lucy Bilaver.
Award: $8,463.00.

This project will increase DCFS's capacity for real-time reporting of preventable health care encounters, chronic health conditions, and unmet health care needs using Medicaid claims data.

Hines VA Hospital for "Enhancing Implementation of Secure Messaging for Veterans with SCI/D." Christina Papadimitriou.
Award: $3,332.00. (Cumulative $20,000.00).

Funds will be used to provide methodological, design, analysis, and interpretation of project findings in spinal cord injury research.

Hines VA Hospital for "Enhancing Implementation of Secure Messaging for Veterans with SCI/D." Christina Papadimitriou.
Award: $16,668.00. (Cumulative $20,000.00).

Funds will be used to provide methodological, design, analysis, and interpretation of project findings in spinal cord injury research.

PHYSICS

Award: $23,000.00.

The funds are requested to produce compact coherent high-brilliance X-ray sources through the mechanism of channeling radiation.

Fermi National Accelerator Laboratory for "Joint Appointment NIU/FNAL." Young-Min Shin.
Award: $40,333.00. (Cumulative $218,488.00).
October 1, 2014 - August 15, 2015. (Other Sponsored Activities) IPA or Joint Appointment.
Funds are being used, per the Memorandum of Understanding between NIU and FNAL, to support one-half of the PI's 9-month academic salary as a joint faculty appointee of the Department of Physics and the Fermi National Accelerator Laboratory.

Award: $58,915.00.
July 1, 2014 - March 1, 2016. (Organized Research) Basic Research.

The purpose of this project is to participate in beam-dynamics simulation and optimization necessary for the production of pre-bunched electron beams by combining the proposed patterned photocathodes with a phase-space exchanging beamline.

Argonne National Laboratory for "Support for a Visiting Professor in NIU's Physics Department." Andreas Glatz.
Award: $25,039.00.

The purpose of this project is to investigate quantum transport in mesoscale and nonopatterned structures in macroscopic quantum coherent systems and quantum phase transitions.

Award: $42,843.00.

The purpose of this project is to study the effects of chemical substitutions and external pressures on the superconducting and structural properties of diverse pnictide families.

University of Notre Dame for "The Quarknet Project." Dhiman Chakraborty.
Award: $16,840.00. (Cumulative $43,020.00).

The purpose of this project is to involve high school teachers and their students in state-of-the-art research that seeks to resolve some of the mysteries about the structure of matter and the fundamental forces of nature.

Department of Energy for "Department of Energy-Office of Science and Technology Policy 2 year Appointment." Gerald C. Blazey.
Award: $4,900.00. (Cumulative $635,390.00).
June 1, 2011 - May 31, 2013. (Other Sponsored Activities) Other.

Dr. Blazey's duties will include coordination with the White House Office of Science and Technology Policy, as the Senior Policy Advisor for Physical Sciences. The OSTP plays an important role in coordinating interagency relationships between NSF, NASA, and DOE, in particular, and for interfacing with the Office of Management and Budget.

NIU's Beam Physics group will participate in the conceptual design of the proposed high-repetition-rate compact X-ray source based on inverse Compton scattering.

POLITICAL SCIENCE

Award: $11,000.00.

Funds will be used to support both (1) the continuation of a highly successful undergraduate fellowship program begun last year and (2) a special undergraduate seminar on the topic of American exceptionalism and international relations, tentatively entitled "Seminar on the American Experiment in Democracy," to be held in the spring of 2015.

PSYCHOLOGY

National Science Foundation for "Do Implementation Intentions Facilitate Job Search Behaviors for the Unemployed?" Bradley G. Bond/Christopher J. Budnick/Alecia Santuzzi/Amanda M. Durik.
Award: $22,000.00. (Cumulative $88,000.00).

The goal of this project is to examine the utility of implementation intentions in reducing job search distractions and increasing job search time among unemployed job seekers.

Award: $60,000.00. (Cumulative $300,527.00).

Funds will be used to use both qualitative and quantitative methods to investigate mentor behaviors, from both mentors' and mentees' perspectives, and to link behaviors to leadership competencies important to both military and civilian populations.

Award: $270,000.00.

The purpose of the project is to determine the ability of a revised version of the Department of Defense's Intimate Partner Physical Injury (IPPI) - Risk Assessment Tool (RAT) to evaluate pre- and post-intervention changes in maltreating couples.

This project supports a graduate psychology student externship at Wolcott School.

Exceptional Children Have Opportunities (ECHO) for "Psychology Externship at ECHO." Greg Waas/Michelle Demaray/Christine E. Malecki. Award: $2,838.00. (Cumulative $19,869.00). May 16, 2014 - June 30, 2014. (Instructional Programs) Instructional Programs.

This project supports a graduate psychology student externship at Exceptional Children Have Opportunities (ECHO)

PUBLIC ADMINISTRATION


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program. The student will work closely with Village of Campton Hills personnel on administrative projects and the implementation of policy established by the Village Board.

PUBLIC SAFETY


The major goal of the project is to purchase CPR equipment to provide training to agency responders and members of the public.


The major goal of the project is to conduct special enforcement for impaired driving during holidays.

SPECIAL AND EARLY EDUCATION


Funds will be used to provide a fellowship to graduate student Sean Tikkun.