# SUMMARY OF GRANT/CONTRACT AWARDS – FISCAL YEAR 2018

**July 1, 2017 – September 30, 2017**

## DOLLARS AWARDED BY SOURCE

<table>
<thead>
<tr>
<th>Source</th>
<th>THIS REPORT</th>
<th>CUMULATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Government</td>
<td>4,996,613</td>
<td>4,996,613</td>
</tr>
<tr>
<td>State of Illinois</td>
<td>113,686</td>
<td>113,686</td>
</tr>
<tr>
<td>Corporate</td>
<td>106,679</td>
<td>106,679</td>
</tr>
<tr>
<td>Public/Not for Profit</td>
<td>349,756</td>
<td>349,756</td>
</tr>
<tr>
<td>Foreign</td>
<td>96,173</td>
<td>96,173</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,662,907</strong></td>
<td><strong>5,662,907</strong></td>
</tr>
</tbody>
</table>

## DOLLARS AWARDED BY PURPOSE

<table>
<thead>
<tr>
<th>Purpose</th>
<th>THIS REPORT</th>
<th>CUMULATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>1,387,273</td>
<td>1,387,273</td>
</tr>
<tr>
<td>Research</td>
<td>3,331,810</td>
<td>3,331,810</td>
</tr>
<tr>
<td>Public Service</td>
<td>653,125</td>
<td>653,125</td>
</tr>
<tr>
<td>Other Sponsored Activities*</td>
<td>290,699</td>
<td>290,699</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,662,907</strong></td>
<td><strong>5,662,907</strong></td>
</tr>
</tbody>
</table>

## DOLLARS AWARDED BY COLLEGE

<table>
<thead>
<tr>
<th>College</th>
<th>THIS REPORT</th>
<th>CUMULATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Business</td>
<td>295,684</td>
<td>295,684</td>
</tr>
<tr>
<td>College of Education</td>
<td>660,158</td>
<td>660,158</td>
</tr>
<tr>
<td>College of Engineering and Engineering Technology</td>
<td>114,787</td>
<td>114,787</td>
</tr>
<tr>
<td>College of Health and Human Sciences</td>
<td>23,000</td>
<td>23,000</td>
</tr>
<tr>
<td>College of Law</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>College of Liberal Arts and Sciences</td>
<td>4,206,153</td>
<td>4,206,153</td>
</tr>
<tr>
<td>College of Visual and Performing Arts</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Outreach, Engagement, and Regional Development</td>
<td>113,686</td>
<td>113,686</td>
</tr>
<tr>
<td>Other Academic Units</td>
<td>249,439</td>
<td>249,439</td>
</tr>
<tr>
<td>Other University Units</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,662,907</strong></td>
<td><strong>5,662,907</strong></td>
</tr>
</tbody>
</table>

ANTHROPOLOGY


This project studies the long-term social, cultural, and political impact of international NGO aid in eight rural areas in Haiti, and includes a field school for U.S. graduate students and a NGO Summer Institute and research methods seminar.

BIOLOGICAL SCIENCES


Funds will support a student internship at the Nature Conservancy.

CENTER FOR SOUTHEAST ASIAN STUDIES

Department of State for "Leading and Organizing for Change in Southeast Asia." Judy L. Ledgerwood/Gena Flynn. Award: $240,000.00. (Cumulative $703,885.00). September 1, 2017 - August 31, 2018. (Other Sponsored Activities) Public Service.

Participants from SE Asia will learn about civic engagement in the US through the study of US history through written resources, visits to historical sites, hands-on volunteering and civic activism, and interaction with inspiring civic leaders.


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

CHEMISTRY AND BIOCHEMISTRY


This project extends and continues the earlier project, developing capture reagents capable of interacting with fingerprint components and designing methods for their immobilization on membrane-like support materials.

National Institutes of Health/DHHS for "Generation and Biophysical Evaluation of Generic Fab
Antibody pH Switches." Richard James Horn.
Award: $418,295.00.

To investigate new methods to indirectly control conventional antibody interactions through pH-based control of the antibody’s VH/VL interface.

Award: $253,583.00.

On site access to a state of the art mass spectrometer will enable NIU to provide modern training to students and will immensely increase the research output across several departments and centers on campus.

Award: $24,999.00. (Cumulative $424,999.00).

Funds are being used to support the PI's research on transformative photoelectrochemical paradigms for enhanced elementary charge transport and light harvesting processes.

ChemNova Technologies, Inc. for "Nanocoatings for multifunctional applications." Chhiu-Tsu Lin.
Award: $20,000.00. (Cumulative $100,000.00).

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.

Award: $27,776.00. (Cumulative $91,259.00).

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

School District # 204, Indian Prairie for "Science and Math in Linkage with Engineering."
Mansour Tahernezhadi/Jon S. Miller.
Award: $49,786.00.
The goal of SMILE is to improve the mathematics and science achievement of K-eight students by increasing teachers’ content knowledge and teaching skills, and preparing them to deliver robust, research-based learning experiences using frontier technology.

COMPUTER SCIENCE


Funds are being used to develop new methods based on software-defined network (SDN) to provide quality of service (QoS) for end-to-end data transfer in terabit networks.


The purpose of this project is to support the Advanced Integration Group in the Argonne Leadership Computing Facility in the area of Planar 4K display.


Funds are requested to support US-based Students to Attend the BioImage Informatics Conference 2017 (BII 2017)

ECONOMICS


The PI will work in collaboration with RDCEP researchers on the development of robust optimal control methods for economic models re: climate change.

ELECTRICAL ENGINEERING


Implement portions of the Bluetooth wireless communication protocol in software C++ using the Network Simulator 3 (NS3).
FINANCE


Dr. Zhou will conduct research to assess the quality and informativeness of credit ratings, develop methodologies to price securities, and assess the implications of proposed SEC rules.

GEOGRAPHIC AND ATMOSPHERIC SCIENCES


To understand the effects of climate change on mesoscale convective systems and the resulting socioeconomic impacts.


To explore mobile home distribution and the adaptive capacity of mobile home residents to better understand tornado disaster impacts and strategies for overcoming them.


The goal of these experiments is to document the efficacy of differential production inputs, from seed genotype to amount and type of agrichemicals, within the spatially variant context of soil/crop environments.


This project provides one Graduate Assistant to the DeKalb County Economic Development Corporation to provide research services of mutual benefit to NIU and DCEDC.

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

National Science Foundation for "Collaborative Proposal: REU Site: Water Quality and Tourism..."

Funds will be used to engage Latino/as and other students in research projects that link history and culture of the Yucatan Peninsula to modern water issues to develop and encourage those interested in water sciences to be our next leaders in the field.

INDUSTRIAL AND SYSTEMS ENGINEERING


Funds are requested to evaluate the usability of the French door refrigerator handles.

INSTITUTE FOR THE STUDY OF ENVIRONMENT, SUSTAINABILITY & ENERGY


Funds are requested to develop a comprehensive consumer outreach and education plan on electrical smart meters and related energy efficiency programs for the Rockford area.

INTERNATIONAL TRAINING OFFICE

Department of State for "PYLP: Engaging Young Advocates in Environmental Preservation and Peacebuilding." Susan D. Russell/Lina D. Ong. Award: $249,439.00. (Cumulative $749,301.00). January 1, 2018 - December 30, 2018. (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.

KINESIOLOGY AND PHYSICAL EDUCATION


The purpose of the funds is to support a multi-sport, two-way exchange program focused on youth empowerment in Sri Lanka.

MECHANICAL ENGINEERING
Award: $17,531.00. (Cumulative $40,207.00).

The major goal of this project is to quantify social behavior in animal groups using information-theoretic methods.

OUTREACH, ENGAGEMENT, AND REGIONAL DEVELOPMENT, VP

Illinois State Board of Education for "Rochelle Migrant Education Program." Amy Jo Clemens.
Award: $113,686.00.
April 17, 2017 - September 30, 2017. (Other Sponsored Activities) Public Service.

The purpose of the funds is to provide migrant children a comprehensive summer school program with academic and supportive services including instruction in research-based reading and mathematics along with tutoring and/or enrichment activities.

PHYSICS

State University of New York at Stony Brook for "US ATLAS Operations." Dhiman Chakraborty.
Award: $77,697.00. (Cumulative $152,447.00).

Funds are requested to develop and maintain the ATLAS calibration database and related software.

State University of New York at Stony Brook for "US ATLAS Operations." Dhiman Chakraborty.
Award: $74,750.00. (Cumulative $152,447.00).

Funds are requested to develop and maintain the ATLAS calibration database and related software.

Award: $170,000.00. (Cumulative $510,000.00).

The major goal is to search for new laws of physics that may manifest themselves at such extremely high energies as were characteristic of the universe shortly after the Big Bang.

Fermi National Accelerator Laboratory for "Joint Appointment NIU/FNAL." Swapan Chattopadhyay.
Award: $140,810.00. (Cumulative $552,157.00).
September 1, 2017 - August 31, 2018. (Other Sponsored Activities) IPA or Joint Appointment.
Funds are being used, per the Cooperative Research and Development Agreement 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.


The proposed project will progress theoretical understanding and experimental development of "ultra-cold" relativistic electron beams at its fundamental limit via field-emission from structured nano-materials and subsequent efficient acceleration.


The purpose of this project is to study the effects of local lattice distortions and short-range correlations on the unusual physical properties of novel materials, such as iron based superconductors and relaxor ferroelectrics.


This project tests the range accuracy of the proton tomography system to determine the quantitative reduction in proton range uncertainties.


Funds are requested to continue the development of PHAD with large-scale parallelization on hybrid architecture computer clusters, enhancing the performance and fidelity of electron cooling simulations.


The funds are used to support PhD Student Aliaksei Halavanau's work under the Joint University-Fermilab Doctoral Program in Accelerator Physics and Technology.
Fermi National Accelerator Laboratory for "Development of the MU2E Preliminary Design."
David R. Hedin/Nicholas Pohlman/Vishnu V. Zutshi.
Award: $2,520.00. (Cumulative $501,421.00).

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.

Award: $150,000.00.

The goal of this project is to conduct research that advances the theoretical understanding of the frontiers of the Standard Model of high energy physics.

Award: $385,492.00. (Cumulative $1,153,148.00).

Funds are requested to develop a Laser-Electron-Interaction region for Compact High-Repetition-Rate Mono-Energetic Laser-Based Gamma Sources.

Argonne National Laboratory for "Drive- and Main-bunch beam dynamics in a wake field accelerator for soft X-ray-FEL applications." Philippe R. Piot.
Award: $31,752.00.

The research will focus on the beam dynamics associated to the formation of the drive and main bunches along with their interaction in the wake field linac.

Fermi National Accelerator Laboratory for "Joint Appointment FNAL/NIU under CRADA."
Michael Syphers.
Award: $114,088.00. (Cumulative $344,428.00).
September 16, 2017 - September 15, 2018. (Other Sponsored Activities) IPA or Joint Appointment.

Funds are being used, per the CRADA between NIU and FNAL, to support 49% of the PI's 11-month calendar salary as a joint faculty appointee of the Department of Physics and the Fermi National Accelerator Laboratory.

Award: $130,000.00. (Cumulative $259,000.00).
The major goal is to theoretically investigate X-ray spectroscopy and scattering on nonequilibrium and decaying systems.


Funds will be used for developing methods and/or procedures to fabricate and to characterize superconducting nanostructures as part of DoE funded project on superconductivity and magnetism at Argonne National Laboratory.


Funds are being used to develop approaches to probe the effect of an array of artificial defects on a superconductor.


Funds are used to develop scintillator-based hadron calorimetry for detectors at future lepton colliders.

PSYCHOLOGY

Department of Education for "Project Prevent and Address Bullying (PPAB) for Students with Disabilities: A Multitiered Behavioral Framework." Christine E. Malecki/Julia Ogg/Michelle Demaray. Award: $249,979.00. (Cumulative $730,710.00). September 1, 2017 - August 31, 2018. (Instructional Programs) Instructional Programs.

The proposed project will prepare 24 highly-qualified, licensed school psychologists with specialized training (a) emphasizing prevention of bullying, especially with students with disabilities; and (b) improving student outcomes by decreasing bullying.


Funds will be used to support a graduate psychology externship at Genoa-Kingston School District.

Opportunity House, Inc. for "Psychology Graduate Externship at Opportunity House."
Leslie Matuszewich/Holly K. Orcutt.
Award: $12,314.00. (Cumulative $90,592.00).
July 1, 2017 - June 30, 2018. (Instructional Programs) Instructional Programs.
Funds will be used to support a psychology graduate extern and faculty clinical supervisor.

Award: $30,444.00. (Cumulative $169,437.00).
June 1, 2017 - May 31, 2018. (Instructional Programs) Instructional Programs.
The purpose of this project is to support a psychology graduate student externship with Joliet School District.

Vaya Group for "Psychology Externship at Vaya Group." Leslie Matuszewich/Lisa M. Finkelstein.
Award: $16,708.00.
Funds will be used for a graduate psychology student externship at Vaya Group.

PUBLIC ADMINISTRATION

City of Geneva for "Administrative Intern (Jacqueline Nevarez)." Denise Burchard.
Award: $16,170.00.
The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program.

Village of North Aurora for "Administrative Intern (David Hansen)." Denise Burchard.
Award: $430.00. (Cumulative $25,778.00).
July 1, 2017 - May 15, 2018. (Instructional Programs) Instructional Programs.
The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program.

Village of Elk Grove for "Administrative Intern (Ana Elizarraga Zarazua)." Denise Burchard.
Award: $22,222.00.
The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program.

Village of Lemont for "Administrative Intern (Michael Herrera)." Denise Burchard.
Award: $16,170.00.
The purpose of this project is to provide a valuable experiential learning opportunity to a
graduate student within the NIU MPA program.


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student within the NIU MPA program.


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program.


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student within the NIU MPA program.


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student within the NIU MPA program.


The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student within the NIU MPA program.

Village of Algonquin for "Management Intern (Ian Respeto-Irizarry)." Denise Burchard. Award: $2,835.00. (Cumulative $19,005.00). July 1, 2017 - May 15, 2018. (Instructional Programs) Instructional Programs.

The purpose of this project is to provide a valuable experiential learning opportunity to a graduate student in NIU's MPA program.

SCHOOL OF HEALTH STUDIES

Northern Illinois Food Bank for "Research and Outreach at the Northern Illinois Food Bank." Josephine Umoren.
Award: $23,000.00.  

NIU will provide consultation for the Northern Illinois Food Bank related to research and nutrition education program implementations.

SPECIAL AND EARLY EDUCATION

Department of Education for "Low Incidence Personnel Program for Training of Teachers and Orientation and Mobility Instructors of Students with Visual Impairments with Additional Training in Assistive Technology and English Language Learners." Gaylen G. Kapperman/Stacy Kelly/Jodi Sticken.
Award: $250,000.00.  (Cumulative $1,250,000.00).

The major goal of the program is to train graduate students as teachers and orientation and mobility specialists to serve the needs of blind and visually impaired children in grades P-12.

Award: $250,000.00.  (Cumulative $500,000.00).
May 2, 2017 - May 1, 2018.  (Instructional Programs) Instructional Programs.

The purpose of this program is to train undergraduate and graduate students as teachers and assistive technology instructors to serve the needs of children who are blind or visually impaired in preschool through 12th grade.

Department of Education for "Preparing the USA for the UEB: A Massively Open Online Course for Personnel Providing Vocational Rehabilitation Services or Educational Services to Youth and Adults who are Blind." Stacy Kelly/Thomas J. Smith.
Award: $110,000.00.  (Cumulative $440,000.00).
October 1, 2017 - September 30, 2018.  (Instructional Programs) Instructional Programs.

Development and implementation of a Massively Open Online Course (MOOC) for retraining service providers in the field of visual impairments in schools and rehabilitation settings on the new Unified English Braille program.

STATISTICS

Casualty Actuarial Society (CAS) for "Pricing Cyber Insurance for a Large-Scale Network." Lei Hua.
Award: $20,000.00.

To develop a novel frequency-severity model for assessing cyber risks for a large-scale network based on a reasonably small set of underwriting information, while accounting for the heterogeneity of the network nodes and their interdependence.