11-2014

Research and Creative Activity July 1, 2013 – June 30, 2014: Major Sponsored Programs and Faculty Awards for Research and Creativity

Elizabeth Banset
University of Nebraska-Lincoln

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On the Cover: The cover photo shows the target chamber of the University of Nebraska–Lincoln’s Diocles Laser. The burst of light results from laser light interacting with nitrogen gas, which produces an electron beam. Using this powerful, compact laser, UNL Extreme Light Laboratory scientists discovered a way to vastly shrink the space needed to produce synchrotron X-rays, expanding the potential uses for these high-quality X-rays. This major breakthrough and the opening of a collaborative laser lab that houses a new specialty laser called Archimedes are advancing UNL’s capabilities in laser science, a longtime research strength.
This “Major Sponsored Programs and Faculty Awards for Research and Creative Activity” booklet highlights the successes of the University of Nebraska–Lincoln faculty during the fiscal year July 1, 2013-June 30, 2014. It lists the funding sources, projects and investigators on major grants and sponsored program awards received during the year; published books and scholarship; fellowships and other recognitions; intellectual property licenses; and performances and exhibitions in the fine and performing arts.

At UNL we continue to grow our research enterprise, investing in big ideas, new faculty and new facilities, and our researchers have been focused on pursuing new opportunities. These investments of time, energy, creativity and dollars are paying off, and I am pleased to present evidence of our faculty’s accomplishments. Grants and contracts in a diverse range of fields—from high energy physics to education and child development, from human health to water and food security, from digital humanities to nanoscience—enable UNL’s faculty to address grand challenges. Our total research expenditures of $266 million in fiscal year 2013 represent a record for UNL and, along with an impressive list of publications and awards, reflect our faculty’s achievements.

With an eye to the future, we are expanding our reach by pursuing interdisciplinary initiatives and partnerships necessary to tackle today’s complex issues. We are cultivating innovative collaborations across disciplinary, institutional, state and national boundaries to solve global challenges, address national needs and enhance Nebraska’s economy. And we are partnering with business, industry and entrepreneurs to ensure that we maximize the social and economic benefits of UNL research.

I invite you to read about our faculty’s accomplishments in this booklet and envision the power of UNL’s innovative and collaborative research, scholarship and creative activity to solve problems and create opportunities for our state, our nation and our world. Thank you for your interest in and support for research, scholarship and creative activity at UNL, a growing Big Ten research university!

Prem S. Paul
Vice Chancellor for Research and Economic Development
Awards of $3 Million or More
Active awards, July 1, 2013–June 30, 2014
* Indicates new in 2013-2014

Allen, Craig  Natural Resources
IGERT: Resilience and Adaptive Governance in Stressed Watersheds
$3,116,173  NSF
8/15/09 – 7/31/15
Fritz, Sherilyn  Earth and Atmospheric Sciences
Samal, Ashok  Computer Science and Engineering
Tyre, Richard  Natural Resources
Tomkins, Alan  Law/Public Policy Center

Wildlife ecologist Craig Allen, with a grant from the National Science Foundation’s Integrative Graduate Education and Research Traineeship Program, known as IGERT, leads this innovative, interdisciplinary graduate education program to prepare future scientists, policymakers and natural resource managers to address increasingly complex global water issues. The five-year grant funds an education project focused on resilience and adaptive governance in stressed watersheds. Doctoral students from many disciplines across the natural, computational and social sciences study resilience and adaptive management strategies for stressed watersheds in the U.S. and Eastern Europe. The program integrates scientific, socioeconomic and legal aspects involved in studying and managing complex systems of people and nature.

Becker, Donald  Biochemistry
Redox Biology Center
$4,305,466  NIH-NIGMS
9/1/12 – 7/31/17

Donald Becker, professor of biochemistry in the Institute of Agriculture and Natural Resources, is the director of the Redox Biology Center. Established in 2002 with a grant from the National Institutes of Health as a Center of Biomedical Research Excellence, the center received a competitive renewal grant to support it through 2017. The center’s researchers investigate how cells maintain a reduction-oxidation balance, a process called redox homeostasis, and study links between redox homeostasis and diseases such as cancer, cardiovascular disease, Alzheimer’s disease and cataracts. The center’s research will provide important advances in the understanding of redox regulation, comprising aspects of cellular aging and controlled cell death.
The Biological Process Development Facility provides clients with process research and early manufacture of new therapeutic molecules for clinical testing. Supported in part by funding from the Department of Defense, the BPDF also develops vaccines against biological warfare agents, as well as products that can be used as therapeutic countermeasures to treat people who have been exposed to biological agents.

The eXtension Initiative is an Internet-based Cooperative Extension Service education and information system. UNL leads this multi-year project, which partners with the University of Kentucky, North Carolina State University and Virginia Tech University. This collaborative effort of the nation’s 107 land-grant universities and the U.S. Department of Agriculture’s Cooperative State Research, Education and Extension Service develops content and technology for the eXtension project. eXtension is a virtual educational environment that provides science-based, objective information. Users may take advantage of learning opportunities and interact with the expertise available from the land-grant university system by visiting www.extension.org.
DiLillo, David  
Sexual Revictimization: Emotional and Psychosocial Mechanisms  
$3,229,123  
7/15/10 – 6/30/15  
Hoffman, Lesa  
Psychology  
NIH-NICHD  

The National Institute of Child Health and Human Development is supporting the work of psychologist David DiLillo to study the problem of “revictimization” – the phenomenon in which women who suffered abuse during childhood or adolescence are up to 10 times more likely to be sexually victimized again as adults. This multi-site project is examining the processes that link early maltreatment to adult revictimization, in particular focusing on mechanisms related to psychopathology, sexual risk taking and alcohol use. Drawing on recent theoretical and empirical findings, DiLillo’s team proposes that difficulties regulating emotions stemming from early abuse create underlying risk factors for the more immediate predictors of revictimization. Together, these findings will permit the testing of a comprehensive model of revictimization.

Dominguez, Aaron  
* U.S. CMS Phase-1 Upgrades  
$11,479,310  
6/15/14 – 5/31/19  

UNL physicist Aaron Dominguez leads a collaboration involving eight universities to upgrade the Compact Muon Solenoid particle detector, a key component of the world’s largest physics experiment. With a five-year, nearly $11.5 million grant from the National Science Foundation, the team is working to increase the effectiveness of a vital component of the Large Hadron Collider at CERN laboratory in Switzerland, the supercollider that made discovery of the Higgs boson possible. The UNL team was part of the multi-institutional collaboration that built the original CMS experiment, one of two large particle detector experiments at the Large Hadron Collider. With this new NSF grant, they now lead a large research partnership to upgrade the detector in stages through 2019. Their collaborators are at the University of Kansas, University of Illinois at Chicago, Rutgers University, Cornell University, SUNY Buffalo, Purdue University Calumet, Notre Dame University and Northeastern University.
With support from a $3.2 million grant from the U.S. Department of Education’s Institute of Education Sciences, Kristin Duppong Hurley, research associate professor of special education and communication disorders, and colleagues are evaluating a unique new program that uses parent-to-parent support to encourage families to get connected to services to help their children be successful in school. The four-year grant enables UNL researchers to evaluate the Parent Connectors Program, originally developed by researchers at the University of South Florida with U.S. Department of Education funding. This intervention program encourages parents of middle school-aged children with emotional or behavioral disorders to get involved in their children’s education and help them access available mental health and school services. UNL’s team is evaluating the program’s effectiveness through a randomized control trial involving about 250 families of Nebraska middle school students in the Lincoln and metro Omaha areas who have Individualized Education Programs for emotional or behavioral needs.
AWARDS OF $3 MILLION OR MORE

Dussault, Patrick
Building Infrastructure in Nanohybrid Materials and Algal Biology Research

$11,100,982
10/01/10 – 09/30/15

NSF-EPSCoR

Biochemistry
Biochemistry
Chemistry
Center for Plant Science Innovation/Biological Sciences/Center for Plant Science Innovation/Agronomy and Horticulture/Center for Plant Science Innovation/Biochemistry/Nutrition and Health Sciences

Hoge, David
Han, Ming
Hudgins, Jerry
Ianno, Natale
Lai, Rebecca
Lu, Yongfeng
Morris, T. Jack
Schubert, Eva
Schubert, Mathias
Spreitzer, Robert
Takacs, James
Van Etten, James
Weeks, Donald

Chemistry
Chemistry
Electrical Engineering
Electrical Engineering
Chemistry
Electrical Engineering
Biological Sciences
Electrical Engineering
Electrical Engineering
Biochemistry
Chemistry
Plant Pathology
Biochemistry

UNL’s planned Center for Nanohybrid Functional Materials combines the efforts of chemists, engineers and biologists to develop fundamental new science related to sensing and separation of targets ranging from small molecules to toxins. The center is led by Patrick Dussault, Charles Bessey Professor of Chemistry, and Mathias Schubert, associate professor of electrical engineering. The center brings together investigators from two broad areas of science. One group has experience in creating highly ordered nanostructures, such as tiny silicon spirals that have unique characteristics in terms of how they appear under certain frequencies of light. Other center members are experts in using chemical and biochemical agents such as RNA or antibodies to bind a particular target such as a drug or a virus.

The Nebraska Coalition for Algal Biology and Biotechnology builds on UNL’s innovation in research on algae and algal biotechnology, focusing on the production of renewable biofuels to replace gasoline and diesel. The project expands on UNL’s research in developing algal compounds of high value to society, such as specialty chemicals and drugs for humans or animals and is directed by Donald Weeks, Maxcy Professor of Agriculture and Natural Resources.

The funding award is the major part of a five-year, $20 million Nebraska EPSCoR grant involving faculty from five universities: UNL, UNMC, UNK, Creighton and Doane College.
A five-year, $8.7 million grant from the U.S. Department of Health and Human Services Children’s Bureau has helped establish the Midwest Child Welfare Technical Assistance Implementation Center. The center provides long-term consultation and support to child service agencies and tribes in Nebraska, Iowa, Illinois, Indiana, Kansas, Michigan, Missouri, Minnesota, Ohio and Wisconsin. It partners with state and tribal child welfare agencies to assess their inner workings and identify broad changes that could help them operate more efficiently and effectively to serve families and children; identify obstacles to helping families; build the capacity of state and tribal child welfare systems; and work toward significant changes to improve outcomes for children and families involved with these systems. The ultimate goal is to ensure all children have safe, stable and permanent homes.

With support from the NIH National Institute of Mental Health, Kim Espy, adjunct professor of psychology, is researching executive control in children, which has been shown to be a precursor to childhood externalizing disorders (including ADHD). The objective of this project is to determine how executive control relates to later functional outcomes, the next step toward clinical application. Espy’s research will elucidate the fundamental mechanisms that go awry in childhood psychopathology and identify precursors for use in future work to tailor preventive interventions to those who stand to benefit most.
Harwood, David  
Earth and Atmospheric Sciences  
ANDRILL: Investigating Antarctica’s Role in Cenozoic Global Environmental Change

$12,978,160  
NSF  
6/1/05 – 12/31/14

Levy, Richard  
Earth and Atmospheric Sciences

David Harwood, professor of earth and atmospheric sciences, leads an international team of scientists drilling beneath the Antarctic ice pack to unearth geological strata that could hold ancient clues to contemporary global warming trends. The National Science Foundation awarded $12.9 million to a consortium of five U.S. universities headed by UNL and Northern Illinois University. Dubbed ANDRILL (ANtarctic geological DRILLing), the project is administered by the ANDRILL Science Management Office headquartered at UNL. ANDRILL is backed by more than $30 million in funding, including $9.7 million in previous and ongoing national agreements to support operations and nearly $8 million from the other countries to support scientific research. Other members of the U.S. consortium making up the American portion of the ANDRILL program are Florida State University, The Ohio State University and the University of Massachusetts Amherst. The project also includes scientists from Germany, Italy and New Zealand.

Hein, Gary  
Doctor of Plant Health Program  
A Predictive Model to Increase Adoption of IPM of a Mite-Virus Disease Complex in Wheat

$3,375,000  
USDA-AFRI  
1/1/13 – 12/31/18

Bradshaw, Jeffrey  
Panhandle Research and Extension Center

Golick, Douglas  
Entomology

Lyon, Drew  
Panhandle Research and Extension Center

Namuth Covert, Deana  
Agronomy and Horticulture

Wegulo, Stephen  
Plant Pathology

Zygielbaum, Arthur  
School of Natural Resources

The USDA’s Agriculture and Food Research Initiative has awarded $3.375 million to a team led by Gary Hein, professor of entomology and director of UNL’s Doctor of Plant Health Program, to develop a forecasting model that can help wheat growers predict the risk for mite-transmitted virus disease and make more effective management decisions. Beneficiaries of this 5-year project include wheat growers in the Great Plains from Montana to Texas, who produce over 1 billion bushels of wheat annually. In addition, the project provides opportunities and resources for students and teachers (graduate, undergraduate, G4-12 science teachers and their students) who can use information about management of this wheat-mite-virus complex to demonstrate the principles of biology, ecology and integrated pest management.
A UNL team led by Tiffany Hogan in the Department of Special Education and Communication Disorders is collaborating with researchers at The Ohio State University, University of Kansas and Arizona State University to study the language bases of skilled reading comprehension in 4- to 8-year-old children. The UNL researchers are working with local school districts to assess reading comprehension in approximately 300 children aged 4 to 8. They also work with other teams to develop instructional materials and procedures to improve reading comprehension and will then examine the effectiveness of those materials and procedures. The primary goal is to determine the feasibility and efficacy of instruction focused on basic and higher-order language skills for improving children’s reading comprehension in the short- and long-term.

Mintaka Foundation for Medical Research is supporting the BPDF’s development of a process to produce a cream containing 5P12-RANTES, a protein widely considered to be one of the most promising candidates for use as a topical HIV prevention agent.
Lewis, Jim
Mathematics/Center for Science, Mathematics and Computer Education
* NebraskaMATH: Strengthening the OPS-UNL Partnership
$5,455,811 The Sherwood Foundation®/Lozier Foundation
5/1/13 – 8/31/16
Heaton, Ruth Teaching, Learning and Teacher Education/Center for Science, Mathematics and Computer Education
Smith, Wendy Center for Science, Mathematics and Computer Education
A grant from The Sherwood Foundation® and the Lozier Foundation supports a three-year partnership between Omaha Public Schools and UNL’s Center for Science, Mathematics and Computer Education to fund the NebraskaMATH Omaha Public Schools Teacher Leader Academy. The program gives a community of OPS mathematics teachers from grades K-12 access to continuing education and graduate coursework centered on math education. The goals of the OPS initiative are to strengthen mathematics learning in Omaha classrooms, narrow student achievement gaps between different populations and conduct research that continues to inform school improvement efforts.

Nebraska NOYCE: NSF Mathematics Teaching and Master Teaching Fellows Program
$3,000,000 NSF
9/1/10 – 8/31/16
Fowler, David Teaching, Learning and Teacher Education
Kauffman, Douglas Educational Psychology
Papick, Ira Mathematics/Center for Science, Mathematics and Computer Education
Smith, Wendy Center for Science, Mathematics and Computer Education
Swidler, Stephen Teaching, Learning and Teacher Education
A six-year, $3 million grant from the National Science Foundation, awarded through NSF’s Robert Noyce Teacher Scholarship program, aims to encourage talented science, technology, engineering and mathematics majors and professionals to become K-12 mathematics and science teachers in “high-need” classrooms. The math program covers tuition, fees and a stipend for 16 students who are pursuing master’s degrees from the Department of Teaching, Learning and Teacher Education and certification to teach math for grades 7-12. Fellowship recipients also receive a supplementary stipend from UNL while they teach for four years in a high-need school district. The grant also provides professional development and stipends for 24 strong, master’s-degree-holding, K-12 teachers who commit to teaching in a high-need district for five years. The selected “master teaching fellows” take courses that will give them the skills they need to improve math education in their schools and school districts. The program builds on previous successful efforts to enhance mathematics teaching and learning in Nebraska schools, including the Math in the Middle Institute and NebraskaMATH.
NebraskaMATH

$9,235,407
1/1/09 - 12/31/14
Edwards, Carolyn
Psychology/Child, Youth and Family Studies
Heaton, Ruth
Teaching, Learning and Teacher Education/
Center for Science, Mathematics and
Computer Education
Jacobson, Barbara
Lincoln Public Schools
McGowan, Thomas
Teaching, Learning and Teacher Education/
Mathematics/Center for Science,
Mathematics and Computer Education
Papick, Ira
Statistics
Stroup, Walter
Statistics

NebraskaMATH is a statewide program aimed at improving mathematics achievement for all students and narrowing the achievement gap for at-risk students in kindergarten through third grade. The program is supported by a $9.2 million grant from the National Science Foundation. NebraskaMATH is a partnership of UNL, public school districts in Omaha, Lincoln, Grand Island, and Papillion-La Vista and Nebraska’s Educational Service Units. It builds on the success of UNL’s Math in the Middle Institute by initiating new programs that focus on enhancing teachers’ knowledge of mathematics and teaching methods.

Lodl, Kathleen
Child Care and Youth Training and Technical Assistance Project
$7,045,455
7/1/10 - 8/31/15
Durden, Tonia
Child, Youth and Family Studies

With support from the U.S. Department of Agriculture’s National Institute of Food and Agriculture, UNL Extension is working with counterparts at Penn State University to develop and deliver content and provide programming for a nationwide educational program to help the children of military families succeed as they enter the school system. The three-year project, led by Kathleen Lodl, associate dean of UNL Extension, aims to develop and deliver early childhood professional development in 13 states, focusing on children through age 12 from military families who live off base. The goals of the program are to improve the quality of existing home and center-based child care and school-age/afterschool programs and to increase the number of military-connected children with access to services by increasing the number of practitioners. The Child and Youth TTAP will provide training and technical assistance to increase the knowledge and skills of child care providers and youth program staff. Content will be delivered to early childhood educators both face-to-face and online.
Lu, Yongfeng  
**Electrical Engineering**  
Multi-Energy Processing for Novel Coating Technologies  
$4,138,000  
4/10/09 – 9/30/14

With the support of the Department of Defense’s Office of Naval Research, Lott Professor of Electrical Engineering Yongfeng Lu, is undertaking a project to investigate and delineate the underlying science behind multi-energy processing, an emerging surface coating technology that will make surface coatings stiffer, tougher and lighter for use in applications like thermal barriers, corrosion protection and interface tribology. Multi-energy processing can be used, for example, to deposit diamond and diamond-like carbon coatings in open atmosphere. The multi-energy processing approach is a marked improvement over conventional coating techniques that require high vacuum and high temperature. Lu is applying his fundamental understanding of multi-energy processing to develop a new multi-laser-beam, low-temperature, open-atmosphere, contamination-free surface coating technique to deposit hard coating materials from gaseous and polymeric precursors on various substrates, resulting in optimized efficiency, improved quality and minimal thermal stress.

Lubben, Bradley  
**Agricultural Economics**  
North Central Risk Management Education Center  
$3,446,401  
9/1/12 – 8/31/15

The North Central Risk Management Education Center provides program leadership and coordination for risk management education in the North Central Region (Kansas, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, North Dakota, South Dakota and Wisconsin). It is one of four risk management education centers in the United States. They were established in 2001 to provide risk management education for agricultural producers to help them develop knowledge, skills and tools needed to make informed risk management decisions for their operations.
Moxley, Rodney  
Veterinary Medicine and Biomedical Sciences

Shiga-Toxigenic *Escherichia coli* (STEC) in the Beef Chain:
Assessing and Mitigating the Risk by Translational Science, Education and Outreach

$24,812,267  
USDA-AFRI

1/1/12 – 12/31/14

Thippareddi, Harshavardhan  
Food Science and Technology

UNL veterinary scientist Rodney Moxley leads a major project involving 12 universities and other institutions to target eight of the most dangerous *E. coli* strains throughout the beef production chain. Funded by a $25 million Agriculture and Food Research Initiative grant from the U.S. Department of Agriculture’s National Institute of Food and Agriculture, the project’s long-term goal is to reduce the occurrence and public health risks from Shiga toxin-producing *E. coli* in beef, while preserving an economically viable and sustainable beef industry. The project explores the public health, economic and environmental impacts of existing or new intervention strategies on predicted and actual STEC exposure risk. Innovative education, extension and evaluation efforts are intertwined with research on beef chain STEC risk mitigation and decreased numbers of human STEC cases.

Paul, Prem  
Research and Economic Development

$5,000,000  
Nebraska Center for Energy Sciences Research  
Nebraska Public Power District

11/24/09 – 3/31/16

The Nebraska Center for Energy Sciences Research is a collaboration between UNL and the Nebraska Public Power District. The center was established in April 2006 to support energy research that produces new technologies, processes and systems that provide new or significantly enhanced renewable energy sources, improves the quality of life and boosts economic opportunity. The center fosters interdisciplinary collaboration among UNL faculty and with other research institutions, public-sector agencies and private sector companies with similar interests. The center supports both basic and applied research and has a broad mandate to explore a range of renewable energy opportunities (including biofuels, wind and solar energy), as well as opportunities for energy conservation.
Pope, Kevin

Angler Behavior in Response to Management Actions on Nebraska Reservoirs

Natural Resources Nebraska Game and Parks Commission

$3,147,776

1/1/09 – 12/31/13

Kevin Pope, assistant unit leader-fisheries of the Nebraska Cooperative Fish and Wildlife Research Unit and associate professor in the School of Natural Resources, with support from the Nebraska Game and Parks Commission, will document the current participation levels of anglers in Nebraska’s lentic systems. In particular, participation levels of generic angling groups will be quantified among specific water bodies, and a model will be developed to describe generic angler participation (spatial and temporal) within a region. Such a model will help managers better determine appropriate lake-specific management objectives, given the dynamic nature of angler participation, and will be important for increased effectiveness of angler recruitment and retention activities throughout the Midwest.

Rilett, Laurence

Transportation Infrastructure - Visualizations & ITS Laboratory

Civil Engineering/Nebraska Transportation Center

$3,171,651

DOT-FHWA through Nebraska Department of Roads

6/5/12 – 6/30/15

Faller, Ronald

The U.S. Department of Transportation has awarded $3.1 million to a team led by Laurence Rilett, Keith W. Klaasmeyer Chair in Engineering and Technology in UNL’s civil engineering department and director of the Nebraska Transportation Center (NTC), to conduct research related to 1) visualization and modeling on non-linear material behavior that is critical for new roadside safety devices; and 2) identifying promising safety and risk mitigation tools. As part of this research, funds support state-of-the art ITS infrastructure (laboratory and test beds) and visualization capabilities in the NTC space in the Whittier Research Center on the UNL campus. The goal is to develop advanced technologies that can be economically adapted to make the nation’s multi-modal transportation system safer.
The U.S. Department of Transportation’s Research and Innovative Technology Administration has designated UNL’s Mid-America Transportation Center (MATC) as a regional university transportation center. MATC is a consortium with UNL as the lead institution with regional partners Kansas State University, University of Kansas, University of Missouri-Rolla and Lincoln University of Missouri. The Nebraska Department of Roads and the Kansas and Missouri Departments of Transportation also are key partners. The center’s focus is “improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system.” MATC focuses on safety research related to rural transportation. Key safety research areas include traffic control, animal crashes, safer at-grade railway crossings and work zones, and the development of more effective and economical roadside crash barriers. The university transportation center program supports transportation research, education and technology transfer that promote scientific innovations in a variety of transportation modes and disciplines. Region 7 serves Iowa, Kansas, Missouri and Nebraska. It is one of 10 regional university transportation centers in the nation.

**Rothermel, Gregg**

**Computer Science and Engineering**

**Safeguarding End-User Military Software**

$3,975,935

9/1/10 – 8/31/14

Cohen, Myra

Dwyer, Matthew

Elbaum, Sebastian

Sarma, Anita

Srisa-An, Witawas

A team of University of Nebraska–Lincoln software engineering researchers, headed by Gregg Rothermel, has received a nearly $4 million grant from the U.S. Air Force’s Office of Scientific Research for a project to help find and fix faults in modern military systems. Military systems are a complex assembly of hardware systems, software systems and human beings all interacting to achieve an overall mission objective. The goal of UNL’s ESQuaRed team (Laboratory for Empirically-based Software Quality Research and Development), part of the Department of Computer Science and Engineering, is to develop methods for modeling how people interact with software and hardware components and with each other in order to analyze the quality of the system as a whole. The information obtained as a result will be used to improve the dependability and safety of the systems.
Sellmyer, David  

Physics and Astronomy/Nebraska Center for Materials and Nanoscience  

Research and Develop Nanoscale Magnetoelectronic, Sensor and Energy Materials and Devices  

$5,864,300  

DoD-ARO  

9/24/10 – 3/23/16  

Sellmyer, David, professor of physics and astronomy, and colleagues in the Nebraska Center for Materials and Nanoscience, have received funding from the Army Research Office to support several efforts of high current interest in nanoscience and nanotechnology: 1) magnetoelectronic and sensor materials and devices, 2) nanomaterials for energy applications, and 3) development of a nanofabrication and characterization facility to support related research. Goals of the first project are to develop a high-sensitivity magnetoresistive sensor for both DC and high-frequency-band EMI magnetic field mapping; investigate new magnetic semiconductor systems for room-temperature spintronic applications; and research the fabrication of nanodot arrays for magnetic logic and information-processing operations. Research on nanomaterials for energy systems will involve fabrication of new nanomagnets for applications in motors and hybrid vehicles, as well as research on nanoparticles and nanoclusters on oxide structures likely to have applications in energy production and environmental science. The third general area of this project involves the purchase and installation of a variety of state-of-the-art nanofabrication and characterization tools to be housed in the new NIST ARRA-supported Nanoscience Metrology Facility.

Cooperative Agreement to Research and Develop High-Sensitivity Nanosensors for Defense Applications  

$4,260,001  

DoD-ARO  

9/25/09 – 9/24/13  

Dussault, Patrick, Lai, Rebecca, Liou, Sy-Hwang, Skomski, Ralph, and Zeng, Xiao Cheng, are working on developing high-sensitivity nanosensors for defense applications. The key to improving the sensitivity of the magnetic sensors is to understand and control sources of noise and to understand the fundamental limitations due to both noise and signal. This research will provide clear pathways for applications developers to improve signal and reduce noise and lead to development of new materials for improving future sensors. In particular, there is considerable room for improvement in ferromagnetic materials. The project has important applications in the areas of homeland security, health care, information technology and nanotechnology.
Sheridan, Susan  
**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**

Efficacy of the Getting Ready Intervention at Supporting Parental Engagement and Positive Outcomes for Preschool Children at Educational Risk

$3,212,919  
07/01/12 – 06/30/16

Bovaird, James  
**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**

Clarke, Brandy  
**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**

Edwards, Carolyn  
**Child, Youth and Family Studies/Psychology**

Knoche, Lisa  
**Nebraska Center for Research on Children, Youth, Families and Schools**

Marvin, Christine  
**Special Education and Communication Disorders**

Getting Ready 2 is a continuation of the Getting Ready Project, a recently completed five-year study of parent engagement in children’s learning. In this project, supported by the U.S. Department of Education’s Institute of Education Sciences, Susan Sheridan, George Holmes University Professor of educational psychology, and her team are implementing the Getting Ready (GR) intervention with preschool children at risk of significant delays in the two years prior to kindergarten, then tracking these children and their families through kindergarten. They are evaluating the efficacy of the Getting Ready intervention in enhancing cognitive, language and S/E functioning as children complete preschool; its impact on parent engagement and parent-teacher relationships as children complete preschool; whether changes in parent engagement and parent-teacher relationships mediate the effects of the intervention on child outcomes as children complete preschool; and the long-term effects of the GR intervention through kindergarten.

Nebraska Center for Research on Rural Education (R2Ed)

$9,997,852  
7/1/09 – 6/30/15

Bovaird, James  
**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**

Glover, Todd  
**Nebraska Center for Research on Children, Youth, Families and Schools**

Kunz, Gina  
**Nebraska Center for Research on Children, Youth, Families and Schools**

Nugent, Gwen  
**Nebraska Center for Research on Children, Youth, Families and Schools**

Steckelberg, Allen  
**Teaching, Learning and Teacher Education**

Trainin, Guy  
**Teaching, Learning and Teacher Education**
Sheridan also heads the National Center for Research on Rural Education, the only one of its kind in the U.S., funded by a five-year grant from the U.S. Department Education’s Institute of Education Sciences. The center conducts cutting-edge rural education research to improve student learning in reading, science and math. Researchers identify how to best provide professional development for teachers to infuse state-of-the-art instructional strategies in their classrooms and enhance student learning. Research on rural education is limited and the center will provide the infrastructure, leadership and expertise to focus on unique rural needs.

Shulski, Martha
Regional Climate Services Support in the High Plains Region
$4,063,320
Hubbard, Kenneth
You, Jinsheng
07/01/10 – 09/30/13

NOAA’s National Climatic Data Center (NCDC) contracts with the Regional Climate Centers (RCCs) to provide regional climate services. The six centers that comprise the RCC Program are engaged in the timely production and delivery of useful climate data, information and knowledge for decision makers and other users at the local, state, regional and national levels. This includes information that informs planning and preparedness activities for natural hazards. To improve how climate information is used for drought planning, the center coordinates activities to engage the preparedness community to better integrate climate monitoring and analysis for mitigation and reduction of drought impacts.

Stowell, Richard
National Facilitation of Extension Programming in Climate Change Mitigation and Adaptation for Animal Agriculture
$4,295,536
4/1/11 – 3/31/16
Heemstra, Jill
Koelsch, Richard

University of Nebraska–Lincoln Extension has been awarded $4.1 million from the National Institute of Food and Agriculture for a five-year project addressing climate change and animal agriculture issues, led by UNL Extension engineer Richard Stowell. Five other land-grant universities are partnering in the project that will be facilitated through the Livestock and Poultry Environmental Learning Center. The overall goal of the proposed project is for Extension, working with partner organizations, to effectively inform and influence livestock and poultry producers and consumers of animal products in all regions of the U.S. to move animal production toward practices that are environmentally sound, climatically compatible and economically viable.
Torkelson-Trout, Alexandra  
Special Education and Communication Disorders  
Promoting Transition Outcomes in Youth with LD and EBD: An Efficacy and Replication Study of the On the Way Home Aftercare Intervention  
$3,487,223  
ED-IES  
7/1/12 – 6/30/16  
Duppong Hurley, Kristin  
Epstein, Michael

Alexandra Torkelson-Trout, research associate professor in the Department of Special Education and Communication Disorders, leads a project funded by the Department of Education’s Institute of Education Sciences to evaluate the “On the Way Home” aftercare program. This 12-month aftercare program is designed to improve the transition outcomes for youth with emotional and behavioral disorders or learning disabilities who have returned to the home, community and school following a stay in out-of-home care.

Tsymbal, Evgeny  
Physics and Astronomy/Nebraska Center for Materials and Nanoscience  
Center for NanoFerroic Devices  
$7,125,000  
DOC-NIST through Semiconductor Research Corp.-Nanoelectronics Research Corp.  
4/1/13 – 12/31/17

UNL leads a new $7.125 million research collaboration involving six universities and an industry consortium to develop a new generation of electronic devices. Semiconductor Research Corp. and the National Institute of Standards and Technology have awarded a UNL physics team a five-year contract to lead a new Center for NanoFerroic Devices as part of the Nanoelectronics Research Initiative. The center will harness the significant advances UNL and its Materials Research Science and Engineering Center (MRSEC) have made in exploring nanomaterials with unique properties that may prove the key to surpassing the limitations of current technology. Evgeny Tsymbal, professor of physics and astronomy and MRSEC director, co-directs the Center for NanoFerroic Devices with UNL physicist Peter Dowben. UNL is partnering with researchers at the University of California, Irvine, University of Wisconsin-Madison, University at Buffalo, SUNY, University of Delaware and Oakland University. This joint research will help transform basic university discoveries and knowledge into actual devices, in collaboration with industry.
Materials Research Science & Engineering Center: Quantum Spin

$8,426,180  
9/1/08 – 8/31/15  
Gruverman, Alexei  
Physics and Astronomy

The Materials Research Science and Engineering Center (MRSEC) was established in 2002 with a grant from the National Science Foundation and involves scientists from the Departments of Physics and Astronomy, Chemistry and Mechanical & Materials Engineering, and the School of Biological Sciences. MRSEC projects focus on fabricating and studying new magnetic structures and materials at the nanometer scale. The research has applications in advanced computing and data storage, handheld electronic devices, advanced sensors and future medical technologies.

Weissinger, Ellen

ADVANCE-Nebraska: An Institutional Approach to Hiring, Retaining, and Promoting Women STEM Faculty at the University of Nebraska–Lincoln

$3,801,443  
9/1/08 – 8/31/14  
Holmes, Mary Anne  
McQuillan, Julia  
Wei, Timothy  
Yoder, Ron  
Earth and Atmospheric Sciences  
Sociology  
Engineering  
Biological Systems Engineering

The National Science Foundation funds ADVANCE-Nebraska, a program intended to significantly increase the gender diversity of the UNL faculty, especially in the science, technology, engineering and mathematics (STEM) fields. The ADVANCE office, led by program director Mary Anne Holmes, professor of practice of earth and atmospheric sciences, coordinates recruitment and retention-enhancing activities, disseminates information to the campus and the academic community at large, and serves as liaison for the many groups engaged in diversity-focused activities on campus. Other ADVANCE efforts include initiatives related to flexible work arrangements to accommodate work-life issues of faculty; development of a dual career partner program; training programs to minimize the influence of bias on decision-making processes; and informal networking through professional development workshops and retreats. The five-year, $3.8 million grant is from NSF’s ADVANCE program, which aims to increase participation and advancement of women in academic science and engineering careers.
Great Plains National Security Education Consortium (GP-NSEC)

$3,210,000  DoD-NGIA
9/23/09 – 9/22/14
Adenwalla, Shireen  Physics and Astronomy
LeSueur, James  History
McMahon, Patrice  Political Science
Paul, Prem  Research and Economic Development
Wedeman, Andrew  Political Science
Wood, Simon  Classics and Religious Studies

The Great Plains National Security Education Consortium (GP-NSEC) is an Intelligence Community (IC) Center of Academic Excellence, located at UNL, in partnership with the University of Nebraska at Omaha, Creighton University and Bellevue University. By forming a partnership among four institutions that reach a diverse mix of students and aligning strong IC-relevant programs designed to meet differing academic and professional needs, GP-NSEC establishes a whole that is greater than the sum of its individual parts. The goal of GP-NSEC is to help prepare and diversify the next-generation IC workforce by providing rich academic, research, cultural immersion, and outreach activities focused on national security-related topics to talented students from a variety of backgrounds.

Wood, Charles
Biological Sciences/
Nebraska Center for Virology

$5,499,715  NIH-NIGMS
9/16/10 – 7/31/15

Charles Wood, Lewis Lehr/3M University Professor of Biological Sciences, is the director of the Nebraska Center for Virology. The center, funded by the National Institutes of Health, combines the expertise and facilities of Nebraska’s leading biomedical research institutions: UNL, the University of Nebraska Medical Center and Creighton University. Center research addresses pathogenic and therapeutic aspects of some of the most devastating viral and neuroimmune disorders facing the global community, including AIDS, HIV-associated cancers, Alzheimer’s disease and chronic infections caused by herpes viruses and a new class of infectious agents called prions.

Kaposi’s Sarcoma & Human Herpesvirus in Africa

$5,194,724  NIH-NCI
7/16/10 – 4/30/15

Since the onset of the AIDS epidemic, Kaposi’s sarcoma has become the most frequently diagnosed pediatric cancer in sub-Saharan Africa. It is associated with Human Herpesvirus 8 (HHV-8) and Kaposi’s Sarcoma Herpesvirus. The project seeks to understand how these viruses are transmitted to children by studying children in Lusaka, Zambia. The goal is to establish the rates of transmission and to identify virologic, immunologic and ethnographic risk factors that predispose children to HHV-8 infection. It is anticipated that the information could be used to develop intervention strategies.
Awards of $1 Million to $2,999,999
Active awards, July 1, 2013-June 30, 2014
* Indicates new in 2013-2014

**Alexander, Dennis**  
Electrical Engineering  
Fundamental Studies of Femtosecond Pump Probe Techniques for Killing and Assessment of Damage to Optical Components  
$1,111,104  
DOD-AFRL  

**Ianno, Natale**  
Electrical Engineering  

**Alfano, James**  
Plant Pathology/Center for Plant Science Innovation  
Suppression of Innate Immunity by ADP Ribosyltransferase Type III Effectors  
$1,797,433  
NIH-NIAID  

**Baenziger, P. Stephen**  
Agronomy and Horticulture  
Improving Barley and Wheat Germplasm for Changing Environments  
$1,261,597  
USDA through University of California, Davis  

**Lee, Donald**  
Agronomy and Horticulture  

**Regassa, Teshome**  
Agronomy and Horticulture  

**Waters, Brian**  
Agronomy and Horticulture  

**Balkir, Sina**  
Electrical Engineering  
* Ultra-Low-Power Long-Duration Programmable Remote Radiation Monitoring Sensor Electronics  
$1,385,150  
DOD-DTRA  

**Bauer, Mark**  
Electrical Engineering  

**Hoffman, Michael**  
Electrical Engineering  

**Barker, Bradley**  
4-H Youth Development  
Scale-UP: National Robotics in 4-H: Workforce Skills for the 21st Century  
$2,498,908  
NSF  

**Adamchuk, Viacheslav**  
Biological Systems Engineering  

**Nugent, Gwen**  
Nebraska Center for Research on Children, Youth, Families and Schools  

**Becker, Donald**  
Biochemistry  
Role of Proline in Redox Homeostasis and Apoptosis  
$1,089,521  
NIH-NIGMS  

**Mechanistic Studies of Functional Switching in the PutA Flavoprotein**  
$1,888,980  
NIH-NIGMS  

**Bellows, Laurie**  
Graduate Studies  
McNair Scholars Project and the University of Nebraska-Lincoln  
$1,088,494  
ED
Benson, Andrew  
Food Science and Technology  
Composition of the GI Microbiota and Predisposition to Enterohemorrhagic Escherichia coli (EHEC) Colonization as Complex Polygenic Traits in Beef Cattle  
$2,354,004  
Kachman, Stephen  
Statistics  
USDA-NIFA  
Moriyama, Etsuko  
Biological Sciences/Center for Plant Science Innovation

Bevins, Rick  
Psychology  
Pharmacological Interventions to Diminish Nicotine-Associated Responding  
$1,437,004  
NIH-NIDA

Bloom, Kenneth  
Physics and Astronomy  
* Experimental Particle Physics at the Energy and Cosmic Frontiers  
$2,055,000  
Claes, Daniel  
Physics and Astronomy  
NSF  
Dominguez, Aaron  
Kravchenko, Ilya  
Snow, Gregory  
Physics and Astronomy  
U.S. CMS Operations at the LHC  
$2,626,621  
Swanson, David  
Computer Science and Engineering  
NSF through Princeton University

Blum, Paul  
Biological Sciences  
Value-Added Products from Renewable Biofuels  
$1,968,000  
Cassman, Kenneth  
Agronomy and Horticulture  
DOE

Bond, Alan  
Biological Sciences  
Mechanisms of Social Cognition  
$1,458,126  
Kamil, Alan  
NIH-NIMH  
Biological Sciences

Cahoon, Edgar  
Biochemistry/Center for Plant Science Innovation  
Center for Metabolic Channeling for Enhanced Biofuel Systems  
$1,412,772  
DOE through Donald Danforth Plant Science Center
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$1 MILLION – $2,999,999
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Fontaine, Joseph  
* Use and Satisfaction of Public Hunting Opportunities  
$1,240,600  
Martin, Dustin  
Natural Resources

Frankl, Nicole  
* Nebraska Rural Transit NU Development and Support  
$2,090,048  
Bivin, William  
Nebraska Local Technical Assistance Program

Green, Jordan  
* Bulbar Motor Deterioration in ALS  
$2,294,633  
Guo, Jiantao  
* Improve the Safety of an Efficacious Live-Attenuated HIV-1 Vaccine through Unnatural Amino Acid-Mediated Suppression of Blank Codon  
$1,919,552  
Guerritzky, John  
* Agro-Ecosystem Approach to Sustainable Biofuels Production  
$1,916,143  
Gruverman, Alexei  
Nanoscale Resistive Switching Behavior of Ferroelectric and Multiferroic Tunnel Junctions  
$1,251,143  
Guo, Jiantao  
Chemistry

Huang, Jinsong  
* High-efficiency Low-cost Nanocomposite for Radiation Detection Enabled by Charge Triggered Secondary Charge Injection  
$1,050,000  
Huang, Jinsong  
Mechanical & Materials Engineering

$1 MILLION — $2,999,999
Hudgins, Jerry  
Electrical Engineering  
$1,118,179  
DOT-FHWA  
Jones, Elizabeth  
Civil Engineering  
Qiao, Wei  
Electrical Engineering  
Rilett, Laurence  
Civil Engineering/Nebraska Transportation Center  
Sharma, Anuj  
Civil Engineering

Hygnstrom, Scott  
Natural Resources  
Development of Spatially Explicit Models of Wildlife Diseases  
$1,220,184  
USDA-APHIS

Irmak, Suat  
Biological Systems Engineering  
Measurement of Growing Season Actual Crop Evapotranspiration and Crop Coefficients, and Dormant Season Evaporative Losses for Key Vegetation Surfaces in the Central Platte Natural Resources District  
$1,066,416  
Central Platte NRD  
Kilic, Ayse  
Biological Systems Engineering  
Martin, Derrel  
Biological Systems Engineering  
von Donk, Simon  
Biological Systems Engineering  
Verma, Shashi  
Natural Resources

Jackson, David  
Agricultural Research Division  
Identification and Release of Brown Midrib (BMR) Sorghum Varieties to Producers in Central America and Haiti  
$1,100,000  
USAID

Johnson, Scott  
Biological Process Development Facility  
USAMRAA CGMP Production Contract #1  
$2,164,301  
DoD-AMR  
Van Cott, Kevin  
Chemical and Biomolecular Engineering

Josiah, Scott  
Nebraska State Forest Service  
Cooperative Forestry Program  
$1,734,765  
10/1/11 – 9/30/16  
USDA-FS

Lee, Jaekwon  
Biochemistry  
Mechanistic Insights into Cellular Metal Detoxification  
$1,408,563  
NIH-NIEHS

Lewis, Elizabeth  
Teaching, Learning and Teacher Education  
UNL Science Scholars Program  
$1,194,387  
NSF  
Bonnstetter, Ron  
Teaching, Learning and Teacher Education  
Claes, Daniel  
Physics and Astronomy  
Gosselin, David  
Natural Resources  
Heng-Moss, Tiffany  
Entomology  
Swidler, Stephen  
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$1 MILLION — $2,999,999
Pegg, Mark  
Missouri River Sportfish Ecology and Management  
$1,324,787  
Nebraska Game and Parks Commission  
Natural Resources

Hamel, Martin  

Perez, Lance  
* WIDER: Adopting Research-Based Instructional Strategies for Enhancing STEM Education  
$1,990,279  
Arthurs, Leilani  
Earth and Atmospheric Studies  
$1,324,787  
Couch, Brian  
Biological Sciences  
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Golick, Douglas  
Entomology  
$1,990,279  
Heaton, Ruth  
Teaching, Learning and Teacher Education  
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Lee, Kevin  
Center for Science, Mathematics and Computer Education/Physics and Astronomy  
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Spiegel, Amy  
Educational Psychology  
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Stains, Marilyne  
Chemistry  

Pickard, Gary  
Veterinary Medicine and Biomedical Sciences  
Homeostatic Regulation of Peripheral Oscillators via Autonomic Circuitry  
$1,761,617  
Sollars, Patricia  
Veterinary Medicine and Biomedical Sciences

Pope, Kevin  
Natural Resources  
* Human Dimensions of Nebraska’s Fisheries  
$2,165,236  
Chizinski, Christopher  
Veterinary Medicine and Biomedical Sciences

Reddy, N.R. Jayagopala  
Veterinary Medicine and Biomedical Sciences  
* Autoimmunity in the Mediation of Infectious Myocarditis  
$1,370,344  
Elthon, Thomas  
Biotechnology/Agronomy and Horticulture  
$1,370,344  
Othman, Shadi  
Biological Systems Engineering  
$1,370,344  
Riethoven, Jean-Jack  
Biotechnology  
$1,370,344  
Steffen, David  
Veterinary Medicine and Biomedical Sciences  
$1,370,344  
Xu, Huihui  
Biological Systems Engineering

Redepenning, Jody  
Chemistry  
Bioceramic Bones for Battlefield Traumas  
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DoD-AMR

Richardson, Amanda  
Sociology  
Behavioral Risk Factor Surveillance Survey 2012  
$1,151,218  
DHHS-CDC through Nebraska Department of Health and Human Services

Robertson Jr., Vaughn  
Student Affairs  
UNL Educational Talent Search  
$2,082,071  
ED
Sellmyer, David  
**Physics and Astronomy/Nebraska Center for Materials and Nanoscience**  
Studies of Artificially Structured Composite Magnets  
$1,408,001  
DOE

Beyond Rare Earth Magnets  
$1,197,462  
DOE-Ames Laboratory

Shield, Jeffrey  
**Mechanical & Materials Engineering**  
Skomski, Ralph  
**Physics and Astronomy**

Shapiro, Charles  
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Improving Organic Farming Systems and Assessing Their Environmental Impacts across Agro-Ecoregions  
$1,419,710  
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**Durham School of Architectural Engineering and Construction**  
Advanced Decentralized Water/Energy Network Design for Sustainable Infrastructure  
$1,249,995  
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Alahmad, Mahmoud  
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Lau, Siu Kit  
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Li, Haorong  
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Schwer, Avery  
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**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**  
A Randomized Trial of Conjoint Behavioral Consultation (CBC) in Rural Educational Settings: Efficacy for Elementary Students with Disruptive Behaviors  
$2,999,994  
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Regional Climate Services Support in the High Plains Region
$1,218,274
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Simpson, Melanie
Biochemistry
Mechanisms of Hyaluronan Signaling and Turnover in Prostate Cancer
$1,503,626
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Harris, Edward
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Somerville, Greg
Veterinary Medicine and Biomedical Sciences
Citric Acid Cycle Regulation of Exopolysaccharide Synthesis in Staphylococci
$1,384,992
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Powers, Robert
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Spreitzer, Robert
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Role of the Rubisco Small Subunit
$1,496,500
DOE

Starace, Anthony
Physics and Astronomy
Dynamics of Few-Body Atomic Processes
$2,180,804
DOE

Steadman, James
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Genetic Approaches to Reducing Fungal and Oomycete Soilborne Problems of Common Bean in Eastern and Southern Africa
$1,100,000
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Urrea Florez, Carlos
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Storz, Jay
Biological Sciences
Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents
$1,411,572
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Moriyama, Hideaki
Biological Sciences/Center for Biotechnology

Stroup, Walter
Statistics/Center for Science, Mathematics and Computer Education
Data Connections: Developing a Coherent Picture of Mathematics Teaching and Learning
$1,213,475
NSF

Green, Jennifer
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Smith, Wendy
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Tsymbal, Evgeny
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Cyberinfrastructure-Enabled Computational Nanoscience for Energy Technologies
$2,587,878
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Swanson, David
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Umstadter, Donald  
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$2,896,428  
* Novel Narrowband, Tunable, Multi-MeV-\textit{X}-Ray Source  
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Chen, Shouyuan  
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Propagation and Interactions of Ultrahigh Power Light: Relativistic Nonlinear Optics  
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Kalmykov, Serguei  
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Shadwick, Bradley  
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Laser Produced Coherent X-Ray Sources  
$1,395,000  
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Velander, William  
Chemical and Biomolecular Engineering  
Technologies for Hemostasis and Stabilization of the Acute Traumatic Wound  
$1,783,613  
D-O-D-USAMRAA through UNMC  
Walia, Harkamal  
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Physiological and Genetic Mechanisms Underlying Salt Tolerance in Rice across Developmental Stages  
$2,035,509  
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Samal, Ashok  
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Wang, Dong  
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Walter, Jens  
Food Science and Technology  
Determination of the Importance of Colonization History in the Assembly of the Gastrointestinal Microbiota  
$1,194,259  
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Petersen, Daniel  
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Wardlow, Brian  
Natural Resources  
* The Quick Drought Response Index (QuickDRI): An Integrated Approach to Maximizing the Use of NASA Data Sets for Rapid Response Drought Monitoring  
$1,150,701  
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Hayes, Michael  
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Consortium for Commercialization of Algae Biofuels and Biotechnology  
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Van Etten, James  
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Whitbeck, Les
Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents
$1,358,156
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Sociology

Cheadle, Jacob

Hoyt, Dan

Wilson, Mark
Biochemistry/
Nebraska Center for Redox Biology
Redox Regulation of DJ-1 Function
$1,330,374
NIH-NIGMS

Wood, Charles
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Nebraska Center for Virology
Neuropathogenesis and Neuroinvasiveness of Subtype C Human Immunodeficiency Virus-1
$1,712,314
DHHS-NINDS

Wood, Charles
Biochemistry/
Nebraska Center for Redox Biology
Programs in HIV & AIDS Assoc Diseases/Malignancies
$2,609,284
NIH-FIC

Wood, Charles
Biochemistry/
Nebraska Center for Virology
Research Training in Comparative Viral Pathogenesis
$1,316,330
NIH-NIAID

Wood, Charles
Biochemistry/
Nebraska Center for Virology
Vaccination against Mucosal HIV Clade C Transmission
$1,291,235
NIH-DFCI

Yamamoto, Catherine
Student Affairs
Student Support Services Program
$2,470,445
ED
Awards of $200,000 to $999,999
Active awards, July 1, 2013–June 30, 2014
* Indicates new in 2013-2014

Adamec, Jiri
Biochemistry
Genetic & Genomic Approaches to Understanding Long-Distance Transport and Carbon Partitioning in Plants
$315,157 NSF through University of Missouri

Adenwalla, Shireen
Physics and Astronomy/Center for Materials and Nanoscience
Magnetoelectric Coupling in Ferroelectric/Ferromagnetic Heterostructures: Beyond Volume Effects
$395,020 NSF
Ducharme, Stephen Physical and Astronomy
Gruverman, Alexei Physical and Astronomy

Albrecht, Julie
Nutrition and Health Sciences
Growing Healthy Kids through Healthy Communities
$947,093 USDA-AFRI
Bergman, Gary Southeast Research and Extension Center
Food Safety for Diverse Families with Young Children
$554,302 USDA-NIFA

Alfano, James
Plant Pathology
* The Pseudomonas Syringae Type 3 Translocon and the Injection of Bacterial Effectors across the Plant Cell Wall and Plasma Membrane
$499,778 USDA-NIFA

Allen, Craig
Natural Resources
NGPC Coordination, Mapping, Monitoring, Risk Assessment and Data Management of Wind Development in Nebraska
$295,770 Nebraska Game and Parks Commission
Fontaine, Joseph Natural Resources
Nebraska Wetland Conditions Assessment: An Intensification Study in Support of the 2011 National Survey
$338,250 Nebraska Game and Parks Commission

NCFWRU: Adaptive Management for Nebraska Legacy Program Goals
$200,000 Nebraska Game and Parks Commission
Fontaine, Joseph Natural Resources
Missouri River Mitigation: Implementation of Amphibian Monitoring and Adaptive Management for Wetland Restoration Evaluation
$601,886 DOI-GS

Anderson, John
Economics
Clayton Yeutter Center for International Trade Phase I: Trade Scholars Program
$500,000 DOC-ITA
Anderson, Mark
Earth and Atmospheric Sciences
Development of Northern Hemisphere Snow & Ice Climate Data Records
$247,874 NASA through Rutgers University

Askren, Mark
Information Services
* CC-NIE Networking Infrastructure: Accelerating Science for Nebraska
$491,871 NSF
Bockelman, Brian
Computer Science and Engineering
Ramamurthy, Byravamurthy
Computer Science and Engineering
Swanson, David
Computer Science and Engineering

Atkin, Audrey
Biological Sciences
Mechanisms that Protect Transcripts from Nonsense-Mediate mRNA Decay
$620,647 NSF

Avalos, George
Mathematics
Analysis and Control of Evolutionary Plates and Elastic Structures
$292,773 NSF
Toundykov, Daniel
Mathematics

Avramov, Luchezar
Mathematics
Cohomology over Commutative Rings: Structure and Applications
$458,919 NSF

Avramova, Zoya
Biological Sciences
Memory of a Drought: Training Arabidopsis Plants to Withstand Dehydration Stress
$711,000 NSF
Fromm, Michael
Center for Biotechnology/
Riethoven, Jean-Jack
Center for Plant Science Innovation

Azizinamini, Atorod
Civil Engineering
Comprehensive Evaluation of Fracture Critical Bridges
$286,348 Nebraska Department of Roads

Baenziger, P. Stephen
Agronomy and Horticulture
Enhance Variety Development of Scab Resistant Hard Winter Wheat Varieties in Nebraska
$272,910 USDA-ARS
Wegulo, Stephen
Plant Pathology

Balschweid, Mark
Agricultural Leadership, Education and Communication
Soybean Market Journal
$200,000 Nebraska Soybean Board
Harms, Kurtis
Agricultural Leadership, Education and Communication
Schulte, Brandon
Agricultural Leadership, Education and Communication
Wilkerson, Jeff
Agricultural Leadership, Education and Communication

$200,000 — $999,999
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<td>Comparison of Gnotobiotic and Conventional Mice for Predicting the Allergenic Potential Proteins Introduced into Genetically Engineered Plants</td>
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<td>Cell Line Development, Early Stage Production and Establishment of a Research Cell Bank</td>
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<td>Predictive Models for Dynamic Brittle Fracture and Damage at High-Velocity Impact in Multilayered Targets</td>
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<td>CC-NIE Integration: Bringing Distributed High Throughput Computing to the Network with Lark</td>
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Biopesticide Management of Pasture Flies in the Great Plains via a Push-Pull Strategy
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Contrasting Environmental and Genetic Controls of Alternative Phenotypes
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* Generation and Regulation of Anti-Viral CD4 T Cells with Cytolytic Potential
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* Manufacture of Recombinant Vaccine for Phase Clinical Trial and Toxicity Testing
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Bulling, Denise
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Burgin, Amy
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The Effects of Alum and Fish Restoration on Water Quality in the Fremont Lake, NE
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Coupled C, N and S Cycling in Coastal Plain Wetlands: How Will Climate Change and Salt Water Intrusion Alter Ecosystem Dynamics?
$239,555
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Cahoon, Edgar
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Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis
$686,815 NSF
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$408,442 Bill & Melinda Gates Foundation through Donald Danforth Plant Science Center

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Cassman, Kenneth
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Centurion, Martin
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Ultrafast Imaging of Electronic Motion in Atoms and Molecules
$737,778 DoD-AFOSR
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Physics and Astronomy
Ultrafast Electron Diffraction from Aligned Molecules
$750,000 DOE

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Biological Sciences/
Center for Plant Science Innovation
Histone H3 Phosphorylation and Gene Silencing in Chlamydomonas and Arabidopsis
$591,661 NSF

Chambers, Jeffrey
Center on Children, Family and the Law
Nebraska Homeless Assistance Program - Homeless Management Information System Region VI and Balance of State
$202,221 Nebraska Department of Health and Human Services
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RI: Small: Towards Practical Tractability in Constraint Processing  
$419,564  NSF

Christensen, Alan  Biological Sciences  
EAGER: Plant Mitochondrial Transformation  
$300,000  NSF

Ciobanu, Daniel  Animal Science  
* Application of Genomics to Improving Swine Health and Welfare  
$243,065  University of Alberta, Canada

Claes, Daniel  Physics and Astronomy  
* Strategies: Action at a Distance  
$550,000  NSF
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Welch, Greg  Nebraska Center for Research on Children, Youth, Families and Schools

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* ATD: Statistical Ensembles for the Identification of Bacterial Genomes  
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$386,969  United Soybean Board/Smith/Bucklin
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Cohen, Myra  Computer Science and Engineering  
SHF: Medium: Regression Testing Techniques for Real-World Software Systems  
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* Impact of the Summer Institution on Faculty Teaching and Student Achievement  
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Cramer, Joel  
* Effects of Conjugated Linoleic Acid on Physical Performance  
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Nutrition and Health Sciences  
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Housh, Terry  
Jenkins, Nathaniel  
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Nutrition and Health Sciences  
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* STTR: Infant Assessment of Early Communication Risk Factors: The ECBS  
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Crockett, Lisa  
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An Ecological Model of Latino Youth Development  
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Carranza, Miguel  
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De Guzman, Maria  
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Cupp, Andrea  
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* Causes and Consequences of Androgen Excess on Oocyte Quality  
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De Ayala, Rafael  
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Bovaird, James  
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Geisinger, Kurt  
Educational Psychology

Detweiler, Carrick  
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* Co-Aerial-Ecologist: Robotic Water Sampling and Sensing in the Wild  
$956,210  
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Natural Resources  
Elbaum, Sebastian  
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Waite, Matthew  
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NSF

RI: Small: Adaptive Sampling with Robots for Marine Observations  
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NSF
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Combined Raman/SEM and Raman/FTIR System for High-Resolution Multispectral Analysis of Advanced Materials  
$450,128  
DOD-AFOSR-DURIP  
Advanced Single-Polymer Nanofiber-Reinforced Composite:  
Towards Next Generation Ultralight Superstrong/Tough Structural Material  
$893,269  
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MURI: Multiscale Design and Manufacturing of Hybrid DWCNT-Polymer Fibers  
$815,077  
DoD through Northwestern University

Elbaum, Sebastian  
**Computer Science and Engineering**  
SHF: Small: Solving the Search for Relevant Code in Large Repositories with Lightweight Specifications  
$449,033  
NSF  
T2T: A Framework for Amplifying Testing Resources  
$491,688  
NSF

Dwyer, Matthew  
**Computer Science and Engineering**  
$491,688  
NSF

Enders, Axel  
**Physics and Astronomy**  
* UNO-NASA Space Grant Consortium: Neutron Voltaics for Deep Space Missions  
$546,569  
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Dowben, Peter  
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Epstein, Michael  
**Special Education and Communication and Disorders**  
University of Nebraska’s Post-Doctoral Program in Emotional Disturbance  
$643,776  
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$621,989  
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$601,733  
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Duppong Hurley, Kristin  
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Erickson, Galen  
**Animal Science**  
* Integrated Anaerobic Digestion with Algae Bioenergy and Green Aquaculture  
$250,000  
Nebraska Environmental Trust  
Isom, Loren  
Industrial Agricultural Products Center  
Riley, Mark  
Biological Systems Engineering  
Schmidt, Amy  
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Stowell, Richard  
Biological Systems Engineering

$200,000 — $999,999
$200,000 — $999,999

**Eskridge, Kent**

GAANN Fellowship Program for Statistics

$396,456

**Batman, Renee**

Graduate Studies

**Bellows, Laurie**

Graduate Studies

**Bilder, Christopher**

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**Blankenship, Erin**

Statistics

**Parkhurst, Anne**

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**Stroup, Walter**

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**Weissinger, Ellen**

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**Zhang, Shunpu**

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**Fabrikant, Ilya**

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Electron-Molecule Collisions in Different Environments

$240,000

**Faller, Ronald**

Midwest Roadside Safety Facility

* Development of a TL-3 Transition between Temporary Free-Standing, F-Shape 12.5' Concrete Protection Barrier and Guardrail

$213,677

**Bielenberg, Robert**

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**Reid, John**

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Dynamic Evaluation of Cable Guide Rail with Strong and Standard J-Bolts under MASH

$293,248

**Bielenberg, Robert**

Midwest Roadside Safety Facility

**Lechtenberg, Karla**

Midwest Roadside Safety Facility

**Reid, John**

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**Stolle, Cody**

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Adaptation of the SAFER Barrier for Roadside and Median Applications

$990,000

**Reid, John**

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**Farritor, Shane**

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* Robotic Tele-Surgery Research

$686,808

**Hawks, Jeff**

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**Nelson, Carl**

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**Terry, Benjamin**

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Robotic Devices to Support Long-Term Human Space Flight

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**Feng, Song**

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Megadrought: Local vs. Remote Causal Factors for Medieval North America

$469,398

**Hu, Qi (Steve)**

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Interactions of Water and Nitrogen Supply  
for Irrigated Corn across Field Landscapes  
$483,373  
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Irmak, Suat  
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Evaluation of Flue Gas Desulfurization Gypsum (FGDG)  
as a Soil Amendment for Irrigated Crop Production  
$256,292  
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Dietary Intervention and Microbial Community Analysis  
toward Methane Mitigation  
$749,941  
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Jenkins, Karla  
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Fontaine, Joseph  
Assessing the Effects of Habitat Incentive Programs and  
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$405,382  
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Forbes, Cory  
* Modeling Hydrologic Systems in Elementary Science  
$327,537  
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Franco Cruz, Rodrigo  
Thiol Redox Signaling in Neuronal Cell Death  
$214,500  
American Heart Association  

Frankl, Nicole  
* Nebraska Local Technical Assistance Program FY 2015  
$834,038  
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Franti, Thomas  
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$571,988  
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$627,491  
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<td>Gaussoin, Roch</td>
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<td>* Development of Quality Protein Popcorn as a Non-GMO Approach to Enhanced Nutritional Quality, Pop Volume and Flavor Profile</td>
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<td>* Marker Discovery and Characterization of Genetic Diversity in CAG Popcorn Breeding Program</td>
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*Nebraska Center for Research on Children, Youth, Families and Schools*  
State-Wide Response-to-Intervention Consortium for Training & Evaluation  
$499,917  
Nebraska Department of Education  
Ihlo, Tanya  
*Nebraska Center for Research on Children, Youth, Families and Schools*  

Goddard, Stephen  
*Computer Science and Engineering*  
CSR: Small: Systematic Approaches for Real-Time Stream Data Services  
$L250,000  
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Liu, Xue  
*Computer Science and Engineering*  

Goodman, Richard  
*Food Science and Technology*  
*In vitro* Serum IgE Testing of a Stacked-Event Biotech Soybean Compared to Commercial Lines  
$229,508  
Pioneer Hi-Bred  

In vitro IgE Testing of a Biotech Soybean Event LEPI 2800  
$225,755  
Pioneer Hi-Bred  

Food Allergen Database  
$957,318  
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Goosby, Bridget  
*Sociology*  
Intergenerational Transmission of Race Disparities in Health  
$546,345  
NIH-NICHD  

Gosselin, David  
*Natural Resources*  
Global Climate Change Education: Research Experiences, Modeling and Data  
$349,973  
NASA  
Bonnstetter, Ron  
*Teaching, Learning and Teacher Education*  
Natural Resources  
Low, Russanne  
Oglesby, Robert  
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Online Master’s Degree in Applied Science Education  
$540,345  
Toyota USA Foundation  
Bonnstetter, Ronald  
*Teaching, Learning and Teacher Education*  
Strand, Billie  
*Extended Education and Outreach*  

Graef, George  
*Agronomy and Horticulture*  
Quality Traits Regional Tests  
$267,201  
United Soybean Board/Smith/Bucklin  

Soybean Breeding and Genetic Research for Nebraska  
$230,521  
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Specht, James  
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Griep, Mark  
*Chemistry*  
*Framing the Chemistry Curriculum*  
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<td>Materials World Network: Critical Scaling of Domain Dynamics in Ferroelectric Nanostructures</td>
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<td>Demonstrating Mob Grazing Impacts in the Northern Great Plains on Grazingland Efficiency, Botanical Composition, Soil Quality, and Ranch Economics</td>
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<td>Distributed Fiber-Optic Laser Ultrasound Generation</td>
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Molecular Evolution of Genes Expressed  
in *D. melanogaster* Sperm Storage Structures  
$302,713  
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Zhang, Zhaoyan  
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* Drought Information Service in Support of the National Integrated Drought Information System NIDIS  
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Knutson, Cody  
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Svoboda, Mark  
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Tadesse, Tsegaye  
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Natural Resources  

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Hein, Gary  
Entomology  
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Heng-Moss, Tiffany  
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Mitigating Insect Herbivory of Warm-Season Bioenergy Grasses – Getting Ahead of the Curve  
$734,477  
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* Topology and Geometry of Cayley Graphs for Groups  
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Higley, Leon  
**Natural Resources**  
Establishing Blow Fly Development and Sampling Procedures to Estimate Postmortem Intervals  
$483,323  
DOJ-National Institute of Justice

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**Electrical Engineering**  
Ellipsometric Materials Characterization of Electronic Thin Film Heterostructures  
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Holding, David  
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* A Novel Functional Genomics Platform for Dissecting Maize Kernel Maturation and Protein Quality  
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Development of a Northern Hemisphere Gridded Precipitation Dataset Spanning the Past Half Millennium for Analyzing Interannual and Longer-Term Variability in the Monsoons  
$529,501  
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Extremely Sensitive Solid-State Ultraviolet Photodetector by Fabricated Low-Cost Solution Process  
$628,183  
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NSF

Iyengar, Srikanth  
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Derived Categories of Complete Intersections and Hochschild Cohomology  
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* Pollen-Mediated Gene Flow from Acetolactate Synthase-Inhibiting Herbicide-Resistant Sorghum to Johnsongrass  
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$763,023  
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PATH, through Bill & Melinda Gates Foundation

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* Analysis of Bovine Herpesvirus 1 Stress-Induced Reactivation from Latency  
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Doster, Alan  
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Analysis of Viral Factors that Regulate the Bovine Herpesvirus 1 (BHV-1) Latency Reactivation Cycle  
$375,000  
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Mower, Jeffrey  
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Microarray Analysis of Gene Expression Profiles in Cells Transfected with Nonviral Gene Delivery Vectors  
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* Development of a Novel Self-Propagating PRRSV-VSV G Hybrid Replicon as a Vector for Inducing Broad PRRSV Protection  
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$801,000  
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* A Chautauqua Program for the 21st Century  
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* Crossing the Threshold of Problem Solving: Electrical Engineering vs. Chemistry  
$244,058  
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$255,394  
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Heaton, Ruth  
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NASA EPSCoR RFID and RTLS Enhancement for Inventory Management and Logistics of Space Transportation Systems  
$690,000  
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**Mechanical & Materials Engineering**  
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NCFWRU: Population Assessments of Temperate Basses in Nebraska Reservoirs  
$212,683  
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Recruitment of Walleye and White Bass in Irrigation Reservoirs  
$678,884  
Nebraska Game and Parks Commission

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SBES: Medium: Investigating the Role of Distrust in Unauthorized Online Activities Using an Integrated Sociotechnical Approach
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Cognitive Prediction-Enabled Online Intelligent Fault Diagnosis and Prognosis for Wind Energy Systems
$359,852
Intelligent Optimal Mechanical Sensorless Control for Variable-Speed Wind Energy Systems Considering System Uncertainties
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$606,572  
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$415,471  
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* 2014-2015 Student Health and Risk Prevention Surveillance System  
$275,981  
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* Traffic Calming Elements for Entry Control Facility
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* UTC Tier 1 with University of Texas Pan American
$424,230
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Enhance Awareness of Transportation and Transportation Careers - Fast Forward

$200,000
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Nebraska Center for Research on Children, Youth, Families and Schools

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Soil Carbon Transformation in Heterogeneous Landscapes: Implications for Soil, Water and Air

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* Nebraska Energy Office Loan Management System
$294,745
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* HCC: Variations to Support Exploratory Programming
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Sayood, Khalid
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HCC: Large: Large-Scale Human-Centered Coordination Systems to Support Interdependent Tasks in Context
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Scalora, Mario
Public Policy Center/Psychology
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Scalora, Mario
Public Policy Center/Psychology
Improving Insider Threat Reporting
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Schacht, Walter
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Demonstrating Grazing Land Resilience to Drought in the Central and Northern Great Plains
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Volesky, Jerry
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* Ability of Sorghum Lipids to Reduce Metabolic Intestinal Inflammation and Lower Cholesterol Caused by High Fat Diets
$226,696
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* MRI: Development of an Ion-Beam-Assisted Glancing Angle Deposition Tool (iGLAD) for 3D Nanostructure Thin Film Preparation with in situ Ellipsometry Control
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Seth, Sharad  
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HECURA: A New Semantic-Aware Metadata Organization for Improved File-System Performance and Functionality in High-End Computing  
$344,552  
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Multi-Physics Modeling of Intense, Short-Pulse Laser-Plasma Interactions  
$342,000  
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Buffalograss Breeding, Evaluation and Management for Golf Course  
$360,000  
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Improving and Conserving Water Resources Through Stormwater Management Education for Community Decision Makers of Today and Tomorrow  
$544,500  
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Feehan, Kelly  
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Franti, Thomas  
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Rodie, Steven  
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Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools  
A Meta-Analysis of Parent Involvement Interventions and Family-School Partnerships’ Effects on Student Outcomes  
$699,997  
Kim, Elizabeth  
Nebraska Center for Research on Children, Youth, Families and Schools  
Consultation Based Interventions for Students with Social and Behavioral Concerns  
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Measurement of Vertical Track Deflection: Testing, Demonstration & Implementation  
$546,000  
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Belashchenko, Kirill  
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Shulski, Martha  
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* Automated Weather Data Network  
$300,000  
Nebraska Department of Natural Resources  
Siegfried, Blair  
Entomology  
* Characterizing Resistance Evolution to Pyrethroid Insecticides  
$528,340  
Monsanto  
Utilization of RNAi to Validate Putative Cry Protein Receptors in the Western Corn Rootworm, *Diabrotica virgifera virgifera*  
$211,229  
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Assessing the Risk of European Corn Borer Adaptation to Transgenic Bt Maize  
$400,000  
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Smith, Stacey  
Biological Sciences  
Evolution and Diversification of Red Flowers: Testing the Macroevolutionary Causes of Rarity  
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NSF
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* Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa under Evolving Climate Conditions to Support Adaptation Strategies  
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Evaluating Integrated Resistance Management Strategies in Variable Environments  
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$249,053  
Liu, Xue  
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Gaussoin, Roch  
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$283,280  
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Public Policy Center  
Pytlik Zillig, Lisa  
Center for Instructional Innovation/Public Policy Center

Trainin, Guy  
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Hamann, Edmund  
Teaching, Learning and Teacher Education

Tsymbal, Evgeny  
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Turner, Joseph  
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Tyler, Kimberly  
Sociology  
* Stressors, Protective Factors, and Substance Use among Homeless Youth and Young Adults  
$408,768  
Olson, Kristen  
Sociology/Survey Research and Methodology
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<tr>
<th>Name</th>
<th>Department</th>
<th>Project Description</th>
<th>Grant Amount</th>
<th>Funding Agency</th>
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<td>Uiterwaal, Cornelis</td>
<td>Physics and Astronomy</td>
<td>REU Site: Optics and Laser Physics</td>
<td>$246,450</td>
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<td>Batelaan, Herman</td>
<td>Physics and Astronomy</td>
<td>Molecules and Intense Light in a Photodynamical Test Tube</td>
<td>$440,000</td>
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<td>Umstader, Donald</td>
<td>Physics and Astronomy</td>
<td>* Nuclear Forensics</td>
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<td>Banerjee, Sudeep</td>
<td>$442,915</td>
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<td>Chen, Shouyuan</td>
<td>$514,995</td>
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<td>Van Cott, Kevin</td>
<td>Chemical and Biomolecular Engineering</td>
<td>Structural Characterization of Recombinant Glycoproteins</td>
<td>$331,923</td>
<td>NSF</td>
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<td>Van Den Broek, Matthew * Quantifying the Relative Roles</td>
<td>$446,697</td>
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<td>Hu, Qi</td>
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<td>Oglesby, Robert</td>
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<td>van Donk, Simon</td>
<td>$287,080</td>
<td>DOI-BR</td>
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<td>Corr, Alan</td>
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<td>Martin, Derrel</td>
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<td>Melvin, Steven</td>
<td>$287,080</td>
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<td>Van Etten, James</td>
<td>Plant Pathology</td>
<td>Evaluation of the Natural History of Algal Viruses Associated with Patients Diagnosed with Human Psychiatric Disorders</td>
<td>$246,422</td>
<td>Stanley Medical Research Institute</td>
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<td>Van Tassell, Larry</td>
<td>Agricultural Economics</td>
<td>Developing Economic Improvements through Cooperative Businesses in Rural Nebraska</td>
<td>$200,000</td>
<td>USDA-RD</td>
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<td>Burkhart-Kriesel, Cheryl</td>
<td>$200,000</td>
<td>USDA-RD</td>
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<td>Varyiam, Vinodchandran</td>
<td>Computer Science and Engineering</td>
<td>AF: Small: Studies in Nonuniformity, Completeness and Reachability</td>
<td>$272,031</td>
<td>NSF</td>
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<tr>
<td>Name</td>
<td>Department</td>
<td>Title</td>
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<td>Vuran, Mehmet</td>
<td>Computer Science and Engineering</td>
<td>* CyberSEES: Type 1: Improving Crop Production Efficiency Using Wireless Underground Sensor-Guided Irrigation Systems</td>
<td>NSF $300,000</td>
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<td>Wagner, William</td>
<td>Biological Sciences</td>
<td>Effects of Predation by a Phonotactic Parasitoid on Male and Female Reproductive Behavior in a Field Cricket</td>
<td>NSF $523,414</td>
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<td>Walia, Harkamal</td>
<td>Agronomy and Horticulture</td>
<td>Early Seed Development under Stressful Environments</td>
<td>NSF $557,708</td>
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<td>Wang, Dong</td>
<td>Statistics</td>
<td>Quantitative Evaluation of the Colonization and Persistence of <em>Bifidobacterium longum</em> AH1206 in the Gastrointestinal Tract and its Tolerance by Human Subjects</td>
<td>NSF $204,340</td>
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<td>Walter, Jens</td>
<td>Food Science and Technology</td>
<td>Expanding the Scope of Association Mapping in Important Crop Species with Methodology Development in Statistics</td>
<td>USDA-AFRI $282,000</td>
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<td>Wang, Dong</td>
<td>Statistics</td>
<td>AERONET Skylight Retrievals Using Polariometric Measurements: Toward Physically Consistent Validation of APS Aerosol Products</td>
<td>NASA $443,464</td>
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<td>Wang, Jun</td>
<td>Earth and Atmospheric Sciences</td>
<td>Evaluate and Enhance the VIIRS Aerosol EDRs for Air Quality and Public Health Applications</td>
<td>NASA $429,637</td>
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<td>Waters, Brian</td>
<td>Agronomy and Horticulture</td>
<td>* Discovering New Aspects of Iron Uptake Regulation Controlled by the fefe Gene</td>
<td>USDA-NIFA $452,000</td>
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<td>Exploring Iron &amp; Copper Cross-Talk in Iron Deficient <em>Arabidopsis Thaliana</em></td>
<td>NSF $391,077</td>
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</table>
Weber, Karrie  
Biological Sciences  
Feammox - A New Pathway for Nitrogen Loss from Terrestrial Ecosystems  
$202,210  
NSF

Weeks, Donald  
Biochemistry  
LiT: Novel Bicarbonate Transporters in Chlamydomonas CO2-Concentrating Mechanism  
$553,000  
NSF

Wegulo, Stephen  
Plant Pathology  
Regional Distribution and Host Range of Triticum Mosaic Virus, an Emerging Virus of Wheat, and Its Potential Impact on Wheat Production  
$621,284  
USDA-NIFA  
Boeniger, P. Stephen  
Agronomy and Horticulture  
Hein, Gary  
Doctor of Plant Health Program

Weisz, Victoria  
Center on Children, Families, and the Law  
* Court Improvement Project Infant/Toddler Program  
$655,843  
Sherwood Foundation  
Cole-Mossman, Jennie  
Center on Children, Families, and the Law  
* Project Safe Start - Nebraska 2013-2014  
$222,769  
DHHS-SAMSHA through Supreme Court of Nebraska  
* Nebraska Administrative Office of Probation Services  
$219,838  
Supreme Court of Nebraska

Weller, Curtis  
Extension/Biological Systems Engineering/Food Science and Technology  
* Manufacturing Extension Partnership Center for Nebraska  
$600,000  
DOC-NIST  
Faller, Ronald  
Midwest Roadside Safety Facility  
Wei, Timothy  
Engineering

Whitbeck, Les  
Sociology  
Culturally-Based, Family-Centered Mental Health Promotion for Aboriginal Youth II  
$749,958  
Government of Canada-Public Health Agency through Jewish General Hospital-CMHRU  
A Lakota Type 2 Diabetes Mellitus Prevention  
$353,806  
Aberdeen Area Tribal Chairmen’s Health Board

Wiebe, Matthew  
Veterinary Medicine and Biomedical Sciences  
Intracellular Defenses against Foreign DNA: Insights from Poxvirus-Infected Cells  
$340,339  
NIH-NIAID

Wiener, Richard  
Psychology  
Objectification, Affective Forecasting, and Sexual Harassment  
$314,956  
NSF  
Gervais, Sarah  
Psychology
Wilson, Richard  
**Plant Pathology**  
* Defining Mechanisms of Nutrient Adaptation to Host Rice Cells by the Blast Fungus  
$500,000  
USDA-NIFA  
Pathogenic Gene Discovery and Elucidation of Genetic Regulatory Networks in the Rice Blast Fungus  
$512,955  
NSF

Wood, Charles  
**Biological Sciences/Nebraska Center for Virology**  
Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center  
$419,455  
NIH-NIMH through UNMC

Wortmann, Charles  
**Agronomy and Horticulture**  
* Developing and Fine-Tuning Fertilizer Recommendations within an Integrated Soil Fertility Management Framework  
$345,473  
Alliance for Green Revolution in Africa through CAB

Xiang, Shi-Hua  
**Biological Sciences**  
Mucosal Delivery and Retention of Anti-HIV Agents Using Lactobacillus  
$611,119  
Bill & Melinda Gates Foundation

Xu, Lisong  
**Computer Science and Engineering**  
NeTS: Small: Internet Congestion Control Census  
$450,000  
NSF  
Deagun, Jitender  
Computer Science and Engineering  
Lu, Ying  
Computer Science and Engineering

Yoder, Ronald  
**Biological Systems Engineering**  
Nebraska AgrAbility  
$684,000  
USDA-NIFA  
Booker, William  
Panhandle Research and Extension Center  
Nielsen, Sharon  
West Central Research and Extension Center

Yu, Bin  
**Biological Sciences/Center for Plant Science Innovation**  
Understanding DAWDLE Function in miRNA and siRNA Biogenesis  
$499,504  
NSF

Zera, Anthony  
**Biological Sciences**  
Nutritional Physiology of Life History Allocation Trade-Offs  
$343,500  
NSF

Zhang, Tian  
**Civil Engineering**  
Influence of Soil Particle Size Fractions and Environmental Conditions on Fate and Transport of Hormones in Soils  
$300,000  
NSF
American Recovery and Reinvestment Act (ARRA) Awards

Through ARRA, or the Stimulus Act, the U.S. is investing in science, technology and engineering research and infrastructure to stimulate the nation's economy and bolster its research capacity. These are active ARRA awards UNL faculty received through competitive grants from federal agencies since 2009.

Avalos, George  
**Mathematics**  
Analysis, Computation and Control of Coupled Partial Differential Equation Systems  
$182,898  
NSF

Curto, Carina  
**Mathematics**  
Stimulus Representation and Spontaneous Activity in Recurrent Networks  
$109,635  
NSF

Dominguez, Aaron  
**Physics and Astronomy**  
MRI-R2: Development of a Pixel Detector for the Upgraded CMS Experiment  
$263,430  
NSF through University of Kansas Center for Research

Bloom, Kenneth  
**Physics and Astronomy**

Hancock, Connie  
**Panhandle Research and Extension Center**  
Nebraska Broadband Planning  
$2,472,652  
Nebraska Public Service Commission

Norjes, Charlotte  
**Center for Applied Rural Innovation**  
Agricultural Leadership, Education and Communication

Terry, Roger  
**Agricultural Leadership, Education and Communication**

Hartke, Stephen  
**Mathematics**  
Computerized Search for Combinatorial Objects  
$220,000  
NSF

Lubben, Bradley  
**Agricultural Economics**  
2009 Trade Adjustment Assistance for Farmers  
$855,000  
USDA-NIFA through University of Minnesota

Nam, Yunwoo  
**Community and Regional Planning**  
Nebraska Rural Health and Primary Care  
$112,000  
Nebraska Department of Health and Human Services

Scholz, Gordon  
**Community and Regional Planning**
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<tr>
<td>Paul, Prem</td>
<td>Research and Economic Development</td>
<td>Nebraska Center for Virology Facility Expansion</td>
<td>$8,000,000</td>
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<td>Wood, Charles</td>
<td>Bio Medical Sciences/</td>
<td>Nebraska Center for Virology</td>
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<td>Engineering and Economic Development</td>
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<td>High-Power Laser Science Collaboratory</td>
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<td>Chandra, Namas</td>
<td>Mechanical &amp; Materials Engineering</td>
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<td>Lu, Yongfeng</td>
<td>Electrical Engineering</td>
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<td>Umstadter, Donald</td>
<td>Physics and Astronomy</td>
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<td>Wedge, Alan</td>
<td>Facilities Management</td>
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<td>Qiao, Wei</td>
<td>Electrical Engineering</td>
<td>A Nationwide Consortium of Universities to Revitalize Electric Power Engineering Education by State-of-the Art Laboratories</td>
<td>$24,999</td>
<td>DOE through University of Minnesota</td>
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<td>Rack, Frank</td>
<td>Earth and Atmospheric Sciences/ Antarctic Geological Drilling Program</td>
<td>Response to Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) Project: Drilling Support Overview and Requirements Request</td>
<td>$3,002,421</td>
<td>NSF through Montana State University/Northern Illinois University/University of California, Santa Cruz</td>
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<td>Asgarpoor, Sohrab</td>
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<td>Hudgins, Jerry</td>
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<td>Patterson, Dean</td>
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<td>Qu, Lilyan</td>
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<td>Saraf, Ravi</td>
<td>Chemical and Biomolecular Engineering</td>
<td>Regulating Current through a Nanoparticle Necklace by Microorganism: A Transformative Technology for Biofuel Cells and Biosensors</td>
<td>$391,056</td>
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<td>Shen, Zhigang</td>
<td>Durham School of Architectural Engineering and Construction</td>
<td>Veterans Commissioning Training Program for Commercial-Healthcare Facilities</td>
<td>$405,741</td>
<td>DOE</td>
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<td>Toundykov, Daniel</td>
<td>Mathematics</td>
<td>Stabilization and Control in Nonlinear Structural-Acoustics, Magnetic Imaging, and Elasticity</td>
<td>$96,436</td>
<td>NSF</td>
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</table>
Early Career Awards
Active awards, July 1, 2013-June 30, 2014
* Indicates new in 2013-2014

NSF CAREER Grants

National Science Foundation CAREER grants are awarded only to untenured junior faculty. These grants recognize research and education “of the highest quality and in the broadest sense.” CAREER grants are unique in requiring a four- to five-year plan for the scientist’s development as both a researcher and an educator.

Bartelt-Hunt, Shannon
Civil Engineering
CAREER: The Influence of Soil Attachment on the Biologic Activity of Extracellular Proteins
$413,883
NSF

Basset, Gilles
Agronomy and Horticulture/Biochemistry/
Center for Plant Science Innovation
CAREER: The Metabolism of Prenylated Benzoquinones through the Lens of Plant-Prokaryote Phylogenomics
$784,820
NSF

Brassil, Chad
Biological Sciences
CAREER: How Temporal Fluctuations Alter Indirect Interactions in Duckweed-Based Communities and Its Integration with a Student Report Exchange
$531,141
NSF

Cho, Yong Kwon
Durham School of Architectural Engineering and Construction
* CAREER: Hybrid 3D Unstructured Workspace Modeling: A Critical Component in Developing an Automated Construction Site
$400,000
NSF

Cohen, Myra
Computer Science and Engineering
Configuration-Aware Testing Through Intelligent Sampling to Improve Software Dependability
$400,000
NSF

Frank, Tracy
Earth and Atmospheric Sciences
Exploring the Geologic Record of Major Climate Transitions: Causes, Consequences, & Impacts on the Evolution of Earth Systems
$583,816
NSF
Gu, Linxia  
Mechanical & Materials Engineering  
CAREER: Bridging Cellular-Level Changes to Vascular Tissue Response to Reveal Basic Mechanisms of Restenosis  
$433,248  
NSF

Hebets, Eileen  
Biological Sciences  
Evolution and Function of Complex Signaling in Wolf Spider Genus Schizocosa  
$692,351  
NSF

Hong, Xia  
Physics and Astronomy  
CAREER: Interface Engineered Multiferroics and Nanoscale Phase Modulation in Complex Oxide Heterostructures  
$600,000  
NSF

Huang, Jinsong  
Mechanical & Materials Engineering  
CAREER: Increasing Charge Separation and Extraction by Ferroelectric Polymer-Induced Persisting Electric Field for Efficient Organic Solar Cell  
$400,000  
NSF

Lai, Rebecca  
Chemistry  
CAREER: Ligand-Induced Folding in Peptides for Biosensing Applications  
$455,000  
NSF

Li, Xu  
Civil Engineering  
* CAREER: Effects of Nutrients on Antimicrobial Resistance and Subsistence  
$400,000  
NSF

Lim, Jung Yul  
Mechanical & Materials Engineering  
* CAREER: Adipocytic Mechanotransduction for Obesity  
$430,554  
NSF

Pannier, Angela  
Biological Sciences  
CAREER: Nanostructured Thin Films for Substrate-Mediated Gene Delivery  
$419,051  
NSF
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<th>Name</th>
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<tr>
<td>Qiao, Wei</td>
<td>Electrical Engineering</td>
<td>CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration</td>
<td>$407,999</td>
<td>NSF</td>
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<tr>
<td>Schubert, Eva</td>
<td>Electrical Engineering</td>
<td>Chiral Nanostructure Hybrid Materials for Application in Terahertz Resonator and Magnetic Storage Devices</td>
<td>$400,000</td>
<td>NSF</td>
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</table>
Arts and Humanities Awards $250,000 or More
Active awards, July 1, 2013-June 30, 2014
* Indicates new in 2013-2014

Kooser, Ted
English
American Life in Poetry Project
Poetry Foundation
$341,385
1/1/05 – 12/31/14
The Poetry Foundation, in partnership with the Library of Congress, supports the American Life in Poetry project, an initiative of Ted Kooser, the 2004-2006 Poet Laureate Consultant in Poetry to the Library of Congress. American Life in Poetry is a free weekly column for newspapers and online publications featuring a poem written by a contemporary American poet, chosen by Kooser, with a brief introduction written by Kooser. The sole mission of this project is to promote poetry. The Poetry Foundation funds the project, with administrative support provided by the UNL English department, where the project office is located.

Price, Kenneth
English/Center for Digital Research in the Humanities
Walt Whitman as an Author before Leaves of Grass
NEH
$330,000
08/01/13 – 07/31/16
With a $330,000 award from the National Endowment for the Humanities, the Walt Whitman Archive, a digital archive that makes Whitman’s vast work easily and conveniently accessible to scholars, students, and general readers alike, is expanding its content to include Whitman-authored materials written before the 1855 edition of Leaves of Grass. The Whitman Archive is gathering, editing and annotating these early materials for digital publication, offering a seamlessly integrated presentation of Whitman’s literary contributions in the lead-up to his masterpiece, Leaves of Grass. This three-year project is led by Kenneth Price, Hillegass University Professor of English and co-director of the Center for Digital Research in the Humanities.

Walter, Katherine
University Libraries/Center for Digital Research in the Humanities
An Integrated Guide to Walt Whitman’s Literary Manuscripts
NEH
$275,000
06/01/12 – 05/31/15
The Walt Whitman Archive (whitmanarchive.org), with support from the National Endowment for the Humanities, is using Encoded Archival Description (EAD) to create item-level finding guides to the more than seventy individual repositories holding Walt Whitman’s prose manuscripts. Each description is linked to high-quality digital images of the manuscript material and dynamically joined in an integrated guide. Under the direction of Kenneth Price, the archive has developed a system that creates a
relationship between the manuscript and the final manifestation of the prose draft, most often the version Whitman published in his collection, *Complete Prose Works* (1892). Creating EAD records for Whitman’s prose manuscripts will provide unprecedented documentation of and access to the literary manuscripts of a major literary figure. The end result will be an overarching guide to a virtual collection of all of Whitman’s manuscripts, organized not around their physical location but according to the conceptual work to which they contribute.

**Shear, Donna**  
*University of Nebraska Press*  
*Recovering Languages and Literacies of the Americas: A Collaborative Initiative*  
$781,900  
1/3/11 – 12/31/17

This $781,900 grant from the Andrew W. Mellon Foundation gives the University of Nebraska Press, along with the University of Oklahoma Press and the University of Texas Press, resources to help linguistic scholars publish indigenous language grammars and dictionaries, literacy studies, ethnographies and other linguistic monographs. Twenty-seven books – nine from each press – will be published on the grammar and literacy of endangered languages. The initiative also aims to generate broader interest in linguistic monographs and to find more efficient, cost-effective ways to produce monographs. These publications are important resources for academics in the fields of linguistics, indigenous studies and social sciences, and to communities wishing to preserve their language and culture, said Donna Shear, University of Nebraska Press director, who is leading this collaboration.

**Walter, Katherine**  
*University Libraries/Center for Digital Research in the Humanities*  
*Center for Digital Research in the Humanities Endowment*  
$500,000  
12/21/10 – 7/31/14

The National Endowment for the Humanities has awarded a four-year, $500,000 challenge grant to the Center for Digital Research in the Humanities, led by Katherine Walter, UNL Libraries chair of digital initiatives and collections, to permanently support some of the center’s key programs.

The grant will support two graduate student assistantships annually, an ongoing two-year postdoctoral fellowship and the Nebraska Digital Workshop, the center’s signature event. The workshop brings the nation’s top early career digital humanities scholars to UNL to showcase their research, get feedback from senior faculty and network with potential research partners and employers.
Wisnicki, Adrian  
English/Center for Digital Research in the Humanities

* The Livingstone Online Enrichment and Access Project (LEAP)  
$275,000  
NEH  
9/1/13 – 8/31/16

Pytlik Zillig, Brian  
University Libraries/Center for Digital Research in the Humanities

Adrian Wisnicki, assistant professor of English and spectral imaging specialist at UNL’s Center for Digital Research in the Humanities, leads Livingstone Online, http://livingstoneonline.org, a large multi-institutional project to update the digital home for Livingstone’s manuscripts. Wisnicki and colleagues are collaborating with more than 30 archives worldwide, developing a sustainable digital platform, and conducting scholarship and outreach activities. More than $430,000 in grants from the National Endowment for the Humanities funds Wisnicki’s Livingstone work.
### Arts and Humanities Awards

**$50,000 to $249,999**

*Active awards, July 1, 2013-June 30, 2014*

* Indicates new in 2013-2014

<table>
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<tr>
<th>Name</th>
<th>Institution and Department</th>
<th>Title</th>
<th>Grant Amount</th>
<th>Funding Agency</th>
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<tr>
<td>Barney, Brett</td>
<td>University Libraries/Center for Digital Research in the Humanities</td>
<td>Diachronic Markup and Presentation Practices for Text Editions in Digital Research Environments</td>
<td>$165,005</td>
<td>NEH</td>
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<tr>
<td>Behrendt, Stephen</td>
<td>English</td>
<td>Reassessing British Romanticism</td>
<td>$117,198</td>
<td>NEH</td>
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<tr>
<td>Jockers, Matthew</td>
<td>English/Center for Digital Research in the Humanities</td>
<td>* Text Mining the Novel: Establishing the Foundations of a New Discipline</td>
<td>$112,524</td>
<td>Government of Canada-SSHRC through McGill University</td>
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<tr>
<td>Lorang, Elizabeth</td>
<td>University Libraries/Center for Digital Research in the Humanities</td>
<td>* Image Analysis for Archival Discovery: Poetic Content in Historic Newspapers</td>
<td>$60,000</td>
<td>NEH</td>
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<td>Price, Kenneth</td>
<td>English/Center for Digital Research in the Humanities</td>
<td>Walt Whitman and Post-Reconstruction America</td>
<td>$156,470</td>
<td>National Historical Publications and Records Commission</td>
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<td>Barney, Brett</td>
<td>University Libraries/Center for Digital Research in the Humanities</td>
<td>Thomas, William</td>
<td>$200,000</td>
<td>NEH</td>
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<td>Walter, Katherine</td>
<td>University Libraries/Center for Digital Research in the Humanities</td>
<td>Major Railroad Archival Collections</td>
<td>$208,481</td>
<td>Council on Library and Information Resources</td>
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<td>Bolin, Mary</td>
<td>University Libraries</td>
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<td>Mering, Margaret</td>
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<tr>
<td>Wisniski, Adrian</td>
<td>English/Center for Digital Research in the Humanities</td>
<td>* Explorer David Livingstone’s 1870 Field Diary and Select 1871 Letters: A Multispectral Critical Edition</td>
<td>$158,605</td>
<td>NEH</td>
</tr>
</tbody>
</table>

**Goldman Sachs and Co.**

*Note: Funding amounts and institutions may vary.*
Arts and Humanities Awards
$5,000 to $49,999
Active awards, July 1, 2013-June 30, 2014
* Indicates new in 2013-2014

Edwards, Richard  Center for Great Plains Studies
* Lost Writers of the Plains
$5,000  Woods Charitable Fund
Katz, Wendy  Center for Great Plains Studies

Engen-Wedin, Nancy  Lied Center for Performing Arts
* Valoshky Ukrainian Dance Ensemble - 25th Anniversary Project
$10,000  New England Foundation for the Arts

Katz, Wendy  Center for Great Plains Studies
* Lost Writers of the Plains
$9,500  Cooper Foundation

Shear, Donna  University of Nebraska Press
* Publishing Literary Translation Works at the University of Nebraska Press
$10,000  NEA

$30,100  University of Georgia
Literary Publishing, Digitization, and E-Pub Conversion at the University of Nebraska Press
$20,000  NEA
Elias-Rowley, Kristen  University of Nebraska Press
Faust, Jana  University of Nebraska Press

Wahlqvist, Petra  Lied Center for Performing Arts
Residency with STREB
$20,000  NEA

STREB Residency and Performance of Essentialist Acts
$11,000  New England Foundation for the Arts

Walter, Katherine  University Libraries/Center for Digital Research in the Humanities
* Buffalo Bill’s European Frontier
$40,404  NEH through Buffalo Bill Historical Center

Weiss, Wendy  Textiles, Merchandising and Fashion Design
* Visiting Artists at the Robert Hillestad Textiles Gallery
$5,000  Pearle Francis Finigan Foundation

Arts Across Nebraska Education Enhancement
$23,000  NEA

Arts Across Nebraska Extension
$23,000  Nebraska Arts Council

* Humanities without Walls
$30,588  Andrew W. Mellon Foundation through University of Illinois-IPRH

* Buffalo Bill’s European Frontier
$40,404  NEH through Buffalo Bill Historical Center

* Humanities without Walls
$30,588  Andrew W. Mellon Foundation through University of Illinois-IPRH
NUtech Ventures’ mission is to facilitate the commercialization and practical use of innovations generated through the research activities at UNL. We do this by identifying, evaluating, protecting, marketing and licensing UNL intellectual property to promote economic development and improve the quality of life.

Further, NUtech Ventures also connects innovators with the people, coaching and resources they need to start companies, develop products and create jobs. If you’re interested in starting a company, seeing your innovations licensed or securing developmental funding for your leading-edge research, we can help you connect with potential industry partners, entrepreneurs and investors. We can add value to your research by enabling a fully collaborative process for joint creation, development and commercialization so your technologies can change the world.

We would like to recognize the following UNL inventors and creators whose technologies have formed the basis of licensing agreements with our industry partners between July 1, 2013, and June 30, 2014.

(UNL faculty and staff are indicated in red. Other co-inventors are students, postdocs or collaborators at other institutions.)

2013-2014 License Agreements

**Dennis R. Alexander**, Electrical Engineering  
*Technology*: A Laser Device and Process that Uses a Series of High Frequency Energy Pulses to Remove Material and/or Create Nanoparticles from Various Surfaces

**David Andrews**, Agronomy and Horticulture  
*Technology*: Ornamental Millet Called Copper Millet

**P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn, Richard Little**, Agronomy and Horticulture; Jerry Bohlmann, Chris Hoadland  
*Technology*: Millennium and Overland Hard Red Winter Wheat Varieties  
*Technology*: Overland and Freeman Hard Red Winter Wheat Varieties
Paul Blum, Biological Sciences
Technology: Novel Bacterial Enzymes Used for Conversion of Plant Starch to Fuel

Stephen G. DiMagno, Chemistry; Bao Hu
Technology: Methods and Materials for Preparing Radioiodinated Pharmaceuticals

George L. Graef, Agronomy and Horticulture
Technology: Soybean Varieties UO6-301151, U06-301158, U06-630051, and U07-202096.

George L. Graef, Leslie Korte, Agronomy and Horticulture; Travis L. Wegner, Dennis White
Technology: Soybean Variety U01-390489

Edward N. Harris, Biochemistry; Robert J. Linhardt, Jian Liu, Yongmei Xu
Technology: Synthesis and Use of Novel Heparin

Rebecca Y. Lai, Patrick H. Dussault, Chemistry; Socrates Jose Pastor Canete, Thomas Fisher, Anita Joseph-Sevany Zaitoun, Weiwei Yang
Technology: Electrochemical Biosensors

Bryan Leavitt, Survey Division, Natural Resources
Technology: CDAP-2: Remote sensing observation software for data collection
Technology: CDAP-2 Upgrade: An Upgrade of the CDAP Software to Run CDAP on Instruments Utilizing USB Communication (2 licenses)

Sally Mackenzie, Yingzhi Xu, Agronomy and Horticulture/Center for Plant Science Innovation; Dong Wang, Statistics; Michael E. Fromm, Yashitola Wamboldt, Agronomy and Horticulture; Kamaldeep S. Virdi
Technology: An Improved Method of Plant Breeding, Plant Yields, and Inbred Lines
Sally Mackenzie, Yingzhi Xu, Agronomy and Horticulture/Center for Plant Science Innovation; Michael E. Fromm, Yashitola Wamboldt, Agronomy and Horticulture; Dong Wang, Statistics; Roberto de la Rosa Santamaria, Mon-Ray Shao, Kamaldeep S. Virdi, Jiantao Yu

**Technology:** An Improved Method of Plant Breeding

---

Sally Mackenzie, Yingzhi Xu, Agronomy and Horticulture/Center for Plant Science Innovation; Michael E. Fromm, Yashitola Wamboldt, Agronomy and Horticulture; Dong Wang, Statistics; Roberto de la Rosa Santamaria, Kamaldeep S. Virdi

**Technology:** An Improved Method of Plant Breeding

---

Blair Siegfried, Entomology

**Technology:** Transgenic Crops with Novel Resistance to Western Corn Rootworms

---

Blair Siegfried, Entomology; Kanika Arora, Chitvan Khajuria, Kenneth Narva, Sarah Worden

**Technology:** Transgenic Crops with Novel Resistance to Western Corn Rootworms

---

Carlos Urrea Florez, Panhandle Research and Extension Center; James Steadman, Plant Pathology; Dale T. Lindgren, Agronomy and Horticulture; Dermot Coyne, Marcial Pastor-Corrales

**Technology:** Great Northern Common Bean Cultivar “Coyne”

---

Haishun Yang, Kenneth G. Cassman, Daniel T. Walters, Agronomy and Horticulture; Achim Dobermann

**Technology:** Hybrid-Maize: A Simulation Model for Corn Growth and Yield (2 licenses)
Creative Activity
Faculty who created, performed or produced creative works in the fine and performing arts and architecture, nationally or internationally, July 1, 2013-June 30, 2014
Submitted by faculty, chairs/heads or deans

Stacy J. Asher
Art and Art History

John Bailey
Glenn Korff School of Music
Conductor, International Flute Orchestra. Works by Bach, Mendelssohn, Rossini, Von Suppé, Louke, Leech, De Falla. Concert tour performed at various churches, civic theaters, villas, great halls in Milan, Mantua, Villa Carlotta (Como), Belgirate (Lago Maggiore), Italy.

John Bailey
Glenn Korff School of Music
Performer, “Teaching and Performing the Prokofiev Flute Sonata, op. 94.” Flute lecture/recital, National Flute Association National Convention, Chicago, IL.

Lexi Bass
Art and Art History
Director, The Adytum. Film shown at the Louisville International Festival of Film, Louisville, KY; Culture Unplugged: Online Film Festival, www.cultureunplugged.com; and Werner Herzog’s Rogue Film School, Los Angeles, CA.

Charles Burr
West Central Research and Extension Center
Developer, mobile app, “Irrigation Flow Meter Calculator.”

Chiara String Quartet
Glenn Korff School of Music
Rebecca Fischer, violin; Hyeyung Julie Yoon, violin; Jonah Sirota, viola; Gregory Beaver, cello. Performers, Brahms by Heart. CD recording, Azica Records, Cleveland, OH.

Wheeler Winston Dixon
English

Thomas Dorn
Cooperative Extension Division
Developer, mobile app, “Agriculture Irrigation Costs.”

Bethany Johnston
Panhandle Research and Extension Center
Developer, mobile app, “GrassSnap – A Mobile App for Monitoring Grasslands.”

Derrel Martin
Biological Systems Engineering
Developer, mobile app, “Irrigation Pumping Plant Efficiency Calculator.”

Bernard “Barney” McCoy
Journalism and Mass Communications
Director, They Could Really Play the Game: Reloaded. Film televised by WOSU-TV, Columbus, OH.
Mo Neal  
**Art and Art History**


Artist, “Robert’s Hole in One.” ISC Little Sculpture Show, International Sculpture Center, Miami, FL.

David C. Neely  
**Glenn Korff School of Music**

Books
Faculty who wrote or edited books published July 1, 2013-June 30, 2014
UNL authors in red
Submitted by faculty, chairs/heads or deans

Marco Abel  English

Craig R. Allen  Natural Resources

Deeann Allison  University Libraries

Ikuho Amano  Modern Languages and Literature

John E. Anderson  Economics

Radha Balasubramanian  Modern Languages and Literature

Grace Bauer  English
Author. Nowhere All At Once. Nacogdoches, TX: Stephen F. Austin University Press.

David Beukelman  Special Education and Communication Disorders
Editor, with Nina Simons-Mackie and Julia King. Supporting Communication for Adults with Acute and Chronic Aphasia. Baltimore, MD: Brookes Publishing.

Christopher Bilder  Statistics
Author, with Thomas Loughin. Analysis of Categorical Data with R. Boca Raton, FL: CRC Press.

Dawn O. Braithwaite  Communication Studies

Les Carlson  Marketing
Kiyomi D. Deards


Bedross Der Matossian


Judy Diamond


Wheeler Winston Dixon


Beth Doll


Kirk Dombrowski


Marcia L. Dority Baker

Author, with Stefanie S. Pearlman, Law. *A Bibliography of University of Nebraska College of Law Faculty Scholarship 1892-2013*. Lincoln, NE: University of Nebraska Press.

Stephen Ducharme

Author, with Vladimir Fridkin. *Ferroelectricity at the Nanoscale*. Heidelberg, Germany: Springer.

Gwendolyn A. Foster


Rhonda K. Garelick


Kurt F. Geisinger


Jerry L. Hudgins

Margaret D. Jacobs

Matthew L. Jockers

Paul A. Johnsgard
Author. *Prairie Dog Empire: A Saga of the Shortgrass Prairie.* Lincoln, NE: University of Nebraska Press.

Ted Kooser
Author. *The Wheeling Year.* Lincoln, NE: University of Nebraska Press.

Glenn Ledder

Qingsheng Li

Suping Lu

Melissa Amateis Marsh

Bernard “Barney” McCoy

Colleen Medill

Joseph Mendola
Katherine Nashleanas  Geography/Natural Resources

J. Ron Nelson  Special Education and Communication Disorders

Jon E. Pedersen  Education and Human Sciences


Luis Peon-Casanova  Journalism and Mass Communications

Reece Peterson  Special Education and Communication Disorders

Yi Qian  Computer and Electronics Engineering

Brett C. Ratcliffe  Entomology/University of Nebraska State Museum
Author, with Ronald D. Cave and Enio B. Cano. The Dynastine Scarab Beetles of Mexico, Guatemala, and Belize. Lincoln, NE: University of Nebraska State Museum.

Robert Reid  Special Education and Communication Disorders

Brandon K. Ruud  Sheldon Memorial Art Gallery and Sculpture Garden
Editor, with Gregory Nosan, Sheldon Museum of Art. Painting from the Collection of the Sheldon Museum of Art. Lincoln, NE: University of Nebraska Press.

Lowell Sandell  Agronomy and Horticulture
Editor. 2014 Guide for Weed Management in Nebraska with Insecticide and Fungicide Information. Lincoln, Nebraska: UNL Printing Services.
Khalid Sayood
Electrical Engineering
Author. *Introduction to Data Compression (4th ed.)*. Singapore and China: Elsevier (Singapore) Pte Ltd.

Timothy Schaffert
English

William J. Seiler
Communication Studies

Susan M. Sheridan
Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools

Alison G. Stewart
Art and Art History

Scott F. Stoltenberg
Psychology/Center for Brain, Biology and Behavior

Steve Taylor
Food Science and Technology

William G. Thomas
History

Cho Wing S. To
Mechanical & Materials Engineering

Joseph Weber
Journalism and Mass Communications
Author. *Transcendental Meditation in America: How a New Age Movement Remade a Small Town in Iowa*. Iowa City, IA: University of Iowa Press.
Les B. Whitbeck  Sociology

Simon A. Wood  Classics and Religious Studies

Sandra B. Zellmer  Law

Recognitions and Honors
Faculty who have been elected to honor academies or who have received national or international honors or awards, July 1, 2013-June 30, 2014
Submitted by faculty, chairs/heads or deans

Joseph S. Francisco
Chemistry/Dean of the College of Arts and Sciences
National Academy of Sciences

Brian Larkins
Agronomy and Horticulture/Associate Vice Chancellor for Life Sciences
National Academy of Sciences

James Van Etten
Plant Pathology
National Academy of Sciences

Marco Abel
Best Book, German Studies Association

Changbum Ahn
Durham School of Architectural Engineering and Construction
Best Paper Award, International Conference on Construction Engineering and Project Management

P. Stephen Baenziger
Agronomy and Horticulture
Genetics and Plant Breeding Award, National Council of Commercial Plant Breeders

Frederick P. Baxendale
Entomology
C. V. Riley Achievement Award, Entomological Society of America - North Central Branch

Edward Becker
Philosophy
Keynote speaker, International Conference on the Philosophy of W. V. Quine, Beijing University

Christopher Bilder
Statistics
Outstanding Statistical Application, American Statistical Association

Erin Blankenship
Statistics
Jackie Dietz Best JSE Paper, American Statistical Association

Dawn O. Braithwaite
Communication Studies
Distinguished Scholar Award, Western States Communication Association

Charles A. Braithwaite
Communication Studies/Center for Great Plains Studies
Visiting Scholar, Lund University, Sweden

Jennifer Brand
Chemical and Biomolecular Engineering
ELATE Fellow, Drexel University

Dennis Brink
Animal Science
Teaching Fellow, American Society of Animal Science
Tami Brown-Brandl  Biological Systems Engineering
Presidential Citation, American Society of Agricultural and Biological Engineers

Les Carlson  Marketing
Best Article Award, Marketing Education Review Journal

Brent Cejda  Educational Administration
Senior Scholar, Council for the Study of Community Colleges

Bertrand Clarke  Statistics/IANR
Fellow, American Statistical Association

Kwame Dawes  English
Paul Engle Prize, Iowa City UNESCO City of Literature

Judy Diamond  University of Nebraska State Museum
Fellow, American Association for the Advancement of Science

Concetta DiRusso  Biochemistry
Jefferson Science Fellow, National Academies, U.S. Department of State, U.S. Agency for International Development
Fellow, American Academy for the Advancement of Science

Aaron Duncan  Communication Studies
Larry Schnoor Award for Outstanding Coaching and Service, American Forensics Association - District IV

Tonia Durden  Child, Youth and Family Studies
Family Life Extension Specialist Early Career Achievement Award, U.S. Department of Agriculture - NIFA

Bruce Dvorak  Civil Engineering
George Warren Fuller Award, American Water Works Association

Matthew Dwyer  Computer Science and Engineering
Fellow, Institute of Electrical and Electronics Engineers

Rick Endacott  Johnny Carson School of Theatre and Film
Silver Screen Award, U.S. International Film and Video Festival

Ronald K. Faller  Midwest Roadside Safety Facility
Best Paper Award, TRB Committee AFB20 Roadside Safety Design, Transportation Research Board

Kelly Feehan  Northeast Research and Extension Center
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Richard Ferguson  Agronomy and Horticulture
Fellow, Soil Science Society of America

Cory Forbes  Natural Resources/Teaching, Learning, and Teacher Education
Early Career Research Award, National Association for Research in Science Teaching
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Recognition</th>
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<tbody>
<tr>
<td>Tom Franti</td>
<td>Biological Systems Engineering</td>
<td>Outstanding Team Gold Award, Association of Natural Resources Extension Professionals</td>
</tr>
<tr>
<td>Trenton E. Franz</td>
<td>Natural Resources</td>
<td>Best Paper Award, Frontiers in Geoscience Colloquia, Los Alamos National Laboratory - Earth and Environmental Sciences Division</td>
</tr>
<tr>
<td>Sheri Fritz</td>
<td>Earth and Atmospheric Sciences/Biological Sciences</td>
<td>Fellow, American Association for the Advancement of Science Hans Oeschger Medal for Outstanding Achievements in Climate Change Science, European Geophysical Union</td>
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<tr>
<td>Ronnie Green</td>
<td>Institute of Agriculture and Natural Resources</td>
<td>Fellow, American Society of Animal Science</td>
</tr>
<tr>
<td>Jason Gross</td>
<td>Biological Systems Engineering</td>
<td>AE 50 Award, American Society of Agricultural and Biological Engineers Resource Magazine</td>
</tr>
<tr>
<td>Alexei Gruverman</td>
<td>Physics and Astronomy</td>
<td>Fellow, American Physical Society</td>
</tr>
<tr>
<td>Ron Hanson</td>
<td>Agricultural Economics</td>
<td>Distinguished Educator Award, North American Colleges and Teachers of Agriculture Senior Distinguished Undergraduate Teaching Award, Agricultural and Applied Economics Association</td>
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<tr>
<td>John Hay</td>
<td>Biological Systems Engineering</td>
<td>Service to the Industry Award, Nebraska Aviation Trades Association</td>
</tr>
<tr>
<td>Tiffany Heng-Moss</td>
<td>Entomology</td>
<td>National Teaching Award for Food and Agriculture Sciences, Association of Public and Land-grant Universities</td>
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<tr>
<td>Bobbi Holm</td>
<td>Northeast Research and Extension Center</td>
<td>Outstanding Team Gold Award, Association of Natural Resources Extension Professionals</td>
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<tr>
<td>Melissa J. Homestead</td>
<td>English</td>
<td>Visiting Fellowship in North American Studies, Eccles Center for American Studies at the British Library</td>
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<tr>
<td>Scott Hygnstrom</td>
<td>Natural Resources</td>
<td>Career Award, Wildlife Society Nebraska Chapter</td>
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</table>
Suat Irmak  
**Biological Systems Engineering**  
Heermann Sprinkler Irrigation Award, American Society of Agricultural and Biological Engineers  
John Deere Gold Medal Award, American Society of Agricultural and Biological Engineers  
Superior Paper Award, American Society of Agricultural and Biological Engineers  
Award of Excellence, Western Association of Agricultural Experiment Station Directors

Srikanth B. Iyengar  
**Mathematics**  
Fellow, American Mathematical Society

Andrew Jewell  
**University Libraries**  
Top 10 List of Non-Fiction Books of 2013, *Time* magazine

Rodger Johnson  
**Animal Science**  
Morrison Award, American Society of Animal Science

Libby Jones  
**Civil Engineering**  
Peter J. Bosscher Faculty Adviser Award for Outstanding Leader, Engineers Without Borders

Timothy Jones  
**Special Education and Communication Disorders**  
Career Award in Hearing and Balance, American Academy of Audiology

Alan Kamil  
**Biological Sciences**  
Fellow, American Association for the Advancement of Science

Wendy Katz  
**Art and Art History**  
Senior Fellowship, Smithsonian Institution

Suzanne Kemp  
**Special Education and Communication Disorders**  
Susan Phillips Gorin Award, Council for Exceptional Children

Deepak Keshwani  
**Biological Systems Engineering**  
Presidential Citation, American Society of Agricultural and Biological Engineers

Terry Klopfenstein  
**Animal Science**  
Member of “The Beef 50,” *Beef* Magazine

Jody Koenig Kellas  
**Communication Studies**  
Monograph of the Year Award, National Communication Association - Gay, Lesbian, Bisexual, Transgendered and Queer Division

Steven Kolbe  
**Johnny Carson School of Theatre and Film**  
Silver Screen Award, U.S. International Film and Video Festival

Barbara LaCost  
**Educational Administration**  
2014 Distinguished Fellow Award, National Education Finance Conference
Ming Li  
Fellow, American Psychological Association, Division 28

John L. Lindquist  
Agronomy and Horticulture  
Outstanding Paper in Weed Science Award, Weed Science Society of America

Sally Mackenzie  
Agronomy and Horticulture  
Fellow, American Society of Plant Biologists

Bernard “Barney” McCoy  
Journalism and Mass Communications  
Interactive Multimedia and Emerging Technologies Paper Competition Winner, Broadcast Education Association  
Eric Sevareid Award- Radio - Best Use of Audio, Northwest Broadcast News Association

John Meakin  
Mathematics  
Fellow, American Mathematical Society  
Fulbright Scholar, Council for International Exchange of Scholars

Robert Mitchell  
Agronomy and Horticulture  
Fellow, American Society of Agronomy

Michael Nastasi  
Mechanical & Materials Engineering/ Nebraska Center for Energy Sciences Research  
Fellow, American Association for the Advancement of Science

Glenn Nierman  
Glenn Korff School of Music  
President, National Association for Music Education

Kristen Olson  
Sociology  
President, Midwest Association for Public Opinion Research

Ellen Paparozzi  
Agronomy and Horticulture  
Fellow, American Society for Horticulture Science

Katie Pekarek  
School of Natural Resources  
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Yi Qian  
Computer and Electronics Engineering  
CHINACOM Best Paper Award, European Alliance for Innovation

Wei Qiao  
Electrical Engineering  
Best Paper Award, Institute of Electrical and Electronics Engineers Industrial Applications Society - Renewable and Sustainable Energy Conversion Systems Committee

John D. Reid  
Midwest Roadside Safety Facility  
Best Paper Award, TRB Committee AFB20 Roadside Safety Design, Transportation Research Board

Steve Rodie  
Agronomy and Horticulture  
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals
Scott K. Rosenbaugh  
**Midwest Roadside Safety Facility**  
Best Paper Award, TRB Committee AFB20 Roadside Safety Design, Transportation Research Board

Gregg Rothermel  
**Computer Science and Engineering**  
Distinguished Member and Distinguished Scientist, Association for Computing Machinery

Dixie Sanger  
**Special Education and Communication Disorders**  
Editor’s Award for Paper Published in Language, Speech, and Hearing Services in Schools, American Speech Language Hearing Association

Jennifer D. Schmidt  
**Midwest Roadside Safety Facility**  
Best Paper Award, TRB Committee AFB20 Roadside Safety Design, Transportation Research Board

Marc Schniederjans  
**Management**  
President, Decision Sciences Institute

Mathias Schubert  
**Electrical Engineering**  
Fellow, Leibniz-Institut fuer Polymerforschung Dresden e.V.

Dennis Schulte  
**Biological Systems Engineering**  
Outstanding Teaching Award, American Society of Engineering Education - Midwest Section  
Blue Ribbon Award for Air Quality in Animal Agriculture eXtension, American Society of Agricultural and Biological Engineers

William J. Seiler  
**Communication Studies**  
Distinguished Faculty - Basic Course Division, National Communication Association

David Sellmyer  
**Physics and Astronomy**  
Fellow, American Association for the Advancement of Science

Hamid Sharif  
**Computer and Electronics Engineering**  
Fulbright Scholar, Council for International Exchange of Scholars

David Shelton  
**Biological Systems Engineering**  
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Susan M. Sheridan  
**Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools**  
Article of the Year Award, Society for the Study of School Psychology/Journal of School Psychology

Alison G. Stewart  
**Art and Art History**  
Fulbright Scholar, Council for International Exchange of Scholars

Jay Storz  
**Biological Sciences**  
Outstanding Paper, Journal of Experimental Biology
Rick Stowell  
**Biological Systems Engineering**  
Blue Ribbon Award for Air Quality in Animal Agriculture eXtension, American Society of Agricultural and Biological Engineers

Colleen Syron  
**Art and Art History**  
Neptune Awards (3) For Marketing Excellence, Marine Marketers of America

Steve Taylor  
**Food Science and Technology**  
William C. Frazier Memorial Lectureship in Food Microbiology, Food Research Institute, University of Wisconsin-Madison  
John C. Halverson Memorial Lectureship, American Association of Cereal Chemists - Milling and Baking Division

Sriyani Tidball  
**Journalism and Mass Communications**  
Fulbright Specialist Award, Council for International Exchange of Scholars

Alan Tomkins  
**Law/Public Policy Center**  
Glenn R. Winters Award, American Judges Association

Joseph Turner  
**Mechanical & Materials Engineering**  
Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation (Germany)  
Fellow, Acoustical Society of America

L. Dale Van Vleck  
**Animal Science**  
Fellow, American Dairy Science Association

Don Weeks  
**Biochemistry**  
Fellow, National Academy of Inventors

Tyler White  
**Glenn Korff School of Music**  
Silver Medal for Composition, Global Music Awards

Donald Wilhite  
**School of Natural Resources**  
Fellow, American Meteorological Society

Charles Wood  
**Biological Sciences/Nebraska Center for Virology**  
Fellow, American Association for the Advancement of Science

John Woollam  
**Electrical Engineering**  
Prize for Industrial Applications of Physics, American Physical Society

Janos Zempleni  
**Nutrition and Health Sciences**  
Outstanding Investigator Award, American Society for Nutrition

Xiao Cheng Zeng  
**Chemistry**  
Fellow, Royal Society of Chemistry
<table>
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<tr>
<th>Abbreviation</th>
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<tr>
<td>DHS</td>
<td>Department of Homeland Security</td>
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<tr>
<td>DHHS</td>
<td>Department of Health and Human Services</td>
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<td>ACF</td>
<td>Administration for Children and Families</td>
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<td>CDC</td>
<td>Centers for Disease Control</td>
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<td>DOC</td>
<td>Department of Commerce</td>
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<td>International Trade Administration</td>
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<td>Defense Advanced Research Projects Agency</td>
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<td>DRMRP</td>
<td>Defense Deployment Related Medical Research Program</td>
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<td>Defense Threat Reduction Agency</td>
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<td>Defense University Research Instrumentation Program</td>
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<td>Missile Defense Agency</td>
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<td>National Geospatial Intelligence Agency</td>
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<td>Office of Naval Research</td>
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<td>USAMRAA</td>
<td>United States Army Medical Research Acquisition Activity</td>
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<td>USAMRMCTATRC</td>
<td>United States Army Medical Research and Materiel Command-Telemedicine and Advanced Technology Research Center</td>
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<td>BECA</td>
<td>Bureau of Educational and Cultural Affairs</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
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<tr>
<td>FRA</td>
<td>Federal Railroad Administration</td>
</tr>
<tr>
<td>RITA</td>
<td>Research and Innovative Technology Administration</td>
</tr>
<tr>
<td>ED</td>
<td>Department of Education</td>
</tr>
<tr>
<td>IES</td>
<td>Institute of Education Sciences</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Name</td>
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<tr>
<td>HUD</td>
<td>Department of Housing and Urban Development</td>
</tr>
<tr>
<td>NAS</td>
<td>National Academy of Sciences</td>
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<tr>
<td>TRB</td>
<td>Transportation Research Board</td>
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<tr>
<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
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<tr>
<td>NEA</td>
<td>National Endowment for the Arts</td>
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<tr>
<td>NEH</td>
<td>National Endowment for the Humanities</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>DFCI</td>
<td>Dana-Farber Cancer Institute</td>
</tr>
<tr>
<td>FIC</td>
<td>Fogarty International Center</td>
</tr>
<tr>
<td>NCI</td>
<td>National Cancer Institute</td>
</tr>
<tr>
<td>NCRR</td>
<td>National Center for Research Resources</td>
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<tr>
<td>NEI</td>
<td>National Eye Institute</td>
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<tr>
<td>NHLBI</td>
<td>National Heart, Lung and Blood Institute</td>
</tr>
<tr>
<td>NIAAA</td>
<td>National Institute on Alcohol Abuse and Alcoholism</td>
</tr>
<tr>
<td>NIAID</td>
<td>National Institute on Allergy &amp; Infectious Diseases</td>
</tr>
<tr>
<td>NIBIB</td>
<td>National Institute of Biomedical Imaging and Bioengineering</td>
</tr>
<tr>
<td>NICHD</td>
<td>National Institute of Child Health and Human Development</td>
</tr>
<tr>
<td>NIDA</td>
<td>National Institute on Drug Abuse</td>
</tr>
<tr>
<td>NIDCD</td>
<td>National Institute on Deafness &amp; Communication Disorders</td>
</tr>
<tr>
<td>NIDDK</td>
<td>National Institute of Diabetes, Digestive &amp; Kidney Disease</td>
</tr>
<tr>
<td>NIEHS</td>
<td>National Institute of Environmental Health Sciences</td>
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<td>NIGMS</td>
<td>National Institute on General Medical Sciences</td>
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<td>NIH</td>
<td>National Institute of Mental Health</td>
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<td>NINDS</td>
<td>National Institute of Neurological Disorders &amp; Stroke</td>
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<tr>
<td>NSF</td>
<td>National Science Foundation</td>
</tr>
<tr>
<td>EPSCoR</td>
<td>Experimental Program to Stimulate Competitive Research</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>USDA</td>
<td>United States Department of Agriculture</td>
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<tr>
<td>AFRI</td>
<td>Agriculture and Food Research Initiative</td>
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<td>APHIS</td>
<td>Animal and Plant Health Inspection Service</td>
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<tr>
<td>ARS</td>
<td>Agricultural Research Service</td>
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<td>CSREES</td>
<td>Cooperative State Research, Education &amp; Extension Service</td>
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<td>FNS</td>
<td>Food and Nutrition Service</td>
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<td>FS</td>
<td>Forestry Service</td>
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<tr>
<td>NASS</td>
<td>National Agricultural Statistics Service</td>
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<td>NIFA</td>
<td>National Institute for Food and Agriculture</td>
</tr>
<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
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<tr>
<td>NRICGP</td>
<td>National Research Initiative Competitive Grant Program</td>
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<tr>
<td>RD</td>
<td>Rural Development</td>
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Every effort has been made to verify the accuracy and completeness of submissions. Faculty, department chairs and heads and the deans were invited to submit entries online regarding published books, national and international recognitions, and creative works in fine and performing arts and architecture. Information on major sponsored program awards was gathered by the Office of Sponsored Programs. Reports on license agreements were produced by NUtech Ventures.

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