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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  
**Psychology**  
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  
**Physics and Astronomy**  
* 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.
**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.
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.

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.
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.

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
Nebraska Center for Energy Sciences Research
$5,000,000  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
Natural Resources
Angler Behavior in Response to Management Actions on Nebraska Reservoirs
$3,147,776 Nebraska Game and Parks Commission
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
Civil Engineering/Nebraska Transportation Center
Transportation Infrastructure - Visualizations & ITS Laboratory
$3,171,651 DOT-FHWA through Nebraska Department of Roads
6/5/12 – 6/30/15

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.
AWARDS OF $3 MILLION OR MORE

Region 7 University Transportation Center

$6,897,600

1/1/12 – 1/31/16

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
Computer Science and Engineering

Dwyer, Matthew
Computer Science and Engineering

Elbaum, Sebastian
Computer Science and Engineering

Sarma, Anita
Computer Science and Engineering

Srisa-An, Witawas
Computer Science and Engineering

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 Magneto electronic, Sensor and Energy Materials and Devices

$5,864,300

9/24/10 – 3/23/16

David Sellmyer, 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

9/25/09 – 9/24/13

The Department of Defense’s Army Research Office also supports research to develop 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.
### AWARDS OF $3 MILLION OR MORE

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<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Title</th>
<th>Award Amount</th>
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<tr>
<td>Sheridan, Susan</td>
<td>Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools</td>
<td>Efficacy of the Getting Ready Intervention at Supporting Parental Engagement and Positive Outcomes for Preschool Children at Educational Risk</td>
<td>$3,212,919</td>
<td>07/01/12 – 06/30/16</td>
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<td>Marvin, Christine</td>
<td>Special Education and Communication Disorders</td>
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<td>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.</td>
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<td>Nebraska Center for Research on Rural Education (R2Ed)</td>
<td>$9,997,852</td>
<td>07/01/09 – 06/30/15</td>
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<td>Trainin, Guy</td>
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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
7/1/12 – 6/30/16
Duppong Hurley, Kristin

Epstein, Michael

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.

Tsymbal, Evgeny

Physics and Astronomy/Nebraska Center for Materials and Nanoscience

Center for NanoFerroic Devices

$7,125,000
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.
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
9/23/09 – 9/22/14
Adenwalla, Shireen
LeSueur, James
McMahon, Patrice
Paul, Prem
Wedeman, Andrew
Wood, Simon

Physics and Astronomy
History
Political Science
Research and Economic Development
Political Science
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

$5,499,715
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
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  
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  

Baenziger, P. Stephen  
**Agronomy and Horticulture**  
Improving Barley and Wheat Germplasm for Changing Environments  
$1,261,597  
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  
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  
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  
Mechanistic Studies of Functional Switching in the PutA Flavoprotein  
$1,888,980

Bellows, Laurie  
**Graduate Studies**  
McNair Scholars Project and the University of Nebraska-Lincoln  
$1,088,494
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
Moriyama, Etsuko
Biological Sciences/
Center for Plant Science Innovation

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

Bloom, Kenneth
Physics and Astronomy
* Experimental Particle Physics at the Energy and Cosmic Frontiers
$2,055,000
Claes, Daniel
Physics and Astronomy
Domínguez, Aaron
Physics and Astronomy
Kravchenko, Ilya
Physics and Astronomy
Snow, Gregory
Physics and Astronomy

Bloom, Kenneth
Psychology
Pharmacological Interventions to Diminish Nicotine-Associated Responding
$1,437,004

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

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

Cahoon, Edgar
Center for Plant Science Innovation
Center for Metabolic Channeling for Enhanced Biofuel Systems
$1,412,772
Carr, Timothy
Innovation and Collaboration: Creating a Transdisciplinary Childhood Obesity Prevention Graduate Program
$1,450,389
USDA-NIFA through South Dakota State University Statistics
Anderson-Knott, Mindy
Child, Youth and Family Studies Nutrition and Health Sciences
De Guzman, Maria
Fischer, Jean
Takahashi, Shinya

Nutrition and Health Sciences

Cassman, Kenneth
*Global Yield Gap and Water Productivity Atlas
$1,255,923
Grassini, Patricio
Yang, Haishun
Global Yield Gap and Water Productivity Atlas
$2,034,324
Grassini, Patricio

Agronomy and Horticulture

Chen, Bing
SPIRIT^2.0 Silicon Prairie Initiative for Robotics in IT
$2,999,963

Computer and Electronics Engineering

Ciobanu, Daniel
Translational Genomics for Improving Sow Reproductive Longevity
$1,166,650
Kachman, Stephen
Riethoven, Jean-Jack
Spangler, Matthew

Animal Science

Diamond, Judy
Biology of Human: Understanding Ourselves through the Lens of Current Biomedical Research
$1,392,181
Angeletti, Anisa
Bailey, Cheryl
McQuillan, Julia
Wood, Charles

University of Nebraska State Museum

Dickey, Elbert
Supporting Military Families and Youth Partnership
$2,500,000
USDA-NIFA eXtension
$2,240,454

eXtension Military Families Learning Network

Chemistry

DiMaggio, Stephen
Synthesis of Radiofluorinated PET Imaging Agents
$1,176,467

DiRusso, Concetta
Biochemistry/Nutrition and Health Sciences
High Throughput Screens for Fatty Acid Uptake Inhibitors
$1,259,580
Black, Paul

NIH-NIDDK Biochemistry
Doll, Elizabeth  
Educational Psychology  
NU Data: Using Data and Technology to Foster Achievement  
$1,496,461

Horn, Christy  
Educational Psychology  
Shope, Ronald  
Educational Psychology

Eccarius, Malinda  
Special Education and Communication Disorders  
Mountain Prairie Upgrade Partnership-Itinerant  
$1,199,400

Bovaird, James  
Nebraska Center for Research on Children, Youth, Families and Schools

Welch, Greg  
Nebraska Center for Research on Children, Youth, Families and Schools

Engen-Wedin, Nancy  
Teaching, Learning and Teacher Education  
Indigenous Roots Teacher Education Program  
$1,091,185

McGowan, Thomas  
Teaching, Learning and Teacher Education

Espy, Kimberly Andrews  
Psychology  
Prenatal Smoking and the Substrates of Disruptive Behavior in Early Life  
$2,320,241

Garza, John  
NIH-NIDA Psychology

Faller, Ronald  
Civil Engineering/ Midwest Roadside Safety Facility  
Roadside Safety Research  
$1,177,040

Reid, John  
Mechanical & Materials Engineering

Farritor, Shane  
Mechanical & Materials Engineering  
Supporting Surgical Options in Space  
$1,350,000

Goddard, Stephen  
Computer Science and Engineering

Nelson, Carl  
Mechanical & Materials Engineering

Perez, Lance  
Electrical Engineering

Feng, Ruqiang  
Mechanical & Materials Engineering  
Effect of Protective Devices on Brain Trauma Mechanics under Idealized Shock Wave Loading  
$2,678,119

Gu, Linxia  
Mechanical & Materials Engineering

Lim, Jung Yul  
Mechanical & Materials Engineering

Negahban, Mehrdad  
Mechanical & Materials Engineering

Nelson, Carl  
Mechanical & Materials Engineering

Turner, Joseph  
Mechanical & Materials Engineering

Fischer, Jean  
Nutrition and Health Sciences  
Supplemental Nutrition Assistance Program (SNAP-ED)  
$1,620,688

Carr, Timothy  
USDA-FNS through Nebraska Department of Health and Human Services

Lodl, Kathleen  
Nutrition and Health Sciences  
Extension
Fontaine, Joseph  
Natural Resources  
* Use and Satisfaction of Public Hunting Opportunities  
$1,240,600  
Martin, Dustin  
Natural Resources

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

Green, Jordan  
Special Education and Communication Disorders  
Bulbar Motor Deterioration in ALS  
$2,294,633  

Gruverman, Alexei  
Physics and Astronomy  
Nanoscale Resistive Switching Behavior of Ferroelectric and Multiferroic Tunnel Junctions  
$1,251,143  
Tsymbal, Evgeny  
Physics and Astronomy

Guo, Jiantao  
Chemistry  
* Improve the Safety of an Efficacious Live-Attenuated HIV-1 Vaccine through Unnatural Amino Acid-Mediated Suppression of Blank Codon  
$1,919,552  
Niu, Wei  
Chemistry  
Li, Qingsheng  
Chemistry  

Guretzky, John  
Agronomy and Horticulture  
Agro-Ecosystem Approach to Sustainable Biofuels Production  
$1,916,143  
Baxendale, Fred  
Entomology  
Cassman, Kenneth  
Agronomy and Horticulture  
Glewenn, Keith  
Southeast Research and Extension Center  
Hay, Francis  
Biological Systems Engineering  
Heng-Moss, Tiffany  
Entomology  
James, Theresa  
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Namuth Covert, Deana  
Agronomy and Horticulture  
Perrin, Richard  
Agricultural Economics  
Waters, Brian  
Plant Pathology  
Wegulo, Stephen  
Plant Pathology  
Yuen, Gary  
Plant Pathology

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

$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
van 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
Teaching, Learning and Teacher Education

$1 MILLION — $2,999,999

28
Li, Ming
Psychology
Serotonin, Maternal Behavior and Postpartum Depression
$1,497,476
NIH-NIMH
Behavioral Mechanisms of Antipsychotic Action
$1,424,409
NIH-NIMH

Li, Qingsheng
Biological Sciences
The Early Events Determining SIV Rectal Transmission
$1,357,811
NIH-NIDDK

Lodl, Kathleen
Extension
Click2SciencePD Prototype
$1,634,212
Noyce Foundation
Ulferts, David
Extension

Lou, Marjorie
Veterinary Medicine and Biomedical Sciences
Protein-Thiol Mixed Disulfide in Cataractogenesis
$2,083,886
NIH-NEI

Mackenzie, Sally
Agronomy and Horticulture/
Biological Sciences/
Center for Plant Science Innovation
* Epigenetic Breeding in Crops
$2,996,073
Bill & Melinda Gates Foundation

Marley, Tom
Mathematics
EMSW21-MCTP: Nebraska Mentoring through Critical Transition Points
$2,225,689
NSF
Donsig, Allan
Mathematics
Walker, Judy
Mathematics

McCUTCHEON, ALLAN
Survey Research and Methodology/
Gallup Research Center
Reducing Error in Computer Survey Data Collection
$2,967,347
NSF
Belli, Robert
Psychology/Gallup Research Center
Olson, Kristin
Sociology/Gallup Research Center
Smyth, Jolene
Sociology/Gallup Research Center
Soh, Leen-Kiat
Computer Science and Engineering

Mendoza-Gorham, Joan
Student Affairs
Lincoln Upward Bound
$1,298,771
ED
Upward Bound Math/Science Program
$1,257,584
ED

Molfese, Victoria
Child, Youth and Family Studies
Development Implications of Early Childhood Sleep
$1,393,519
NIH-NICHD through Indiana University
Molfese, Dennis
Psychology
Rudasill, Kathleen
Educational Psychology

$1 MILLION — $2,999,999
Pegg, Mark  
Missouri River Sportfish Ecology and Management  
$1,324,787  
Hamel, Martin  
Nebraska Game and Parks Commission  
Natural Resources

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

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  
Othman, Shadi  
Riethoven, Jean-Jack  
Biological Systems Engineering  
Steffen, David  
Xu, Huihui  
Biological Systems Engineering

Redepenning, Jody  
Chemistry  
Bioceramic Bones for Battlefield Traumas  
$1,358,000  
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

Shapiro, Charles  
Northeast Research and Extension Center  
Improving Organic Farming Systems and Assessing Their Environmental Impacts across Agro-Ecoregions  
$1,419,710  
USDA-CSREES

Shen, Zhigang  
Durham School of Architectural Engineering and Construction  
Advanced Decentralized Water/Energy Network Design for Sustainable Infrastructure  
$1,249,995  
EPA

Sheridan, Susan  
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  
ED-IES
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<th>Name</th>
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<td>Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents</td>
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<td>Tsymbal, Evgeny</td>
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Umstadter, Donald  
* Novel Narrowband, Tunable, Multi-MeV X-Ray Source  
$2,896,428  
National Strategic Research Institute  
Physics and Astronomy  

Banerjee, Sudeep  
Chen, Shouyuan  

Propagation and Interactions of Ultrahigh Power Light: Relativistic Nonlinear Optics  
$1,199,891  
Banerjee, Sudeep  
Kalmykov, Serguei  
Shadwick, Bradley  

Laser Produced Coherent X-Ray Sources  
$1,395,000  
Banerjee, Sudeep  

Velander, William  
Chemical and Biomolecular Engineering  
Technologies for Hemostasis and Stabilization of the Acute Traumatic Wound  
$1,783,613  
DoD-USAMRAA through UNMC  

Walia, Harkamal  
Agronomy and Horticulture  
Physiological and Genetic Mechanisms Underlying Salt Tolerance in Rice across Developmental Stages  
$2,035,509  
3/1/13 – 2/29/16  
Lorenz, Aaron  
Samal, Ashok  
Wang, Dong  

Walter, Jens  
Food Science and Technology  
Determination of the Importance of Colonization History in the Assembly of the Gastrointestinal Microbiota  
$1,194,259  
NIH-NIGMS  
Benson, Andrew  
Petersen, Daniel  

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  
NASA  
Fuchs, Brian  
Hayes, Michael  
Svodoba, Mark  
Tadesse, Tsegaye  

Weeks, Donald  
Biochemistry  
Consortium for Commercialization of Algae Biofuels and Biotechnology  
$1,672,123  
DOE through University of California, San Diego  
Cerutti, Heriberto  
Nickerson, Kenneth  
Van Etten, James  

$1 MILLION – $2,999,999
Whitbeck, Les Sociology
Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents
$1,358,156 NIH-NIAAA

Cheadle, Jacob Sociology
$1,330,374 NIH-NIGMS

Hoyt, Dan Sociology

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

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

Research Training in Comparative Viral Pathogenesis
$1,316,330 NIH-NIAID

Vaccination against Mucosal HIV Clade C Transmission
$1,291,235 NIH-DFCI

Yamamoto, Catherine Student Affairs
Student Support Services Program
$2,470,445 ED

$1 MILLION — $2,999,999
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
Physics and Astronomy
Gruverman, Alexei
Physics 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

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  
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  
Bockelman, Brian  
Computer Science and Engineering  
Ramamurthy, Byravamurthy  
Computer Science and Engineering  
Swanson, David  
Computer Science and Engineering

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

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

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

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  
Wegulo, Stephen  
Plant Pathology

Balschweid, Mark  
Agricultural Leadership, Education and Communication  
Soybean Market Journal  
$200,000  
Harms, Kurtis  
Education and Communication  
Schulte, Brandon  
Agro-Industrial Education, Research, and Outreach  
Wilkerson, Jeff  
Education and Communication
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<th>Department</th>
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<td>Barker, Bradley</td>
<td>4-H Youth Development</td>
<td>4-H Robotics: Engineering for Today and Tomorrow</td>
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<td>Barletta, Raul</td>
<td>Veterinary Medicine and Biomedical Sciences</td>
<td>* Genome Wide Analysis of M. Paratuberculosis Pathogenesis</td>
<td>USDA-NIFA</td>
<td>$499,981</td>
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<td>Bartelt-Hunt, Shannon</td>
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<td>Fate and Bioavailability of Steroids in Aquatic Sediment</td>
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<td>Basolo, Alexandra</td>
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<td>The Consistency of Behavioral Plasticity Across Different Selective Contexts</td>
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<td>$506,998</td>
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<td>Basset, Gilles</td>
<td>Agronomy and Horticulture/Biochemistry/Center for Plant Science Innovation</td>
<td>Phylloquinone Biosynthesis in Plants: Enzyme Discovery and Pathway Flux Control</td>
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<td>Batelaan, Herman</td>
<td>Physics and Astronomy</td>
<td>Coherent Electron Control</td>
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<td>Baumert, Joseph</td>
<td>Food Science and Technology</td>
<td>Comparison of Gnotobiotic and Conventional Mice for Predicting the Allergenic Potential Proteins Introduced into Genetically Engineered Plants</td>
<td>EPA</td>
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<td>Becker, Donald</td>
<td>Biochemistry</td>
<td>REU Site: Training in Redox Biology</td>
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<td>Belashchenko, Kirill</td>
<td>Physics and Astronomy</td>
<td>First-Principles Theory of Thermal Effects in Spin Transport</td>
<td>NSF</td>
<td>$225,000</td>
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<td>Food Science and Technology</td>
<td>Microbiome Analysis of ConAgra Products</td>
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<td>Berkowitz, David</td>
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<td>New Approaches to Catalyst Screening &amp; Development</td>
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Beukelman, David  
Special Education and  
Communication Disorders  
Rehabilitation Engineering Research  
Center on Communication Enhancement  
$392,328  
ED through Duke University Medical Center

Billesbach, David  
Biological Systems Engineering  
The Ameriflux Network Management Project  
$244,986  
DOE through  
University of California-Berkeley National Lab

Bischoff, Richard  
Child, Youth and Family Studies  
Improving Training in Rural Mental Health Care through the Innovative Use of Technology and the Application of Collaborative Care Models  
$455,062  
USDA-CSREES

Bloom, Kenneth  
Physics and Astronomy  
Any Data, Anytime, Anywhere  
$710,336  
NSF

Blum, Paul  
Biological Sciences  
Cell Line Development, Early Stage Production and Establishment of a Research Cell Bank  
$213,486  
NovaDigm Therapeutics Inc.

Bobaru, Florin  
Mechanical & Materials Engineering  
Predictive Models for Dynamic Brittle Fracture and Damage at High-Velocity Impact in Multilayered Targets  
$369,945  
DoD-ARO

Bockelman, Brian  
Computer Science and Engineering  
CC-NIE Integration: Bringing Distributed High Throughput Computing to the Network with Lark  
$573,344  
NSF
Brewer, Gary
Entomology
Biopesticide Management of Pasture Flies in the Great Plains via a Push-Pull Strategy
$200,000
USDA-NIFA
Boxler, David
West Central Research and Extension Center

Brisson, Jennifer
Biological Sciences
Contrasting Environmental and Genetic Controls of Alternative Phenotypes
$782,884
NIH-NIEHS

Brown, Deborah
Biological Sciences
* Generation and Regulation of Anti-Viral CD4 T Cells with Cytolytic Potential
$351,312
NIH-NIAID

Buchholz, Wallace
Biological Process Development Facility
* Manufacture of Recombinant Vaccine for Phase Clinical Trial and Toxicity Testing
$832,185
National Strategic Research Institute
Johnson, Scott
Biological Process Development Facility

Bulling, Denise
Public Policy Center
Developing Nebraska’s Homeland Security Planning Capacity
$300,000
DHS through Nebraska Military Department-NEMA
Dekraai, Mark
Psychology/Public Policy Center
Speck, Kathryn
Public Policy Center

Burgin, Amy
Natural Resources
Conversion of Farm Fields to Wetlands: How Do Created Wetlands Affect Global Warming Potential
$454,545
USDA-NIFA

The Effects of Alum and Fish Restoration on Water Quality in the Fremont Lake, NE
$264,148
EPA through Nebraska Department of Environmental Quality
Pegg, Mark
Natural Resources
Pope, Kevin
Natural Resources
Thomas, Steven
Natural Resources

Coupled C, N and S Cycling in Coastal Plain Wetlands: How Will Climate Change and Salt Water Intrusion Alter Ecosystem Dynamics?
$239,555
NSF
Cahoon, Edgar
Biochemistry/Center for Plant Science Innovation
Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis
$686,815 NSF

Stone, Julie
Biochemistry
Center for Enhanced Camelina Oil (CECO)
$689,174 DOE through Donald Danforth Plant Science Center

Development of Bio-Based Lubricants in a Dedicated Industrial Oilseed Crop
$500,000 USDA-NIFA
Clemente, Thomas
Agronomy and Horticulture/Center for Biotechnology/Center for Plant Science Innovation
Biochemical Genomics: Quizzing the Chemical Factories of Oilseeds
$979,028 NSF through Washington State University

BioCassava Plus
$408,442 Bill & Melinda Gates Foundation through Donald Danforth Plant Science Center

Cantrell, Randolph
Center for Applied Rural Innovation
Marketing Rural Communities to Attract and Retain Workers
$498,558 USDA-NRICGP
Burkhart-Kriesel, Cheryl
Panhandle Research and Extension Center

Cassman, Kenneth
Agronomy and Horticulture
CGIAR Fund Office ISPC Chair
$970,147 World Bank Group-IBRD

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

Cerutti, Heriberto
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
Choueiry, Berthe  
Computer Science and Engineering  
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

Pedersen, Jon  
Teaching, Learning and Teacher Education/Center for Science, Mathematics and Computer Education

Snow, Gregory  
Physics and Astronomy  
Nebraska Center for Research on Children, Youth, Families and Schools

Welch, Greg  
Nebraska Center for Research on Children, Youth, Families and Schools

Clarke, Jennifer  
Food Science and Technology/Statistics  
* ATD: Statistical Ensembles for the Identification of Bacterial Genomes  
$495,318  
NSF

Clarke, Bertrand  
Statistics

Clemente, Thomas  
Agronomy and Horticulture/Center for Plant Science Innovation/Center for Biotechnology  
Testing Replacement of Fishmeal and Fish Oil in Seriola Rivoliana (Kona Kampachi) Diet with Soy-Based Protein and Oil  
$386,969  
United Soybean Board/Smith/Bucklin

Engineering Hydrocarbon Biosynthesis and Storage Together with Increased Photosynthetic Efficiency into the Saccharinae  
$551,971  
DOE through University of Illinois at Urbana-Champaign

Necessary Resources to Aid in the Translation of Genomics Information into Applied Technologies  
$630,982  
NSF through University of Georgia

Cohen, Myra  
Computer Science and Engineering  
SHF: Medium: Regression Testing Techniques for Real-World Software Systems  
$324,883  
NSF

Couch, Brian  
Biological Sciences  
* Impact of the Summer Institution on Faculty Teaching and Student Achievement  
$393,068  
NSF through University of Colorado

$200,000 – $999,999
Cramer, Joel
Nutrition and Health Sciences
* Effects of Conjugated Linoleic Acid on Physical Performance
$339,567
Bergstrom, Haley
Nutrition and Health Sciences
Cochrane, Kristen
Nutrition and Health Sciences
Housh, Terry
Nutrition and Health Sciences
Jenkins, Nathaniel
Nutrition and Health Sciences

A Single Site, Double-Blind, Randomized, Placebo-Controlled, Crossover Trial to Evaluate the Safety and Potential Effects of the Dietary Supplement Anatabine on Delayed Onset Muscle Soreness in the Forearm Flexors
$377,456
Housh, Terry
Nutrition and Health Sciences

Cress Nipper, Cynthia
Special Education and Communication Disorders
* STTR: Infant Assessment of Early Communication Risk Factors: The ECBS
$532,677
NIH-NIDCD through Brookes Publishing Company

Crockett, Lisa
Psychology
An Ecological Model of Latino Youth Development
$315,000
NSF
Buhs, Eric
Educational Psychology
Carranza, Miguel
Sociology/Institute for Ethnic Studies
De Guzman, Maria
Child, Youth and Family Studies

Cupp, Andrea
Animal Science
* Causes and Consequences of Androgen Excess on Oocyte Quality
$499,994
USDA-NIFA
Wood, Jennifer
Animal Science

De Ayala, Rafael
Educational Psychology
GAANN Fellowship Program for Educational Psychology
$528,608
ED
Ansorge, Charles
Educational Psychology
Bellows, Laurie
Graduate Studies
Bovaird, James
Educational Psychology
Geisinger, Kurt
Educational Psychology

Detweiler, Carrick
Computer Science and Engineering
* Co-Aerial-Ecologist: Robotic Water Sampling and Sensing in the Wild
$956,210
USDA-NIFA
Burgin, Amy
Natural Resources
Elbaum, Sebastian
Computer Science and Engineering
Waite, Matthew
Journalism and Mass Communications

$390,000
NSF

RI: Small: Adaptive Sampling with Robots for Marine Observations
$249,971
NSF
DiRusso, Concetta  
* Activators of Lipid Accumulation in Algae  
$550,000  
Adamec, Jiri  
Cerny, Ronald  

Biochemistry

Domínguez, Aaron  
PIRE: Collaborative Research with the Paul Scherrer Institute and Eidgenoessische Technische Hochschule on Advanced Pixel Silicon Detectors for the CMS Detector  
$782,447  
Bloom, Kenneth  

Physics and Astronomy

Dowben, Peter  
Doped Boron Carbide Polymers: Fundamental Studies of a Novel Class of Materials for Enhanced Radiation Detection  
$375,000  
Du, Liangcheng  
Discovering New Anti-Infective Agents from Lysobacter  
$838,922  
Ducharme, Stephen  
Ferroelectric-Enhanced Organic Electronics  
$225,000  
Dussault, Patrick  
New Reactions of Organic Peroxides  
$420,000  
Dweikat, Ismail  
Improvement of Millet Hybrid, Kenaf & Tropical Maize  
$220,000  

Agronomy and Horticulture

Chemistry

DiRusso, Concetta  
* Activators of Lipid Accumulation in Algae  
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Cerny, Ronald  

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Du, Liangcheng  
Discovering New Anti-Infective Agents from Lysobacter  
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Ducharme, Stephen  
Ferroelectric-Enhanced Organic Electronics  
$225,000  
Dussault, Patrick  
New Reactions of Organic Peroxides  
$420,000  
Dweikat, Ismail  
Improvement of Millet Hybrid, Kenaf & Tropical Maize  
$220,000  

Agronomy and Horticulture

Chemistry

$200,000 — $999,999
Dzenis, Yuris  
**Mechanical & Materials Engineering**  
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  
DoD-AFOSR

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

Enders, Axel  
**Physics and Astronomy**  
* UNO-NASA Space Grant Consortium: Neutron Voltaics for Deep Space Missions  
$546,569  
NASA through UNO

Dowben, Peter  
Physics and Astronomy

Ianno, Natale  
Electrical Engineering

Epstein, Michael  
**Special Education and Communication and Disorders**  
University of Nebraska’s Post-Doctoral Program in Emotional Disturbance  
$643,776  
ED

Randomized Clinical Trial of the Boys Town In-Home Program  
$621,989  
Father Flanagan’s Boys’ Home

Duppong Hurley, Kristin  
Special Education and Communication and Disorders

Leadership Training in Emotional Disturbance Disorders  
$601,733  
ED

Duppong Hurley, Kristin  
Special Education and Communication and Disorders

Torkelson-Trout, Alexandra  
Special Education and Communication and Disorders

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  
Animal Science/Biological Systems Engineering

Stowell, Richard  
Biological Systems Engineering

$200,000 – $999,999
Eskridge, Kent  
Statistics  
$396,456  
GAANN Fellowship Program for Statistics

Bateman, Renee  
Graduate Studies  
$396,456

Bellido, Christopher  
Statistics  
$396,456

Blankenship, Erin  
Statistics  
$396,456

Parkhurst, Anne  
Statistics  
$396,456

Stroup, Walter  
Statistics  
$396,456

Weissinger, Ellen  
Educational Psychology  
$396,456

Zhang, Shunpu  
Statistics  
$396,456

Fabrikant, Ilya  
Physics and Astronomy  
Electron-Molecule Collisions in Different Environments  
$240,000  
NSF

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  
DOT-FHWA through Nebraska Department of Roads

Bielenberg, Robert  
Midwest Roadside Safety Facility  
$293,248  
Nebraska Department of Roads

Reid, John  
Mechanical & Materials Engineering  
$293,248

Bielenberg, Robert  
Midwest Roadside Safety Facility  
$293,248

Lechtenberg, Karla  
Midwest Roadside Safety Facility  
$293,248

Reid, John  
Mechanical & Materials Engineering  
$293,248

Stolle, Cody  
Midwest Roadside Safety Facility  
$293,248

Adaptation of the SAFER Barrier for Roadside and Median Applications  
$990,000  
Nebraska Department of Roads

Reid, John  
Mechanical & Materials Engineering  
$990,000

Farritor, Shane  
Mechanical & Materials Engineering  
* Robotic Tele-Surgery Research  
$686,808  
DOD-Army-TATRC through UNMC

Hawks, Jeff  
Mechanical & Materials Engineering  
$686,808

Nelson, Carl  
Mechanical & Materials Engineering  
$686,808

Terry, Benjamin  
Mechanical & Materials Engineering  
$686,808

Rowe, Clinton  
Mechanical & Materials Engineering  
$686,808

Feng, Song  
Natural Resources  
Megadrought: Local vs. Remote Causal Factors for Medieval North America  
$469,398  
NSF

Hu, Qi (Steve)  
Natural Resources  
Earth and Atmospheric Sciences/Natural Resources  
$469,398

Oglesby, Robert  
Earth and Atmospheric Sciences/Natural Resources  
$469,398

Rowe, Clinton  
Earth and Atmospheric Sciences/Natural Resources  
$469,398
### Ferguson, Richard
**Agronomy and Horticulture**
- Interactions of Water and Nitrogen Supply for Irrigated Corn across Field Landscapes
- John Deere
- $483,373

### Irmak, Suat
**Biological Systems Engineering**
- Evaluation of Flue Gas Desulfurization Gypsum (FGDG) as a Soil Amendment for Irrigated Crop Production
- Public Power Generation Agency
- $256,292

### Shaver, Timothy
**West Central Research and Extension Center**
- van Donk, Simon
- West Central Research and Extension Center
- $83,373

### Fernando, Samodha
**Animal Science**
- Dietary Intervention and Microbial Community Analysis toward Methane Mitigation
- USDA-AFRI
- $749,941

### Luck, Joe
**Biological Systems Engineering**
- McCullister, Dennis
- Agronomy and Horticulture
- $56,292

### Luck, Joe
**Biological Systems Engineering**
- McCallister, Dennis
- Agronomy and Horticulture
- $56,292

### Fontaine, Joseph
**Natural Resources**
- Assessing the Effects of Habitat Incentive Programs and Public Access Programs on Pheasant Population Dynamics and Hunter Harvest
- Nebraska Game and Parks Commission
- Natural Resources
- $405,382

### Forbes, Cory
**Natural Resources**
- * Modeling Hydrologic Systems in Elementary Science
- NSF
- $327,537

### Franco Cruz, Rodrigo
**Veterinary Medicine and Biomedical Sciences**
- Thiol Redox Signaling in Neuronal Cell Death
- American Heart Association
- $214,500

### Frankl, Nicole
**Nebraska LTAP**
- * Nebraska Local Technical Assistance Program FY 2015
- DOT-FHWA through Nebraska Department of Roads
- $834,038

### Franti, Thomas
**Biological Systems Engineering**
- Heartland Regional Water Coordination Initiative
- USDA-CSREES through Iowa State University
- $571,988

### Gardner, Scott
**Biological Sciences/University of Nebraska State Museum**
- Mongolia Vertebrate Parasite Project
- NSF
- $627,491

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$200,000 – $999,999
Gaussoin, Roch
* Development of Quality Protein Popcorn as a Non-GMO Approach to Enhanced Nutritional Quality, Pop Volume and Flavor Profile

$694,200
Holding, David
Rodriguez, Oscar
Rose, Devin

Agronomy and Horticulture
ConAgra

* ConAgra Popcorn Breeding Maintenance

$475,166
Hoegemeyer, Thomas
Lorenz, Aaron
McAndrew, Thomas

Agronomy and Horticulture
ConAgra

* Marker Discovery and Characterization of Genetic Diversity in CAG Popcorn Breeding Program

$211,900
Lorenz, Aaron

Agronomy and Horticulture
ConAgra

Gay, Timothy

Polarized Electron Physics

$635,000

Physics and Astronomy
NSF

MRI: Development of a Rubidium Spin Filter as a Source of Polarized Electrons

$300,000
Batelaan, Herman
Uiterwaal, Cornelis

Physics and Astronomy
NSF

Giannakas, Konstantin

Center For Agricultural and Food Industrial Organization- Policy Research Group (CAFI-O-PRG)

$766,166
Anderson, John
Burbach, Mark
Calow, Peter
Fulghiniti, Lilyan
Hayes, Michael
Lubben, Bradley
Lynne, Gary
Perrin, Richard
Schoengold, Karina
Thompson, Eric
Yiannaka, Amalia

Agricultural Economics
USDA-NIFA

Natural Resources
Economics
Research and Economic Development
Agricultural Economics
Natural Resources
Agricultural Economics
Agricultural Economics
Bureau of Business Research
Agricultural Economics

$200,000 — $999,999
Glover, Todd  
Nebraska Center for Research on 
Children, Youth, Families and Schools 
State-Wide Response-to-Intervention 
Consortium for Training & Evaluation  
$499,917  
Ihlo, Tanya  
Nebraska Department of Education  
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  
$250,000  
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  
Various Industries 

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 
Low, Russanne  
Natural Resources 
Oglesby, Robert  
Earth and Atmospheric Sciences/ 
Natural Resources 
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 

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

Soybean Breeding and Genetic Research for Nebraska 
$230,521  
Nebraska Soybean Board 
Specht, James  
Agronomy and Horticulture 

Griep, Mark  
Chemistry  
* Framing the Chemistry Curriculum  
$749,285  
NSF
Grosskopf, Kevin  Durham School of Architectural Engineering and Construction
IMPACT - Trade Adjustment Assistance Grant
$725,842  DOL through Central Community College
Harms, Peter  Management
Luthans, Fred  Management
Shen, Zhigang  Durham School of Architectural Engineering and Construction
Stentz, Terry  Durham School of Architectural Engineering and Construction
Torraco, Richard  Educational Administration

Gruverman, Alexei  Physics and Astronomy
Nanoscale Studies of Pyroelectric and Thermoelectric Phenomena
$600,000  DOE
Ducharme, Stephen  Physics and Astronomy

Guo, Jiantao  Chemistry
* Mechanistic Study of Cellulosome through Reprogramming Its Assembly
$307,741  NSF
Niu, Wei  Chemistry

Guretzky, John  Agronomy and Horticulture
Demonstrating Mob Grazing Impacts in the Northern Great Plains on Grazingland Efficiency, Botanical Composition, Soil Quality, and Ranch Economics
$330,256  USDA-NRCS through South Dakota State University
Mama, Martha  Agronomy and Horticulture
Schacht, Walter  Agronomy and Horticulture
Stockton, Matthew  West Central Research and Extension Center
Volesky, Jerry  West Central Research and Extension Center

Hage, David  Chemistry
* Instrumentation Development: Label-Free and Rapid 3D-Nanostructure Ultrathin-Layer Imaging Chromatography
$402,483  NSF
Hofmann, Tino  Electrical Engineering
Chromatographic Automation of Immunoassays
$809,387  NIH-NIGMS

Microcolumns for Biomarker Detection
$250,000  DoD-DRMRP through SFC Fluids LLC

Han, Ming  Electrical Engineering
Highly Sensitive and Multiplexed Fiber-Optic Ultrasonic Sensors
$305,658  DoD
Distributed Fiber-Optic Laser Ultrasound Generation
$300,103  DoD
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<th>Project Description</th>
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<td>Harshman, Lawrence</td>
<td>Biological Sciences</td>
<td>Molecular Evolution of Genes Expressed in <em>D. melanogaster</em> Sperm Storage Structures</td>
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<td>Moriyama, Etsuko</td>
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<td>Genome Biology of Innate Immunity: Genetic Dissection of <em>Drosophila melanogaster</em> Responses to Bacillus Infection</td>
<td>$454,013</td>
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<td>Benson, Andrew</td>
<td>Food Science and Technology</td>
<td>* MPRP Sauce Fluid Dynamic Study for Perfect Dispense System</td>
<td>$550,000</td>
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<td>Hawks, Jeff</td>
<td>Mechanical &amp; Materials Engineering</td>
<td>* NDMC Drought Information Services for Agriculture</td>
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<td>Hayes, Michael</td>
<td>Natural Resources</td>
<td>* National Needs Fellow: Integrated Practitioners for Tomorrow’s Sustainable Agricultural Systems</td>
<td>$234,000</td>
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<td>Economic Implications of Reduced Ground Water Allocations in the Nebraska Panhandle and Educational Programming to Improve Management with Less Water</td>
<td>North Platte NRD</td>
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<td>Mathematics</td>
<td>* Topology and Geometry of Cayley Graphs for Groups</td>
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<td>Establishing Blow Fly Development and Sampling Procedures to Estimate Postmortem Intervals</td>
<td>DOJ-National Institute of Justice</td>
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<td>Ellipsometric Materials Characterization of Electronic Thin Film Heterostructures</td>
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<td>Working Memory and Word Learning in Children with Typical Development and Language Impairment</td>
<td>NIH-NIDCD through Arizona State University</td>
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<td>Holding, David</td>
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<td>* A Novel Functional Genomics Platform for Dissecting Maize Kernel Maturation and Protein Quality</td>
<td>USDA-NIFA</td>
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<td>Natural Resources</td>
<td>Development of a Northern Hemisphere Gridded Precipitation Dataset Spanning the Past Half Millennium for Analyzing Interannual and Longer-Term Variability in the Monsoons</td>
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<td>Understanding and Predicting Tropical and North Atlantic SST Forcing on Variations in Warm Season Precipitation over North America</td>
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**$200,000 — $999,999**
Huang, Jinsong  
**Mechanical & Materials Engineering**  
Room-Temperature Operation Single-Photon Detectors Based on Nanoparticle Super-Gated Organic Field Effect Transistors  
$300,000 NSF

Extremely Sensitive Solid-State Ultraviolet Photodetector by Fabricated Low-Cost Solution Process  
$628,183 DoD-ONR

Tailoring the Energy Levels of Donor and Acceptor in Organic Photovoltaics for Increased Photovoltage with Ferroelectric Dipole Layer  
$416,000 NSF  
Ducharme, Stephen  
Physics and Astronomy

Highly Sensitive, Low Cost Organic Photodetector-Based Photomultiplication  
$400,000 DoD-DTRA

Hunt, William  
**Anthropology**  
Pilot Project: A Multidisciplinary Exploratory Study of Alpine Cairns, Baranof Island, Southeast Alaska  
$290,992 NSF  
Hartley, Ralph  
Anthropology

Hutkins, Robert  
**Food Science and Technology**  
Application of a Novel Synbiotic to Modulate the Human Gut Microbiota and Improve Health in Obese Adults  
$489,699 USDA-NIFA  
Walter, Jens  
Food Science and Technology

Hygnstrom, Scott  
**Natural Resources**  
Outdoor U Program  
$262,381 Nebraska Game and Parks Commission

Irmak, Suat  
**Biological Systems Engineering**  
Impact of Rotational Cover Crops on Soil Quality Parameters, Soil Water Holding Capacity, Soil-Water Retention Curves, and Field-Scale Water Balance Dynamics  
$490,340 USDA-NRCS  
Chatterjee, Sumantra  
Biological Systems Engineering  
Djaman, Koffi  
Biological Systems Engineering  
Mutiibwa, Denis  
Biological Systems Engineering  
Odhiambo, Lameck  
Biological Systems Engineering  
Skaggs, Kari  
Biological Systems Engineering

Impact of Tillage Practices on Corn and Soybean Transpiration, Nutrient Dynamics, and Crop Water Productivity  
$538,809 Nebraska Environmental Trust  
Eisenhauer, Dean  
Biological Systems Engineering  
Gates, John  
Earth and Atmospheric Sciences

Water Use, Surface Energy Balance, and Vegetation Dynamics of Phragmites (*Phragmites australis*) in the Central Platte River Valley  
$266,668 Central Platte NRD
Itskov, Vladimir  
Mathematics  
Topology of Neural Coding in Recurrent Networks: 
Theory and Data Analysis  
$316,862  
NSF

Iyengar, Srikanth  
Mathematics  
Commutative Algebra: Homological and Homotopical Aspects  
$435,785  
NSF

Derived Categories of Complete Intersections 
and Hochschild Cohomology  
$210,528  
NSF

Jhala, Amitkumar  
Agronomy and Horticulture  
* Pollen-Mediated Gene Flow from Acetolactate Synthase-Inhibiting 
Herbicide-Resistant Sorghum to Johnsongrass  
$296,286  
E. I. Du Pont

Lindquist, John  
Agronomy and Horticulture  
Derived Categories of Complete Intersections 
and Hochschild Cohomology  
$210,528  
NSF

Johnson, Scott  
Biological Process Development Facility  
STTR: Process Research, Development and 
Stability Testing of cv-PDG-NLS.  
$763,023  
DHHS-NIH through Restoration Genetics Inc

Van Cott, Kevin  
Chemical and Biomolecular Engineering  
Process Research and Development of a Streptococcus 
pneumoniae Whole Cell Vaccine (SPWVC)  
$676,990  
PATH, through Bill & Melinda Gates Foundation

Jones, Clinton  
Veterinary Medicine and Biomedical Sciences  
* Analysis of Bovine Herpesvirus 1 
Stress-Induced Reactivation from Latency  
$500,000  
USDA-NIFA

Doster, Alan  
Veterinary Medicine and Biomedical Sciences  
Analysis of Viral Factors that Regulate the 
Bovine Herpesvirus 1 (BHV-1) Latency Reactivation Cycle  
$375,000  
USDA-CSREES
Josiah, Scott  Nebraska State Forest Service
* Protecting, Rehabilitating and Restoring Nebraska’s Pine Forest Ecosystems
$989,667  Nebraska Environmental Trust

* Hazardous Mitigation Treatments on Non-Federal Lands
$388,900

* Conservation and Stewardship Education for Nebraska Educators and Youth
$295,781

Forest Legacy Program: Pine Ridge Project
$500,000

Pine Ridge Stewardship and Legacy Project: Ferguson Property Acquisition
$240,000  Nebraska Environmental Trust

Hazardous Fuels Reduction: Pine Ridge
$220,000

Khattak, Aemal  Civil Engineering
HMEP Public Sector Planning Grant-Commodity Flow Survey
$300,000  Nebraska Military Department-NEMA
Rilett, Laurence  Civil Engineering/Nebraska Transportation Center

Kilic, Ayse  Natural Resources/Civil Engineering
CPNRD Mapping Evapotranspiration with High Resolution Satellite Data
$521,705  Central Platte NRD

Kim, Yong Rak  Civil Engineering
Asphalt Research Consortium
$425,000  DOT-FHWA through Texas A&M Research Foundation

Knops, Johannes  Biological Sciences
LTER: Biodiversity, Disturbance & Ecosystem Functioning at the Prairie-Forest Border
$200,280  NSF through University of Minnesota
<table>
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<tr>
<th>Name</th>
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<td>Knutson, Cody</td>
<td>Natural Resources</td>
<td>Transforming Climate Variability and Change Information for Cereal Crop Producers</td>
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<td>Predictability and Prediction of Decadal Climate and Its Societal Impacts in the Missouri River Basin</td>
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<td>Koelsch, Richard</td>
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<td>Transition of an Interactive Drought Management Database for the Identification and Comparison of Drought Mitigation and Response Strategies</td>
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Lackey, Susan  
Natural Resources  
Developing Hydrogeologic Databases to Assist in Water Resources Management  
$539,100  
Lower Elkhorn NRD  
Developing Hydrogeologic Databases to Assist in Water Resources Management — UENRD  
$203,353  
Upper Elkhorn NRD  

Langell, Marjorie  
Chemistry  
* Effect of Composition and Particle Size in Oxidation Catalysis by Metal Oxide Solid Solution Nanoparticles  
$485,000  
NSF  
Metal Oxide Solid Solutions: Macroscopic to Nano-Scale  
$449,855  
NSF  
GAANN Fellowships in Chemistry: Research First at UNL  
$396,456  
ED  

Lee, Jaekwon  
Biochemistry  
Mechanistic Insights into Copper Metabolism  
$834,761  
NIH-NIDDK  
Kim, Heejeong  
Biochemistry  

Lenters, John  
Natural Resources  
Toward a Circumarctic Lakes Observation Network (CALON)  
$297,082  
NSF  

Lenton, Roberto  
Water for Food Institute  
Development of the Middle East and North Africa Network of Water Centers  
$211,565  
USAID through DAI  

Lesoing, Gary  
Southeast Research and Extension Center  
Nebraska Network for Beginning Farmers and Ranchers  
$202,397  
Center for Rural Affairs  
Conley, Dennis  
Agricultural Economics  

Lewis, Charlotte  
Center on Children, Families, and the Law  
EDN/IFSP ON-LINE  
$226,136  
ED through Nebraska Department of Education  

Lewis, Jim  
Mathematics/Center for Science, Mathematics and Computer Education  
* UNL-LPS Title I Mathematics Professional Development Partnership  
$538,246  
Lincoln Public Schools  
Hamp, Michelle  
Center for Science, Mathematics and Computer Education
Li, Xu  
Civil Engineering  
Bioaccumulation of Antibiotic Resistant Salmonella in Produce after Irrigation Using Recycled Waters  
$500,000  
USDA-AFRI  
Bartelt-Hunt, Shannon  
Agronomy and Horticulture  
Hodges, Laurie  
Natural Resources  
Snow, Daniel  
Natural Resources

Lindquist, John  
Agronomy and Horticulture  
Crop-Wild Gene Flow in Sorghum and Relative Fitness of the Shattercane x Sorghum F2 Population  
$300,000  
USDA-NIFA  
Bernards, Mark  
Agronomy and Horticulture

Liou, Sy-Hwang  
Physics and Astronomy  
High Sensitivity Magnetoresistive Sensors for Both DC and EMI Magnetic Field Mapping  
$650,000  
DoD-Strategic Environmental Research Development Program

Liska, Adam  
Biological Systems Engineering  
Second Generation Biofuels: Carbon Sequestration and Life Cycle Analysis  
$500,000  
DOE  
Arkebauer, Timothy  
Agronomy and Horticulture  
Cassman, Kenneth  
Agronomy and Horticulture

Lodl, Kathleen  
Extension  
* Childcare and Youth Training and Technical Assistance Program 2013 Expansion  
$390,000  
USDA-NIFA  
Durden, Tonia  
Child, Youth and Family Studies

Lorenz, Aaron  
Agronomy and Horticulture  
Uncovering the Genetic Basis of Tolerance to Goss’s Wilt in North American Maize  
$293,431  
Dow AgroSciences  
Jackson-Ziems, Tamra  
Plant Pathology

Lou, Marjorie  
Veterinary Medicine and Biomedical Sciences  
* Protein-Thiol Mixed Disulfide in Cataractogenesis  
$409,259  
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Wu, Hong Li  
Veterinary Medicine and Biomedical Sciences

Lu, Ying  
Computer Science and Engineering  
CSR: Small: Energy Management for Heterogeneous MapReduce Data Centers  
$432,932  
NSF  
Swanson, David  
Computer Science and Engineering

$200,000 – $999,999
Lu, Yongfeng  Electrical Engineering
Fast Growth of Large Diamond Crystals in Open Air $275,195  NSF

MRI: Development of Multifunctional CARS (Coherent Anti-Stokes Raman Spectroscopy) Imaging System $266,460  NSF
Ducharme, Stephen  Physics and Astronomy
Pannier, Angela  Biological Systems Engineering
Zhou, You  Center for Biotechnology

Low-Temperature Epitaxy of Gallium Nitride Thin Films $275,338  NSF

Laser-Assisted Chemical Vapor Deposition of Carbon Nanotubes $275,000  Panasonic Boston Laboratory

Synthesis of Crystalline Carbon Nitride by Simultaneous Vibrational and Electronic Excitations $255,771  NSF
Mackenzie, Sally  Agronomy and Horticulture/
Biological Sciences/
Center for Plant Science Innovation
Understanding MSH1 Developmental Reprogramming $925,482  Syngenta
Elucidation of Mito-Nuclear Interplay in Arabidopsis $689,961  DOE
Wang, Dong  Statistics

GEPR: Intersection of the Plant Epigenome and Bioenergetics in Phenotypy $599,998  NSF
Fromm, Michael  Agronomy and Horticulture/
Center for Biotechnology
Lorenz, Aaron  Agronomy and Horticulture/
Center for Biotechnology
Riethoven, Jean-Jack  Center for Plant Science Innovation
Xu, Yingzhi  Biological Sciences
Yu, Bin
Mamo, Martha  Agronomy and Horticulture  
* Grazing Management Effect on Micro- and Macro-Scale Fate of Carbon and Nitrogen in Rangelands  
$497,000  USDA-NIFA  
Bradshaw, Jeffrey  Panhandle Research and Extension Center  
Eskridge, Kent  Statistics  
Ferguson, Richard  Agronomy and Horticulture  
Guretzky, John  Agronomy and Horticulture  
Jenkins, Karla  Panhandle Research and Extension Center  
Schacht, Walter  Agronomy and Horticulture  
Volesky, Jerry  West Central Research and Extension Center  
Whipple, Sean  Panhandle Research and Extension Center  
Wingeyer, Ana  Agronomy and Horticulture  
Yang, Haishun  Agronomy and Horticulture  

McCurdy, Merilee  Educational Psychology  
Training School Psychologists in Response-to-Intervention Implementation and System Change  
$799,981  ED  
Daly, Edward  Educational Psychology  
Ihlo, Tanya  Nebraska Center for Research on Children, Youth, Families and Schools  
Kunz, Gina  Nebraska Center for Research on Children, Youth, Families and Schools  

McMahon, Patrice  Political Science  
* Study of the U.S. Institute on Civic Engagement  
$217,505  DOS-BECA  
Major, Linda  Student Affairs  
Pfister, Damien  Communication Studies  

Mitra, Amit  Plant Pathology  
Development of Transgenic Beans for Broad-Spectrum Resistance against Fungal Diseases  
$250,000  USDA-NIFA  
Steadman, James  Plant Pathology  
Urrea Florez, Carlos  Panhandle Research and Extension Center  

Morcous, George  Durham School of Architectural Engineering and Construction  
Self-Consolidating Concrete for Cast-in-Place Bridge Components  
$449,831  NAS-TRB  

Moriyama, Etsuko  Biological Sciences/ Center for Plant Science Innovation  
Large-Scale Simultaneous Multiple Alignment & Phylogeny Estimation  
$266,830  NSF  

Mower, Jeffrey  Agronomy and Horticulture  
Tracing Processes of Genome Evolution using Plantaginaceae  
$749,544  NSF  
The Geraniaceae Genomes Project: Accelerated and Coordinated Evolution across the Three Plant Genomes  
$720,444  NSF through University of Texas at Austin  

$200,000 — $999,999
Nastasi, Michael  
Mechanical & Materials Engineering/Nebraska Center for Energy Sciences Research  
Radiation Tolerance and Mechanical Properties of Advanced Ceramic/Metal Composites  
$979,978  
DOE

Negahban, Mehrdad  
Mechanical & Materials Engineering  
Polymer Parts with Tailored Microstructure Distributions Optimized for an Application  
$837,503  
DoD-MDA

Tan, Li  
Mechanical & Materials Engineering  
EMME: US-EU Transatlantic Degree Program in Engineering Mechanics/Materials Engineering  
$407,997  
ED

Nelson, Carl  
Mechanical & Materials Engineering  
* Multifunction Robotic Tools for Natural Orifice and Single-Incision Surgery  
$395,905  
NIH-NIBIB

Farritor, Shane  
Mechanical & Materials Engineering  
* A Novel Pediatric Gait Rehabilitation Device  
$394,911  
NIH-NICHD

Nelson, J. Ron  
Special Education and Communication Disorders/Nebraska Center for Research on Children, Youth, Families and Schools  
Efficacy of Supplemental Early Vocabulary Connections Instruction for English Language Learners  
$274,955  
ED-IES through Washington Research Institute

Bovaird, James  
Biological Systems Engineering  
UNO-NASA Space Grant Consortium - ModRED: A Highly Dexterous Modular Robot with Autonomous Dynamic Reconfigurations for Extra-Terrestrial Exploration  
$338,184  
NASA through UNO

Newman, Ian  
Educational Psychology  
Nebraska Collegiate Consortium to Reduce High Risk Drinking  
$222,559  
ED

Hopkins, Megan  
Educational Psychology  
Shell, Duane  
Educational Psychology

Osorio, Fernando  
Veterinary Medicine and Biomedical Sciences  
* Molecular Structures of Porcine Reproductive and Respiratory Virus (PRRSV) that Contribute to Protective Immunity  
$500,000  
USDA-AFRI

Pattnaik, Asit  
Veterinary Medicine and Biomedical Sciences

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<td>Pannier, Angela</td>
<td>Biological Systems Engineering</td>
<td>Microarray Analysis of Gene Expression Profiles in Cells Transfected with Nonviral Gene Delivery Vectors</td>
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<td>Veterinary Medicine and Biomedical Sciences</td>
<td>* Development of a Novel Self-Propagating PRRSV-VSV G Hybrid Replicon as a Vector for Inducing Broad PRRSV Protection</td>
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<td>Porcine Reproductive and Respiratory Syndrome Virus: Modulation of Innate and Acquired Immune Response</td>
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<td>Platte River Catfish Population Dynamics</td>
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<td>Sturgeon Management in the Platte River</td>
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<td>* Crossing the Threshold of Problem Solving: Electrical Engineering vs. Chemistry</td>
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<td>Recruitment of Walleye and White Bass in Irrigation Reservoirs</td>
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<td>Dynamic Optimized Advance Scheduling of Bandwidth Demands</td>
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<td>Faunistic Survey of Dynastinae of Mexico, Guatemala, &amp; Belize</td>
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Rebarber, Richard  
**Nebraska Math Scholars**  
$599,996  
Curto, Carina  
Hartke, Stephen  
Williams, Amber  
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REU Site: Nebraska REU in Applied Math  
$285,263  
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Reddy, N.R. Jayagopala  
**Veterinary Medicine and Biomedical Sciences**  
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$308,000  
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Reid, John  
**Mechanical & Materials Engineering**  
Wisconsin DOT Roadside Safety Research Program FY 2012  
$606,572  
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Midwest Department of Roads  
Midwest Roadside Safety Facility  
Midwest Roadside Safety Facility  

Downstream Anchoring for MGS, Minimum Effective Guardrail Length for MGS, Short-Radius Guardrail w/Large Radii  
$415,471  
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Midwest Roadside Safety Facility  
Midwest Roadside Safety Facility  

Midwest States Regional Pooled Fund Program  
$650,000  
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Midwest Roadside Safety Facility  

Richardson, Amanda  
**Sociology**  
* 2014-2015 Student Health and Risk Prevention Surveillance System  
$275,981  
DHS-SAMSHA through Nebraska Department of Health  
Sociology  

Witt-Swanson, Lindsey  

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Civil Engineering / Nebraska Transportation Center
* Traffic Calming Elements for Entry Control Facility Threat Delay and Containment
$474,663 National Strategic Research Institute
Faller, Ronald Midwest Roadside Safety Facility
Jones, Elizabeth Nebraska Transportation Center
Reid, John Mechanical & Materials Engineering

* UTC Tier 1 with University of Texas Pan American
$424,230 DOT-FHWA
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Khattak, Aemal Civil Engineering

Enhance Awareness of Transportation and Transportation Careers - Fast Forward
$200,000 Department of Transportation-FHWA
Kunz, Gina Nebraska Center for Research on Children, Youth, Families and Schools
Welch, Greg Nebraska Center for Research on Children, Youth, Families and Schools

Riveros Iregui, Diego Natural Resources
Soil Carbon Transformation in Heterogeneous Landscapes: Implications for Soil, Water and Air
$480,000 USDA-NIFA
Li, Xu Civil Engineering

Rosenbaum, David Economics
* Nebraska Energy Office Loan Management System
$294,745 Nebraska Energy Office

Rothermel, Gregg Computer Science and Engineering
II-EN: Infrastructure Support for Software Testing Research
$345,985 NSF

Samal, Ashok Computer Science and Engineering
Evaluation of GPS-Enabled Cell Phones and Laptops for Applications of Law Enforcement Patrolling Activities
$494,516 DOJ-National Institute of Justice
Ramirez, Juan Public Policy Center
Rosenbaum, David Economics/Public Policy Center
Tomkins, Alan Law/Public Policy Center

Saraf, Ravi Chemical and Biomolecular Engineering
Electronic Interfacing between a Living Cell and a Nanodevice: A Bio-Nano Hybrid System
$900,000 DOE
Sarma, Anita  
Computer Science and Engineering  
* HCC: Variations to Support Exploratory Programming  
$857,156  
Rothermel, Gregg  
Computer Science and Engineering  
HCC: Large: Large-Scale Human-Centered Coordination Systems to Support Interdependent Tasks in Context  
$267,936  
Sayood, Khalid  
Electrical Engineering  
ATD: Algorithms for the Analysis of Microbiomes  
$246,367  
Scalora, Mario  
Public Policy Center/Psychology  
Improving Insider Threat Reporting  
$392,274  
Bulling, Denise  
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$769,537  
Bulling, Denise  
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Yardley, Owen  
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Schacht, Walter  
Agronomy and Horticulture  
Demonstrating Grazing Land Resilience to Drought in the Central and Northern Great Plains  
$363,120  
Knutson, Cody  
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Stockton, Matthew  
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Volesky, Jerry  
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Schlegel, Vicki  
Food Science and Technology  
* Ability of Sorghum Lipids to Reduce Metabolic Intestinal Inflammation and Lower Cholesterol Caused by High Fat Diets  
$226,696  
Schubert, Eva  
Electrical Engineering  
* MRI: Development of an Ion-Beam-Assisted Glancing Angle Deposition Tool (iGLAD) for 3D Nanostructure Thin Film Preparation with in situ Ellipsometry Control  
$411,501  
Bartelt-Hunt, Shannon  
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Hofmann, Tino  
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Seth, Sharad  Computer Science and Engineering
HECURA: A New Semantic-Aware Metadata Organization
for Improved File-System Performance and
Functionality in High-End Computing
$344,552  NSF
CSR: Small: ProActive:
A RAID Protection Activator for High Availability
$474,739  NSF

Shadwick, Bradley  Physics and Astronomy
Multi-Physics Modeling of Intense, Short-Pulse Laser-Plasma Interactions
$342,000  NSF
Kalmykov, Serguei  Physics and Astronomy

Shank, Nancy  Public Policy Center
SHNBHIN Improving Access Health IT
$385,528  Health Partners Initiative

Sharif-Kashani, Hamid  Computer and Electronics Engineering
Research & Development - Development of a Standard
Communication Protocol for Wireless Sensor Network in Mobile Railroad Environment
$999,921  DOT-FRA
Hempel, Michael  Computer and Electronics Engineering

Shearman, Robert  Agronomy and Horticulture
Buffalograss Breeding, Evaluation and Management for Golf Course
$360,000  U. S. Golf Association

Shelton, David  Northeast Research and Extension Center
Improving and Conserving Water Resources Through Stormwater Management Education for Community Decision Makers of Today and Tomorrow
$544,500  USDA-CSREES
Feehan, Kelly  Northeast Research and Extension Center
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Rodie, Steven  Agronomy and Horticulture

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Sheridan, Susan  
*Education and 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  
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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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Glover, Todd  
Nebraska Center for Research on  
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Multiscale Development of L10 Materials for Rare-Earth-Free Permanent Magnets  
$288,933  
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Skomski, Ralph  
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Measurement of Vertical Track Deflection: Testing, Demonstration & Implementation  
$546,000  
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Farritor, Shane  
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Phase Transformations in Confined Nanosystems  
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Shulski, Martha  
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Automated Weather Data Network  
$300,000  
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Siegfried, Blair  
*Entomology*  
Characterizing Resistance Evolution to Pyrethroid Insecticides  
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Miller, Nicholas  
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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  
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Smith, Stacey  
*Biological Sciences*  
Evolution and Diversification of Red Flowers: Testing the Macroevolutionary Causes of Rarity  
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Smith, Wendy  
Center for Science, Mathematics and Computer Education  
* Midwest Regional Robert Noyce Connections 2014-2015: Building Communities of Practice  
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Lewis, Elizabeth  
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Lewis, Jim  
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Pederssen, Jon  
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Swidler, Stephen  
Teaching, Learning and Teacher Education

Smyth, Jolene  
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Olson, Kristin  
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Snow, Gregory  
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Claes, Daniel  
Physics and Astronomy  
Dominguez, Aaron  
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Gay, Timothy  
Physics and Astronomy  
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Physics and Astronomy

Soh, Leen-Kiat  
Computer Science and Engineering  
Integrating Computational and Creative Thinking (IC2Think)  
$250,000  
Ingraham, Elizabeth  
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Ramsay, Stephen  
English  
Shell, Duane  
Educational Psychology

Soundararajan, Madhavan  
Biochemistry  
The Hunt for Green Every April: Factors Affecting Fitness in Switchgrass  
$289,424  
USDA-ARS

Spangler, Matthew  
Animal Science  
National Program for Genetic Improvement of Feed Efficiency in Beef Cattle  
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USDA-NIFA through University of Missouri

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Tadesse, Tsegaye
Natural Resources
Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa under Evolving Climate Conditions to Support Adaptation Strategies
$987,767 NASA
Baigorria, Guillermo
Agronomy and Horticulture/Natural Resources
Beyene, Shimelis
Anthropology
Hayes, Michael
Natural Resources
Wardlow, Brian
Natural Resources

Takacs, James
Chemistry
Catalytic Asymmetric Hydroboration: Uncapping the Potential with Two-Point Binding Substrates
$900,114 NIH-NIGMS

Tan, Li
Mechanical & Materials Engineering
Molecularly Intercalated Nanoflakes: A Supramolecular Alloy for Strong Energy Absorption
$349,088 NSF
Zeng, Xiao Cheng
Chemistry

Taylor, Stephen
Food Science and Technology
Effects of Food Processing on Food Allergens - Assessment and Improvement of Detection Methods
$500,000 USDA-NIFA
Baumert, Joseph
Food Science and Technology
Hutkins, Robert
Food Science and Technology
Keshwani, Deepak
Biological Systems Engineering
Subbiah, Jeyamkondan
Biological Systems Engineering/Food Science and Technology

Primary and Secondary Prevention of Peanut and Tree Nut Allergy
$275,000 USDA-ARS
Baumert, Joseph
Food Science and Technology

Determination of Minimal Elicitation Dose for Almond in Almond-Allergic Individuals
$261,000 Almond Board of California

Tenhumberg, Brigitte
Biological Sciences/Mathematics
Evaluating Integrated Resistance Management Strategies in Variable Environments
$388,279 Monsanto
Chirakkal, Haridas
Biological Sciences
Meinke, Lance
Entomology
Siegfried, Blair
Entomology

Thippareddi, Harshavardhan
Food Science and Technology
$599,992 USDA-CSREES
Burson, Dennis
Animal Science
Ellis, Jason
Agricultural Leadership, Education and Communication

$200,000 — $999,999
Thomas, Steven  
Natural Resources  
Dimensions: An Integrative Traits-Based Approach to Predicting Variation in Vulnerability of Tropical and Temperate Stream Biodiversity to Climate Change  
$310,811  
NSF

Tian, Lei  
Computer Science and Engineering  
CSR: Small: SANE: Semantic-Aware Namespace in Exascale File Systems  
$249,053  
NSF
Liu, Xue  
Computer Science and Engineering  
Turbo Button: A Semantically Smart Flash Memory Layer for Internet-Scale Storage Systems  
$471,631  
NSF

Todd, Kim  
Agronomy and Horticulture  
* UNL Greenhouse Tomato Production  
$800,000  
ConAgra
Browning, Sarah  
Southeast Research and Extension Center  
Gaussoin, Roch  
Agronomy and Horticulture  
Schlegel, Vicki  
Food Science and Technology

Tomkins, Alan  
Law/Public Policy Center  
Testing a Three-Stage Model of Institutional Confidence across Branches of Government  
$283,280  
NSF
Bornstein, Brian  
Psychology/Public Policy Center  
Herian, Mitch  
Public Policy Center  
Pytlik Zillig, Lisa  
Center for Instructional Innovation/Public Policy Center

Trainin, Guy  
Teaching, Learning and Teacher Education  
NEA Foundation Grant Evaluation OPS  
$336,008  
National Education Association Foundation through Omaha Public Schools
Hamann, Edmund  
Teaching, Learning and Teacher Education

Tsymbal, Evgeny  
Physics and Astronomy/Nebraska Center for Materials and Nanoscience  
DMREF: Multifunctional Interfacial Materials by Design  
$215,000  
NSF through University of Wisconsin

Turner, Joseph  
Mechanical & Materials Engineering  
Ultrasonic Scattering for Measurement of Longitudinal Rail Stress  
$461,999  
DOT-FRA

Tyler, Kimberly  
Sociology  
* Stressors, Protective Factors, and Substance Use among Homeless Youth and Young Adults  
$408,768  
NIH-NIDA
Olson, Kristen  
Sociology/Survey Research and Methodology
Uiterwaal, Cornelis  
**Physics and Astronomy**  
REU Site: Optics and Laser Physics  
$246,450  
Batelaan, Herman  
**Physics and Astronomy**  
Molecules and Intense Light in a Photodynamical Test Tube  
$440,000

**Umstader, Donald**  
**Physics and Astronomy**  
* Nuclear Forensics  
National Strategic Research Institute  
$514,995  
Banerjee, Sudeep  
**Physics and Astronomy**  
NSRI Standoff Detection  
$442,915  
Chen, Shouyuan  
**Physics and Astronomy**

**Van Cott, Kevin**  
**Chemical and Biomolecular Engineering**  
Structural Characterization of Recombinant Glycoproteins  
$331,923  
Hu, Qi  
**Natural Resources**  
Oglesby, Robert  
**Earth and Atmospheric Sciences**  
Earth and Atmospheric Sciences/ Natural Resources

**Van Den Broeke, Matthew**  
**Earth and Atmospheric Sciences**  
* Quantifying the Relative Roles of Progressive Land Use Change, Irrigation, and Remote Forcing in Southern Great Plains Precipitation Variability  
$446,697  
Huang, Qingguo  
**Natural Resources**  
Oglesby, Robert  
**Earth and Atmospheric Sciences**  
Earth and Atmospheric Sciences/ Natural Resources

**Van Donk, Simon**  
**West Central Research and Extension Center**  
Irrigation Management with Limited Water: A Farm Education Program  
$287,080  
Corr, Alan  
**West Central Research and Extension Center**  
Martin, Derrel  
**Biological Systems Engineering**  
Melvin, Steven  
**West Central Research and Extension Center**

**Van Etten, James**  
**Plant Pathology**  
Evaluation of the Natural History of Algal Viruses Associated with Patients Diagnosed with Human Psychiatric Disorders  
$246,422  
Stanley Medical Research Institute

**Van Tassell, Larry**  
**Agricultural Economics**  
Developing Economic Improvements through Cooperative Businesses in Rural Nebraska  
$200,000  
Burkhart-Kriesel, Cheryl  
**Panhandle Research and Extension Center**

**Variyam, Vinodchandran**  
**Computer Science and Engineering**  
AF: Small: Studies in Nonuniformity, Completeness and Reachability  
$272,031  
NSF

**Total Funding**  
$200,000 – $999,999
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<tr>
<th>Name</th>
<th>Department</th>
<th>Title</th>
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<tbody>
<tr>
<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>$300,000</td>
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<td>Irmak, Suat, Computer Science and Engineering</td>
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<td>Batur, Demet, Management</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>$523,414</td>
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<td>Walia, Harkamal</td>
<td>Agronomy and Horticulture</td>
<td>Early Seed Development under Stressful Environments</td>
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<td>Wang, Dong, Biological Systems Engineering</td>
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<td>Walter, Jens</td>
<td>Food Science and Technology</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>$204,340</td>
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<td>Wang, Dong</td>
<td>Statistics</td>
<td>Expanding the Scope of Association Mapping in Important Crop Species with Methodology Development in Statistics</td>
<td>$282,000</td>
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<td>USDA-AFRI Statistics</td>
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<td>Boenziger, P. Stephen, Agronomy and Horticulture</td>
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<td>Dweikat, Ismail, Agronomy and Horticulture</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>$402,894</td>
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<td>AERONET Skylight Retrievals Using Polarimetric Measurements: Toward Physically Consistent Validation of APS Aerosol Products</td>
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<td>A Combined EOS Data and GEOS-Chem Modeling Study of the Direct Radiative Forcing of Volcanic Sulfate Aerosols</td>
<td>$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 <em>efe</em> Gene</td>
<td>$452,000</td>
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<td>Exploring Iron &amp; Copper Cross-Talk in Iron Deficient <em>Arabidopsis Thaliana</em></td>
<td>$391,077</td>
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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  
Boeninger, 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
<table>
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<tr>
<th>Name</th>
<th>Department/Center</th>
<th>Project Title</th>
<th>Award Amount</th>
<th>Funding Agency</th>
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<tr>
<td>Wilson, Richard</td>
<td>Plant Pathology</td>
<td>* Defining Mechanisms of Nutrient Adaptation to Host Rice Cells by the Blast Fungus</td>
<td>$500,000</td>
<td>USDA-NIFA</td>
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<td>Pathogenic Gene Discovery and Elucidation of Genetic Regulatory Networks in the Rice Blast Fungus</td>
<td>$512,955</td>
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<td>Wood, Charles</td>
<td>Biological Sciences/Nebraska Center for Virology</td>
<td>Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center</td>
<td>$419,455</td>
<td>NIH-NIMH through UNMC</td>
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<td>Wortmann, Charles</td>
<td>Agronomy and Horticulture</td>
<td>* Developing and Fine-Tuning Fertilizer Recommendations within an Integrated Soil Fertility Management Framework</td>
<td>$345,473</td>
<td>Alliance for Green Revolution in Africa through CABI</td>
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<td>Xiang, Shi-Hua</td>
<td>Biological Sciences</td>
<td>Mucosal Delivery and Retention of Anti-HIV Agents Using Lactobacillus</td>
<td>$611,119</td>
<td>Bill &amp; Melinda Gates Foundation</td>
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<td>Xu, Lisong</td>
<td>Computer Science and Engineering</td>
<td>NeTS: Small: Internet Congestion Control Census</td>
<td>$450,000</td>
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<td>Deogun, Jitender</td>
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<td>Lu, Ying</td>
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<td>Yoder, Ronald</td>
<td>Biological Systems Engineering</td>
<td>Nebraska AgrAbility</td>
<td>$684,000</td>
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<td>Booker, William</td>
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<td>Nielsen, Sharon</td>
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<td>Yu, Bin</td>
<td>Biological Sciences/Center for Plant Science Innovation</td>
<td>Understanding DAWDLE Function in miRNA and siRNA Biogenesis</td>
<td>$499,504</td>
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<td>Zera, Anthony</td>
<td>Biological Sciences</td>
<td>Nutritional Physiology of Life History Allocation Trade-Offs</td>
<td>$343,500</td>
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<td>Zhang, Tian</td>
<td>Civil Engineering</td>
<td>Influence of Soil Particle Size Fractions and Environmental Conditions on Fate and Transport of Hormones in Soils</td>
<td>$300,000</td>
<td>NSF</td>
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</table>
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
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
Paul, Prem  
Research and Economic Development  
Nebraska Center for Virology Facility Expansion  
$8,000,000  
Wood, Charles  
Biological Sciences/Nebraska Center for Virology

High-Power Laser Science Collaboratory  
$1,825,345  
Chandra, Namas  
Mechanical & Materials Engineering  
Lu, Yongfeng  
Electrical Engineering  
Umstadter, Donald  
Physics and Astronomy  
Wedge, Alan  
Facilities Management

Qiao, Wei  
Electrical Engineering  
A Nationwide Consortium of Universities to Revitalize Electric Power Engineering Education by State-of-the-Art Laboratories  
$24,999  
DOE through University of Minnesota  
Asgarpoor, Sohrab  
Electrical Engineering  
Hudgins, Jerry  
Electrical Engineering  
Patterson, Dean  
Electrical Engineering  
Qu, Lilyan  
Electrical Engineering

Rack, Frank  
Earth and Atmospheric Sciences/Antarctic Geological Drilling Program  
Response to Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) Project: Drilling Support Overview and Requirements Request  
$3,002,421  
NSF through Montana State University/Northern Illinois University/University of California, Santa Cruz  
ANDRILL Coulman High Project – Investigating Antarctica’s Role in Cenozoic Global Environmental Change Phase 1 (Site Surveys)  
$2,684,370  
NSF  
Fischbein, Steven  
Antarctic Geological Drilling Program  
Harwood, David  
Earth and Atmospheric Sciences

Saraf, Ravi  
Chemical and Biomolecular Engineering  
Regulating Current through a Nanoparticle Necklace by Microorganism: A Transformative Technology for Biofuel Cells and Biosensors  
$391,056  
NSF

Shen, Zhigang  
Durham School of Architectural Engineering and Construction  
Veterans Commissioning Training Program for Commercial-Healthcare Facilities  
$405,741  
DOE

Toundykov, Daniel  
Mathematics  
Stabilization and Control in Nonlinear Structural-Acoustics, Magnetic Imaging, and Elasticity  
$96,436  
NSF
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

**Bassett, 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

**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

**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

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

**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
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
Qiao, Wei
Electrical Engineering
CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration
$407,999

Schubert, Eva
Electrical Engineering
Chiral Nanostructure Hybrid Materials for Application in Terahertz Resonator and Magnetic Storage Devices
$400,000

Vuran, Mehmet
Computer Science and Engineering
CAREER: Bringing Wireless Sensor Networks Underground
$418,760
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.

An Integrated Guide to Walt Whitman’s Literary Manuscripts
NEH
$275,000
06/01/12 – 05/31/15
Walter, Katherine
University Libraries/Center for Digital Research in the Humanities

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  
Price, Kenneth  
*English/Center for Digital Research in the Humanities*

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
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.
Barney, Brett  
**University Libraries/Center for Digital Research in the Humanities**  
Diachronic Markup and Presentation Practices for Text Editions in Digital Research Environments  
$165,005 NEH

**Behrendt, Stephen**  
**English**  
Reassessing British Romanticism  
$117,198 NEH

**Jockers, Matthew**  
**English/Center for Digital Research in the Humanities**  
* Text Mining the Novel: Establishing the Foundations of a New Discipline  
$112,524 Government of Canada-SSHRC through McGill University

**Lorang, Elizabeth**  
University Libraries/Center for Digital Research in the Humanities  
* Image Analysis for Archival Discovery: Poetic Content in Historic Newspapers  
$60,000 NEH  
Soh, Leen-Kiat Computer Science and Engineering

**Price, Kenneth**  
**English/Center for Digital Research in the Humanities**  
Walt Whitman and Post-Reconstruction America  
$156,470 National Historical Publications and Records Commission  
Barney, Brett University Libraries/Center for Digital Research in the Humanities

**Thomas, William**  
**History/Center for Digital Research in the Humanities**  
* O Say Can You See: Early Washington, D.C., Law and Family Project  
$200,000 NEH

**Walter, Katherine**  
**University Libraries/Center for Digital Research in the Humanities**  
Major Railroad Archival Collections  
$208,481 Council on Library and Information Resources  
Bolin, Mary University Libraries  
Mering, Margaret University Libraries

**Wisniski, Adrian**  
**English/Center for Digital Research in the Humanities**  
* Explorer David Livingstone’s 1870 Field Diary and Select 1871 Letters: A Multispectral Critical Edition  
$158,605 NEH  
Pytlik Zillig, Brian University Libraries/Center for Digital Research in the Humanities
Edwards, Richard  
Center for Great Plains Studies  
$5,000  
Lost Writers of the Plains  
Katz, Wendy  
Center for Great Plains Studies  
Woods Charitable Fund

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

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

Shear, Donna  
University of Nebraska Press  
$10,000  
Publishing Literary Translation Works at the University of Nebraska Press  
Early American Regions  
University of Georgia

$20,000  
NEA

Elias-Rowley, Kristen  
University of Nebraska Press  
Faust, Jana  
University of Nebraska Press

Wahlqvist, Petra  
Lied Center for Performing Arts  
$20,000  
Residency with STREB  
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  
$40,404  
Buffalo Bill’s European Frontier  
NEH through Buffalo Bill Historical Center

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

* Indicates new in 2013-2014
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 U06-301151, 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), Belgrate (Lago Maggiore), Italy.

John Bailey  
Glenn Korff School of Music
Concert tour performed at various churches, civic theaters, villas, great halls in Milan, Mantua, Villa Carlotta (Como), Belgrate (Lago Maggiore), Italy.

Performers, “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 Film 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
Performer, violin, Boston Circa 1900. CD recording, Albany Records, Albany, NY.
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
University Libraries

Bedross Der Matossian
History

Judy Diamond
University of Nebraska State Museum

Wheeler Winston Dixon
English

Beth Doll
Educational Psychology

Kirk Dombrowski
Sociology

Marcia L. Dority Baker
Law/Schmid Law Library

Stephen Ducharme
Physics and Astronomy
Author, with Vladimir Fridkin. *Ferroelectricity at the Nanoscale*. Heidelberg, Germany: Springer.

Gwendolyn A. Foster
English

Rhonda K. Garelick
Hixson-Lied College of Fine and Performing Arts/English

Kurt F. Geisinger
BUROS

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. 
Author. Splitting an Order. Port Townsend, WA: Copper Canyon Press.

Glenn Ledder  

Qingsheng Li  

Suping Lu  
Editor. 美国外交官的记载——日军大屠杀与浩劫后的南京城 (American Diplomats' Record: Japanese Atrocities and the Aftermath at Nanjing). Nanjing, China: Nanjing Publishing Press.

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

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

Lowell Sandell  Agronomy and Horticulture
Khalid Sayood

Author. Introduction to Data Compression (4th ed.). Singapore and China: Elsevier (Singapore) Pte Ltd.

Timothy Schaffert


William J. Seiler


Susan M. Sheridan


Alison G. Stewart


Scott F. Stoltenberg


Steve Taylor


William G. Thomas


Cho Wing S. To


Joseph Weber

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Department/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph S. Francisco</td>
<td>Chemistry/Dean of the College of Arts and Sciences</td>
</tr>
<tr>
<td>Brian Larkins</td>
<td>Agronomy and Horticulture/Associate Vice Chancellor for Life Sciences</td>
</tr>
<tr>
<td>James Van Etten</td>
<td>Plant Pathology</td>
</tr>
<tr>
<td>Marco Abel</td>
<td>English</td>
</tr>
<tr>
<td>Changbum Ahn</td>
<td>Durham School of Architectural Engineering and Construction</td>
</tr>
<tr>
<td>P. Stephen Baenziger</td>
<td>Agronomy and Horticulture</td>
</tr>
<tr>
<td>Frederick P. Baxendale</td>
<td>Entomology</td>
</tr>
<tr>
<td>Edward Becker</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Christopher Bilder</td>
<td>Statistics</td>
</tr>
<tr>
<td>Erin Blankenship</td>
<td>Statistics</td>
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<tr>
<td>Dawn O. Braithwaite</td>
<td>Communication Studies</td>
</tr>
<tr>
<td>Charles A. Braithwaite</td>
<td>Communication Studies/Center for Great Plains Studies</td>
</tr>
<tr>
<td>Jennifer Brand</td>
<td>Chemical and Biomolecular Engineering</td>
</tr>
<tr>
<td>Dennis Brink</td>
<td>Animal Science</td>
</tr>
</tbody>
</table>

Joseph S. Francisco
National Academy of Sciences

Brian Larkins
National Academy of Sciences

James Van Etten
National Academy of Sciences

Marco Abel
Best Book, German Studies Association

Changbum Ahn
Best Paper Award, International Conference on Construction Engineering and Project Management

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

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

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

Christopher Bilder
Outstanding Statistical Application, American Statistical Association

Erin Blankenship
Jackie Dietz Best JSE Paper, American Statistical Association

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

Charles A. Braithwaite
Visiting Scholar, Lund University, Sweden

Jennifer Brand
ELATE Fellow, Drexel University

Dennis Brink
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
Tom Franti  
**Biological Systems Engineering**
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Trenton E. Franz  
**Natural Resources**
Best Paper Award, Frontiers in Geoscience Colloquia, Los Alamos National Laboratory – Earth and Environmental Sciences Division

Sheri Fritz  
**Earth and Atmospheric Sciences/Biological Sciences**
Fellow, American Association for the Advancement of Science
Hans Oeschger Medal for Outstanding Achievements in Climate Change Science, European Geophysical Union

Ronnie Green  
**Institute of Agriculture and Natural Resources**
Fellow, American Society of Animal Science

Jason Gross  
**Biological Systems Engineering**
AE 50 Award, American Society of Agricultural and Biological Engineers Resource Magazine

Alexei Gruverman  
**Physics and Astronomy**
Fellow, American Physical Society

Ron Hanson  
**Agricultural Economics**
Distinguished Educator Award, North American Colleges and Teachers of Agriculture
Senior Distinguished Undergraduate Teaching Award, Agricultural and Applied Economics Association

John Hay  
**Biological Systems Engineering**
Service to the Industry Award, Nebraska Aviation Trades Association

Tiffany Heng-Moss  
**Entomology**
National Teaching Award for Food and Agriculture Sciences, Association of Public and Land-grant Universities

Bobbi Holm  
**Northeast Research and Extension Center**
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Melissa J. Homestead  
**English**
Visiting Fellowship in North American Studies, Eccles Center for American Studies at the British Library

Scott Hygnstrom  
**Natural Resources**
Career Award, Wildlife Society Nebraska Chapter
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  Psychology  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/Nebaska 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
Glossary of Federal Agency Abbreviations

DHS  Department of Homeland Security
DHHS  Department of Health and Human Services
ACF  Administration for Children and Families
CDC  Centers for Disease Control

DOC  Department of Commerce
ITA  International Trade Administration
NIST  National Institute of Standards and Technology
NOAA  National Oceanic & Atmospheric Administration

DoD  Department of Defense
AFOSR  Air Force Office of Scientific Research
AFRL  Air Force Research Laboratory
AMR  Army Medical Research
ARO  Army Research Office
DARPA  Defense Advanced Research Projects Agency
DRMIP  Defense Deployment Related Medical Research Program
DTRA  Defense Threat Reduction Agency
DURIP  Defense University Research Instrumentation Program
MDA  Missile Defense Agency
NGIA  National Geospatial Intelligence Agency
ONR  Office of Naval Research
USAMRAA  United States Army Medical Research Acquisition Activity
USAMRMC-TATRC  United States Army Medical Research and Materiel Command-Telemedicine and Advanced Technology Research Center

DOE  Department of Energy

DOI  Department of Interior
BR  Bureau of Reclamation
GS  Geological Survey

DOJ  Department of Justice

DOL  Department of Labor

DOS  Department of State
BECA  Bureau of Educational and Cultural Affairs

DOT  Department of Transportation
FHWA  Federal Highway Administration
FRA  Federal Railroad Administration
RITA  Research and Innovative Technology Administration

ED  Department of Education
IES  Institute of Education Sciences

EPA  Environmental Protection Agency
HUD  Department of Housing and Urban Development

NAS  National Academy of Sciences
TRB  Transportation Research Board

NASA  National Aeronautics and Space Administration

NEA  National Endowment for the Arts

NEH  National Endowment for the Humanities

NIH  National Institutes of Health
DFCI  Dana-Farber Cancer Institute
FIC  Fogarty International Center
NCI  National Cancer Institute
NCRR  National Center for Research Resources
NEI  National Eye Institute
NHLBI  National Heart, Lung and Blood Institute
NIAAA  National Institute on Alcohol Abuse and Alcoholism
NIAID  National Institute on Allergy & Infectious Diseases
NIBIB  National Institute of Biomedical Imaging and Bioengineering
NICHD  National Institute of Child Health and Human Development
NIDA  National Institute on Drug Abuse
NIDCD  National Institute on Deafness & Communication Disorders
NIDDK  National Institute of Diabetes, Digestive & Kidney Disease
NIEHS  National Institute of Environmental Health Sciences
NIGMS  National Institute on General Medical Sciences
NIMH  National Institute of Mental Health
NINDS  National Institute of Neurological Disorders & Stroke

NSF  National Science Foundation
EPSCoR  Experimental Program to Stimulate Competitive Research

USAID  United States Agency for International Development

USDA  United States Department of Agriculture
AFRI  Agriculture and Food Research Initiative
APHIS  Animal and Plant Health Inspection Service
ARS  Agricultural Research Service
CSREES  Cooperative State Research, Education & Extension Service
FNS  Food and Nutrition Service
FS  Forestry Service
NASS  National Agricultural Statistics Service
NIFA  National Institute for Food and Agriculture
NRCS  Natural Resources Conservation Service
NRI  National Research Initiative
RD  Rural Development
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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