2012

Research and Creative Activity: July 1, 2011 – June 30, 2012: Major Sponsored Programs and Faculty Awards for Research and Creative Activity

Office of Research and Economic Development, University of Nebraska-Lincoln

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On the Cover: Nanotechnology promises to revolutionize industry, energy, medicine and science with products and technologies from everyday consumer goods to sophisticated electronics and biomaterials. Nanotechnology is among the University of Nebraska–Lincoln’s research strengths. From nanomagnetism and spintronics to laser-assisted nanomaterials and nanohybrids, our faculty are turning nanotechnology’s potential into reality. The cover features 3-D illustrations of a carbon nano-onion and carbon nanotubes.
This eleventh annual "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, 2011–June 30, 2012. 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; startups and intellectual property licenses; and performances and exhibitions in the fine and performing arts.

This impressive list grows each year and I am pleased to present evidence of our faculty’s accomplishments. Grants and contracts in a diverse range of fields—from education and child development, to food safety, water and food security, from digital humanities to nanoscience—enable the UNL faculty to address grand challenges. Our total research expenditures of $235 million in fiscal year 2012, a record increase in licensing revenue, and 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, 2011-June 30, 2012*

* Indicates new in 2011-2012

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**Allen, Craig**  
Natural Resources  
IGERT: Resilience and Adaptive Governance in Stressed Watersheds  

$3,116,173  
8/15/09 – 7/31/14  

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 an 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.

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**Becker, Donald**  
Biochemistry  
Redox Biology Center  

$10,096,061  
8/1/07 – 7/31/13  

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 in 2007 to support it through 2012. 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.
Cotton, Dan  
* eXtension Building Cooperative Extension’s 21st Century Network  
$6,626,640  
9/1/11 – 8/31/15

Dan Cotton directs the eXtension Initiative, an Internet-based Cooperative Extension Service education and information system. UNL is the lead institution in this multi-year project, which partners with the University of Kentucky, North Carolina State University and Virginia Tech University. This is a 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 to develop content and technology for the eXtension project. eXtension is a virtual educational environment that provides science-based, objective information. Users may take advantage of learning opportunities and interact with the expertise available from the land-grant university system by visiting www.extension.org.

DiLillo, David  
Sexual Revictimization: Emotional and Psychosocial Mechanisms  
$3,280,773  
7/15/10 – 6/30/15

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

$11,100,982  NSF-EPSCoR
10/01/10 – 09/30/15
Hage, David  Chemistry
Lai, Rebecca  Chemistry
Takacs, James  Chemistry
Cerutti, Heriberto  Biological Sciences/Center for Plant Science Innovation

Morris, T. Jack  Chemistry
Han, Ming  Electrical Engineering
Hudgins, Jerry  Electrical Engineering
Ianno, Natale  Electrical Engineering
Lu, Yongfeng  Electrical Engineering
Schubert, Eva  Electrical Engineering
Schubert, Mathias  Electrical Engineering
Cahoon, Edgar  Biochemistry/
Clemente, Thomas  Center for Plant Science Innovation/
Agronomy and Horticulture/Center for Plant Science Innovation

Bailey, Cheryl  Biochemistry
Black, Paul  Biochemistry
DiRusso, Concetta  Biochemistry/
Spreitzer, Robert  Nutrition and Health Sciences
Weeks, Donald  Biochemistry
Van Etten, James  Biochemistry/

UNL’s planned Center for Nanohybrid Functional Materials will combine 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 will be led by Professors Patrick Dussault, Charles Bessey professor in chemistry, and Mathias Schubert, associate professor of electrical engineering. The center will bring 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 will expand on UNL’s research in developing algal compounds of high value to society, such as specialty chemicals and drugs for humans or animals and will be 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.
Graef, Michelle
Center on Children, Families and the Law
$8,695,638 DHHS-ACF
9/1/08 – 9/29/13

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. Co-leaders of the project are Mark Ells and Michelle Graef of the Center on Children, Families and the Law.

Espy, Kimberly Andrews
Psychology
Executive Function Development in Preschool Children
$3,282,101 NIH-NIMH
8/26/09 – 5/31/14

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.
With more than $3 million in support from the Department of Transportation’s Federal Railroad Administration, associate professor of mechanical & materials engineering Shane Farritor and colleagues are continuing to develop techniques to assess track stability and related high-speed wireless communication to improve the safety of railroad operations. This funding supports research in three different areas of railroad track safety: 1) real-time measurement of track modulus from a moving car, leading to preventative maintenance strategies that relate track modulus data to specific track problems; 2) study of the measurement of rail longitudinal stress, to help reduce rail failure; and 3) study of the use of electrical energy from passing trains to power an efficient warning light system at grade crossings that are not equipped with warning light systems due to the lack of electrical infrastructure, thus reducing accidents at these “passive” grade crossings.

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.
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.

Scott Johnson is the pilot plant coordinator of the Biological Process Development Facility, which 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.

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.
The Nebraska Forest Service, has received more than $3.1 million from the U.S. Department of Agriculture through the U.S. Forest Service State and Private Forestry Program, which assists in implementing cooperative state forestry programs. The Nebraska Forest Service improves lives by protecting, enhancing and utilizing Nebraska’s tree and forest resources by providing statewide technical assistance and financial support in five major program areas: Wildland Fire Protection, Forest Stewardship, Community Forestry and Sustainable Landscapes, Forest Health, and Forest Product Marketing and Utilization. Working with wide array of federal, state and local government partners, volunteer fire districts, non-profits, communities, landowners and businesses, these programs protect life, property and tree and forest health statewide.

Lewis, Jim
Mathematics/Center for Science, Mathematics and Computer Education
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, Scott
Teaching, Learning and Teacher Education
A team led by Jim Lewis, Aaron Douglas Professor of mathematics and director of UNL's Center for Science, Mathematics and Computer Education, has secured a six-year, $3 million grant from the National Science Foundation to improve math education. The grant is through NSF’s Robert Noyce Teacher Scholarship program, which 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 – 12/31/13
Heaton, Ruth Teaching, Learning and Teacher Education/Center for Science, Mathematics and Computer Education
McGowan, Thomas Teaching, Learning and Teacher Education
Stroup, Walter Statistics
Edwards, Carolyn Psychology/Child, Youth and Family Studies
Papick, Ira Mathematics/Center for Science, Mathematics and Computer Education
Jacobson, Barbara Lincoln Public Schools

Jim Lewis, professor of mathematics; Ruth Heaton, associate professor of teaching, learning and teacher education; Thomas McGowan, professor of teaching, learning and teacher education; Carolyn Edwards, professor of psychology; Ira Papick, professor of mathematics; and Barbara Jacobson, curriculum director for Lincoln Public Schools, are directing NebraskaMATH, 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.

Math in the Middle Institute Partnership
$5,900,000
8/1/04 – 7/31/11
Heaton, Ruth Teaching, Learning and Teacher Education/Center for Science, Mathematics and Computer Education
McGowan, Thomas Teaching, Learning and Teacher Education
Jacobson, Barbara Lincoln Public Schools

Lewis, Heaton, McGowan and Jacobson are co-leaders of a $5.9 million project titled the Math in the Middle Institute Partnership. The goal is to create the next set of leaders in middle school mathematics who will mentor peers and offer challenging courses to their students. With support from the grant, 156 teachers from across Nebraska are taking 12 challenging math and pedagogy courses and earning master’s degrees from UNL. Middle school is a gateway to high school success, and efforts to improve middle school learning, especially in mathematics, show benefits at later stages in students’ academic careers.
With support from the U.S. Department of Agriculture’s National Institute of Food and Agriculture, UNL Extension will work 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, assistant 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 will apply 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.
Multi-Laser-Beam Open-Atmosphere Surface Coating Techniques Based on Precursor Excitation, Photodissociation and Controlled Cooling

$5,014,954 DoD-ONR-MURI
3/15/05 – 10/30/11
Zeng, Xiao Cheng Chemistry

With support from the Department of Defense, Yongfeng Lu is conducting a five-year study to investigate a new process to deposit a diamond or diamond-like coating on surfaces to create thermal barriers and increase corrosion protection. He is developing a coating technique that employs multiple laser beams to deposit the coating at room temperature in an open atmosphere – a significant improvement over conventional coating techniques that require low vacuum and high temperature. The resulting process will be more energy-efficient, improve the quality of materials on which the coating is deposited and minimize thermal stress.

Lubben, Bradley Agricultural Economics
North Central Risk Management Education Center
$3,506,736 USDA-CSREES
11/15/09 – 11/14/13

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.
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.

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
Nebraska Game and Parks Commission
$3,147,776
1/1/09 – 12/31/13
Kevin Pope, assistant unit leader-fisheries of the Nebraska Cooperative Fish and Wildlife Research Unit and associate professor in the School of Natural Resources, with support from the Nebraska Game and Parks Commission, will document the current participation levels of anglers in Nebraska’s lentic systems. In particular, participation levels of generic angling groups will be quantified among specific water bodies, and a model will be developed to describe generic angler participation (spatial and temporal) within a region. Such a model will help managers better determine appropriate lake-specific management objectives, given the dynamic nature of angler participation, and will be important for increased effectiveness of angler recruitment and retention activities throughout the Midwest.

Rilett, Laurence  Civil Engineering/ Nebraska Transportation Center
Region 7 University Transportation Center
$3,500,000  DOT-RITA
1/1/12 – 1/31/14
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. Laurence Rilett, Keith W. Klaasmeyer Chair in Engineering and Technology in UNL’s civil engineering department, directs the center. Its focus is “improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system.” MATC will focus 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.
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.

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
AWARDS OF $3 MILLION OR MORE

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

$4,260,001  DoD-ARO
9/25/09 – 9/24/12

Liou, Sy-Hwang  Physics and Astronomy
Skomski, Ralph  Physics and Astronomy
Lai, Rebecca  Chemistry
Dussault, Patrick  Chemistry

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.

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

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

$3,212,919  ED-IES
07/01/12 – 06/30/16

Bovaird, James  Educational Psychology
Clarke, Brandy  Nebraska Center for Research on Children, Youth, Families and Schools
Edwards, Carolyn  Child, Youth and Family Studies/Psychology
Knoche, Lisa  Nebraska Center for Research on Children, Youth, Families and Schools
Marvin, Christine  Special Education and Communication Disorders

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

Nebraska Center for Research on Rural Education (R2Ed)  
$9,997,852  ED-IES  
7/1/09 – 6/30/14  
Glover, Todd  Nebraska Center for Research on Children, Youth, Families and Schools  
Kunz, Gina  Nebraska Center for Research on Children, Youth, Families and Schools  
Nugent, Gwen  Nebraska Center for Research on Children, Youth, Families and Schools  
Bovaird, James  Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools  
Steckelberg, Allen  Teaching, Learning and Teacher Education  
Trainin, Guy  Teaching, Learning and Teacher Education

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

Stowell, Richard  
Biological Systems Engineering  
National Facilitation of Extension Programming in Climate Change Mitigation and Adaptation for Animal Agriculture  
$4,290,618  USDA-NIFA  
4/1/11 – 3/31/16  
Heemstra, Jill  Northeast Research and Extension Center  
Koelsch, Richard  Biological Systems Engineering/Extension

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.
David Swanson, research associate professor of computer science and engineering, directs the Holland Computing Center, which hosts a US CMS Tier 2 computing site, funded by the National Science Foundation’s US Compact Muon Solenoid (CMS) Research Program through a subcontract with UCLA. Ken Bloom and Aaron Dominguez, both associate professors of physics at UNL, are collaborating with Swanson and HCC staff to analyze data from particle collisions at the Large Hadron Collider at the European Organization for Nuclear Research near Geneva, Switzerland. UNL researchers are involved in one of the two largest experiments. CMS is designed to investigate a wide range of physics, including the search for the Higgs boson, extra dimensions and particles that could make up dark matter. The experiment creates so much data that a ‘tiered’ hierarchy of computing facilities has been created to analyze it; UNL is a member of that hierarchy, hosting a subset of the data.

Alexandra Torkelson-Trout, research associate professor in the Department of Special Education and Communication Disorders, leads a project funded by the Department of Education’s Institute of Education Sciences to evaluate the “On the Way Home” aftercare program. This 12-month aftercare program is designed to improve the transition outcomes for youth with emotional and behavioral disorders or learning disabilities who have returned to the home, community and school following a stay in out-of-home care.
Evgeny Tsymbal, a professor of physics and astronomy at UNL, leads the Materials Research Science and Engineering Center (MRSEC). The center 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.

Donald Umstadter, Leland and Dorothy Olson Professor of Physics and Astronomy, will complete construction of a high-energy laser system at the UNL Extreme Light Laboratory capable of delivering a peak power of 1 petawatt. This project is critical to the development and performance of laser-driven radiation sources used for detection, inspection and non-destructive testing. The most immediate result will be a dramatic increase in the brightness and quality of the laser-driven electron beams and x-rays, with applications for detecting cracks in aging critical components and detecting special nuclear materials through large thicknesses of shielding.
Tunable, Monoenergetic Gamma-Ray Source for Identification of Embedded SNM

$3,904,359  
3/1/07 – 8/31/11  
Banerjee, Sudeep  
Physics and Astronomy  

With support from the Department of Homeland Security Domestic Nuclear Detection Office, Donald Umstadter is developing an x-ray source capable of distinguishing different target materials embedded in thick shielding, including special nuclear materials (SNM), and determining the target’s size, shape and isotopic composition. By allowing rapid scanning of a large number of cargo containers, and enabling spot inspections on land and sea, this system would provide early detection capability, and so greatly reduce the threat from SNM. As such, it has the potential to radically improve current cargo screening capabilities and transform the national security environment.

Velander, William  
Chemical and Biomolecular Engineering  
cGMP Recombinant FIX and Oral Hemophilia B Therapy  
$9,587,071  
9/6/05 – 8/31/12  
Van Cott, Kevin  
Chemical and Biomolecular Engineering  

William Velander, Donald R. Voelte Jr. and Nancy A. Keegan Endowed Chair in Engineering, is principal investigator in a partnership funded by a $9.9 million grant from the National Institutes of Health/National Heart, Lung and Blood Institute. The goal is to develop an abundant, pure, safe and effective therapy for Hemophilia B using recombinant human coagulation proteins produced in the milk of transgenic pigs. The project builds on innovative bioengineering technologies pioneered by Velander that enable improved intravenous and novel oral delivery of hemophilic factors to patients. Hemophilia B is a congenital bleeding disorder that causes pain, crippling injuries and early death. It can be treated by Factor IX, a blood protein, but the costs are prohibitive and most patients do not receive it. Velander’s project isolates Factor IX in the milk of transgenic pigs.
Weissinger, Ellen
Academic Affairs
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 – 8/31/13
Holmes, Mary Anne
Earth and Atmospheric Sciences
McQuillan, Julia
Sociology
Manderscheid, David
Arts and Sciences
Wei, Timothy
Engineering
Yoder, Ron
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.

Whitbeck, Les
Sociology
Ojibwe Pathways Through the High School Years

$3,121,678
9/3/05 – 6/30/12
Johnson, Kurt
Sociology

Les Whitbeck, John G. Bruhn Professor of Sociology, is coordinating a seven-year project, funded by the National Institute on Drug Abuse, to investigate risk and resilience for early onset substance use and abuse among pre-teen Native children in the Upper Midwest.
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
$4,093,684 NIH-NCI
7/16/10 – 4/30/15
Since the onset of the AIDS epidemic, Kaposi’s sarcoma has become the most frequently diagnosed pediatric cancer in sub-Saharan Africa. It is associated with Human Herpesvirus 8 (HHV-8) and Kaposi’s Sarcoma Herpesvirus. The project seeks to understand how these viruses are transmitted to children by studying children in Lusaka, Zambia. The goal is to establish the rates of transmission and to identify virologic, immunologic and ethnographic risk factors that predispose children to HHV-8 infection. It is anticipated that the information could be used to develop intervention strategies.
John Yohe, associate professor in the Department of Agronomy and Horticulture, directs the International Sorghum/Millet (INTSORMIL) Collaborative Research Support Program. INTSORMIL is a collaborative international organization that supports research focused on improving nutrition and increasing income in developing countries and the United States. Scientists from U.S. land grant universities collaborate with scientists in host countries in the development of technology to improve production and utilization of sorghum and millet and facilitate natural resource management. Their work is done in Africa, Eurasia, Latin America and the United States.

Transfer of Sorghum & Millet Production, Processing & Marketing Technologies Program in Mali

John Yohe, with support from the U.S. Agency for International Development, is directing this project designed to improve sorghum and millet farmers’ productivity and incomes in targeted areas of Mali by moving sorghum and millet production technologies onto farmers’ fields, linking farmers’ organizations to food and feed processors, and commercializing processing technologies. Ultimately, the project’s goal is to improve the supply chain from the farm level to the consumer.
Awards of $1 Million to $2,999,999
Active awards, July 1, 2011-June 30, 2012
* Indicates new in 2011-2012

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

Azizinamini, Atorod
Civil Engineering/
Nebraska Transportation Center
Bridges for Service Life Beyond 100 Years: Innovative Systems
$1,999,637 NAS-TRB

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

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

Barycki, Joseph
Biochemistry
Structural Insights into Redox Homeostasis
$1,065,673 NIH-NIGMS

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

Bellows, Laurie
Graduate Studies
McNair Scholars Project and the University of Nebraska–Lincoln
$1,118,025 ED

Benson, Andrew
Food Science and Technology
Composition of the GI Microbiota and Predisposition to Enterohemorrhagic Escherichia coli (EHEC) Colonization as Complex Polygenic Traits in Beef Cattle
$2,354,004 USDA-NIFA

Kachman, Stephen
Statistics

Moriyama, Etsuko
Biological Sciences/
Center for Plant Science Innovation

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$1 MILLION – $2,999,999
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<tr>
<th>Name</th>
<th>Department</th>
<th>Project Title</th>
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<td>Psychology</td>
<td>* Pharmacological Interventions to Diminish Nicotine-Associated Responding</td>
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<td>Black, Paul</td>
<td>Biochemistry</td>
<td>Research for Developing Renewable Biofuels from Algae</td>
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<td>Van Etten, James</td>
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<td>Public Policy Center</td>
<td>Nebraska Youth Suicide Prevention and Early Intervention</td>
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<td>Cassman, Kenneth</td>
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<td>* Global Yield Gap and Water Productivity Atlas</td>
<td>$2,034,324</td>
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<td>Grassini, Patricio</td>
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<td>Chandra, Namas</td>
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<td>Effect of Protective Devices on Brain Trauma Mechanics under Idealized Shock Wave Loading</td>
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Chen, Bing  
Computer and Electronics Engineering  
SPIRIT^2.0 Silicon Prairie Initiative for Robotics in IT  
$2,999,963  
NSF

Cotton, Dan  
eXtension  
Supporting Military Families and Youth Partnership  
$2,500,000  
USDA-NIFA

Cupp, Andrea  
Animal Science  
Role of VEGF in Testis Morphogenesis  
$1,063,552  
NIH-NICHD  
Weber, John  
Animal Science  
White, Brett  
Animal Science

Diamond, Judy  
University of Nebraska State Museum  
* Biology of Human: Understanding Ourselves through the Lens of Current Biomedical Research  
$1,328,618  
NIH-NCRR  
Angeletti, Anisa  
Biological Sciences  
Bailey, Cheryl  
Biochemistry  
McQuillan, Julia  
Sociology  
Wood, Charles  
Biological Sciences/Nebraska Center for Virology

DiMagno, Stephen  
Chemistry  
* Synthesis of Radiofluorinated PET Imaging Agents  
$1,202,168  
NIH-NIBIB

DiRusso, Concetta  
Biochemistry/Nutrition and Health Sciences  
High Throughput Screens for Fatty Acid Uptake Inhibitors  
$1,270,155  
NIH-NIDDK  
Black, Paul  
Biochemistry

Doll, Elizabeth  
Educational Psychology  
NU Data: Using Data and Technology to Foster Achievement  
$1,496,461  
ED  
Horn, Christy  
Educational Psychology  
Shope, Ronald  
Educational Psychology

Dzenis, Yuris  
Mechanical & Materials Engineering  
NIRT: Nanomanufacturing and Analysis of Active Hierarchical Nanofilamentary Nanostructures  
$1,000,000  
NSF  
Zeng, Xiao Cheng  
Chemistry  
Feng, Ruqiang  
Mechanical & Materials Engineering  
Turner, Joseph  
Mechanical & Materials Engineering  
Poser, Susan  
Law/Center for the Teaching and Study of Applied Ethics  
Tomkins, Alan  
Law/Public Policy Center
Eccarius, Malinda  
Special Education and Communication Disorders  
Mountain Prairie Upgrade Partnership—Itinerant ED  
$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 ED  
$1,249,142  
McGowan, Thomas  
Teaching, Learning and Teacher Education

Epstein, Michael  
Special Education and Communication Disorders  
On the Way Home: A Family-Centered Academic Reintegration Intervention Model ED  
$1,443,284  
Torkelson-Trout, Alexandra  
Special Education and Communication Disorders

Espy, Kimberly Andrews  
Psychology  
Prenatal Smoking and the Substrates of Disruptive Behavior in Early Life NIH-NIDA Psychology  
Garza, John

Farrell, Michael  
University Television  
IPY: Engaging Antarctica NSF  
$1,246,068  
Diamond, Judy  
University of Nebraska State Museum

Farritor, Shane  
Mechanical & Materials Engineering  
Supporting Surgical Options in Space NASA through UNMC  
$1,350,000  
Goddard, Stephen  
Computer Science and Engineering  
Nelson, Carl  
Mechanical & Materials Engineering  
Perez, Lance  
Electrical Engineering 
Robots for Telesurgery Research  
$1,485,000  
Goddard, Stephen  
Computer Science and Engineering  
Nelson, Carl  
Mechanical & Materials Engineering  
Perez, Lance  
Electrical Engineering

Green, Jordan  
Special Education and Communication Disorders  
Bulbar Motor Deterioration in ALS NIH-NIDCD  
$2,294,633  
Early Speech Motor Development NIH-NIDCD  
$1,754,412

$1 MILLION — $2,999,999
Guretzky, John  Agronomy and Horticulture
* Agro-Ecosystem Approach to Sustainable Biofuels Production
$1,916,143  USDA-NIFA through Iowa State University
Baxendale, Fred  Entomology
Cassman, Kenneth  Agronomy and Horticulture
Glewlen, Keith  Southeast Research and Extension Center
Hay, Francis  Biological Systems Engineering
Heng-Moss, Tiffany  Entomology
James, Theresa  Agronomy and Horticulture
Namuth Covert, Deana  Agronomy and Horticulture
Perrin, Richard  Agricultural Economics
Waters, Brian  Agronomy and Horticulture
Wegulo, Stephen  Plant Pathology
Yuen, Gary  Plant Pathology

Heinrichs, Elvis  Entomology/INTSORMIL
Identification and Release of Brown Midrib (BMR) Sorghum Varieties to Producers in Central America and Haiti
$1,100,000  USAID

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
Irmak, Ayse  Biological Systems Engineering
Martin, Derrel  Biological Systems Engineering
van Donk, Simon  Biological Systems Engineering
Verma, Shashi  Natural Resources

Johnson, Scott  Biological Process Development Facility
Technical Transfer and cGMP Production of a Trivalent Vaccine
$2,302,839  Industry client
USAMRAA CGMP Production Contract #1
$2,164,301  DoD-AMR
Van Cott, Kevin  Chemical and Biomolecular Engineering

Jones, David  Biological Systems Engineering
Strengthening Transitions into Engineering Program
$1,993,942  NSF
Ballard, John  Industrial and Management Systems Engineering
Perez, Lance  Electrical Engineering

Knoche, Lisa  Nebraska Center for Research on Children, Youth, Families and Schools
Rural Language and Literacy Connections (Rural LLC)
$2,741,563  ED
Raikes, Helen  Child, Youth and Family Studies
### Koszewski, Wanda  
**Nutrition and Health Sciences**  
Innovation and Collaboration: Creating a Transdisciplinary Childhood Obesity Prevention Graduate Program  
$1,450,389  
USDA-NIFA through South Dakota State University

### Anderson-Knott, Mindy  
**Statistics**  
Carr, Timothy  
**Nutrition and Health Sciences**  
De Guzman, Maria  
**Child, Youth and Family Studies**  
Fischer, Jean  
**Nutrition and Health Sciences**  
Takahashi, Shinya  
**Nutrition and Health Sciences**  

### Supplemental Nutrition Assistance Program (SNAP-ED)  
$1,809,238  
USDA-FNS through Nebraska Department of Health and Human Services

### Birnstihl, Elizabeth  
**Extension**  
Schnepf, Marilynn  
**Nutrition and Health Sciences**

### Lee, Jaekwon  
**Biochemistry**  
Mechanistic Insights into Cellular Metal Detoxification  
$1,414,177  
NIH-NIEHS

### Li, Ming  
**Psychology**  
Behavioral Mechanisms of Antipsychotic Action  
$1,435,910  
NIH-NIMH

### Li, Qingsheng  
**Biological Sciences**  
The Early Events Determining SIV Rectal Transmission  
$1,368,245  
NIH-NIDDK

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

### Mackenzie, Sally  
**Biological Sciences/ Agronomy and Horticulture/ Center for Plant Science Innovation**  
TRMS: An Integrative Study of Plant Mitochondrial Biology  
$1,420,753  
NSF

### Marley, Tom  
**Mathematics**  
EMSW21-MCTP: Nebraska Mentoring through Critical Transition Points  
$2,225,689  
NSF

### McCutcheon, Allan  
**Gallup Research Center**  
* Reducing Error in Computer Survey Data Collection  
$2,967,347  
NSF

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**$1 MILLION — $2,999,999**
Mendoza-Gorham, Joan  
Student Affairs  
Classic Upward Bound  
Upward Bound Math/Science Program

$1,242,250  
$1,242,250

Oyler, George  
Biochemistry  
Consortium for Commercialization of Algae Biofuels and Biotechnology

$1,188,000  
Cerutti, Heriberto  
Biological Sciences/Center for Plant Science Innovation

Nickerson, Kenneth  
Biological Sciences

Van Etten, James  
Plant Pathology

Weeks, Donald  
Biochemistry

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

$1,194,387  
Bonnstetter, Ron  
Teaching, Learning and Teacher Education

Claes, Daniel  
Physics and Astronomy

Gosselin, David  
Natural Resources

Heng-Moss, Tiffany  
Entomology

Lewis, Elizabeth  
Teaching, Learning and Teacher Education

Swidler, Scott  
Teaching, Learning and Teacher Education

Pickard, Gary  
Veterinary Medicine and Biomedical Sciences  
* Homeostatic Regulation of Peripheral Oscillators via Autonomic Circuitry

$1,848,542  
Sollars, Patricia  
Veterinary Medicine and Biomedical Sciences

Redepenning, Jody  
Chemistry  
Bioceramic Bones for Battlefield Traumas

$1,358,000  
DoD-AMR

Robertson Jr., Vaughn  
Student Affairs  
UNL Educational Talent Search

$2,104,080  
ED

Rutenbeck, Kathy  
Student Affairs  
Upward Bound-Northeast Nebraska

$1,449,278  
ED

Schaefer, Matthew  
Law  
University of Nebraska College of Law

Space & Telecommunications Law Program: Filling a National Need, Advancing the Field

$1,717,370  
NASA

Willborn, Steven  
Law

Leiter, Richard  
Law

$1 MILLION — $2,999,999
Scott, Stephen  Computer Science and Engineering  
$1,371,121  NSF  
Soh, Leen-Kiat  Computer Science and Engineering  
Henninger, Scott  Computer Science and Engineering  
Jameson, Mary Liz  University of Nebraska State Museum  
Moriyama, Etsuko  Biological Sciences/Center for Plant Science Innovation

Sellmyer, David  Physics and Astronomy  
$1,197,462  DOE-Ames Laboratory  
Shield, Jeffrey  Mechanical & Materials Engineering  
Skomski, Ralph  Physics and Astronomy  

Shapiro, Charles  Northeast Research and Extension Center  
$1,419,710  USDA-CSREES  
Brandle, James  Natural Resources  
Francis, Charles  Agronomy and Horticulture  
Knezevic, Stevan  Northeast Research and Extension Center  
Schlegel, Vicki  Food Science and Technology  
Wright, Robert  Entomology  
Wortmann, Charles  Agronomy and Horticulture  
Bernards, Mark  Agronomy and Horticulture  
Hergert, Gary  Panhandle Research and Extension Center  
Ferguson, Richard  Agronomy and Horticulture  
Quinn, John  Natural Resources  
Lyon, Drew  Panhandle Research and Extension Center

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  
Bovaird, James  Educational Psychology  
Glover, Todd  Nebraska Center for Research on Children, Youth, Families and Schools  
Kunz, Gina  Nebraska Center for Research on Children, Youth, Families and Schools

Development of a Three-Tiered Model in Early Intervention to Address Language and Literacy Needs of Children at Risk  
$1,499,511  ED-IES  
Knoche, Lisa  Nebraska Center for Research on Children, Youth, Families and Schools  
Ihlo, Tanya  Nebraska Center for Research on Children, Youth, Families and Schools
Shi, Jonathan  Durham School of Architectural Engineering and Construction
Advanced Decentralized Water/Energy Network Design for Sustainable Infrastructure
$1,249,995  EPA
Zhang, Tian  Civil Engineering
Shen, Zhigang  Durham School of Architectural Engineering and Construction
Stansbury, John  Civil Engineering
Alahmad, Mahmoud  Durham School of Architectural Engineering and Construction
Li, Haorong  Durham School of Architectural Engineering and Construction
Schwer, Avery  Durham School of Architectural Engineering and Construction
Lau, Siu Kit  Durham School of Architectural Engineering and Construction

Shulski, Martha  Natural Resources
Regional Climate Services Support in the High Plains Region
$2,840,103  DOC-NOAA
Hubbard, Kenneth  Natural Resources
You, Jinsheng  Natural Resources

Simpson, Melanie  Biochemistry
Role of Hyaluronan Matrix in Prostate Cancer Progression
$1,084,884  NIH-NCI

Somerville, Greg  Veterinary Medicine and Biomedical Sciences
Citric Acid Cycle Regulation of Exopolysaccharide Synthesis in Staphylococci
$1,406,003  NIH-NIAID
Powers, Robert  Chemistry

Spreitzer, Robert  Biochemistry
Role of the Rubisco Small Subunit
$1,496,500  DOE

Starace, Anthony  Physics and Astronomy
Dynamics of Few-Body Atomic Processes
$1,816,554  DOE

Storz, Jay  Biological Sciences
Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents
$1,411,572  NIH-NHLBI
Moriyama, Hideaki  Center for Biotechnology

Stroup, Walter  Statistics/Center for Science, Mathematics and Computer Education
Data Connections: Developing a Coherent Picture of Mathematics Teaching and Learning
$1,213,475  NSF
Green, Jennifer  Statistics/Center for Science, Mathematics and Computer Education
Smith, Wendy  Center for Science, Mathematics and Computer Education
Tsymbal, Evgeny  
Cyberinfrastructure-Enabled Computational Nanoscience for Energy Technologies  
$2,587,878  
Swanson, David  
Computer Science and Engineering  

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

Compact Source of Laser-Driven Monoenergetic Gamma-Rays  
$2,982,685  

Swanson, David  
Computer Science and Engineering  

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

Compact Source of Laser-Driven Monoenergetic Gamma-Rays  
$2,982,685  

DoD-AFOSR  
Physics and Astronomy  

Swanson, David  
Computer Science and Engineering  

Umstadter, Donald  
* Propagation and Interactions of Ultrahigh Power Light: Relativistic Nonlinear Optics  
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Kalmykov, Serguei  
Shadwick, Bradley  

Compact Source of Laser-Driven Monoenergetic Gamma-Rays  
$2,982,685  

DoD-DTRA  
Physics and Astronomy  

Vanderbilt, William  
Chemical and Biomolecular Engineering  
* Technologies for Hemostasis and Stabilization of the Acute Traumatic Wound  
$1,783,613  
Banerjee, Sudeep  
Velander, William  
Chemical and Biomolecular Engineering  
* Technologies for Hemostasis and Stabilization of the Acute Traumatic Wound  
$1,783,613  
Banerjee, Sudeep  

Laser Produced Coherent X-Ray Sources  
$1,095,000  
Banerjee, Sudeep  

DOE  
Physics and Astronomy  

Verma, Shashi  
Natural Resources  
Carbon Sequestration in Dryland & Irrigated Agroecosystems  
$2,364,500  
Cassman, Kenneth  
Knops, Johannes  
Hubbard, Kenneth  
Arkebauer, Timothy  
Walters, Daniel  
Suyker, Andrew  

Agriculture and Horticulture  
Biological Sciences  
Natural Resources  
Agriculture and Horticulture  
Natural Resources  

Viljoen, Hendrik  
Chemical and Biomolecular Engineering  
A Rational Design of a Platform for de novo Gene Synthesis  
$1,312,056  
Subramanian, Anuradha  

NIH-NCRR  
Chemical and Biomolecular Engineering  

Walter, Jens  
Food Science and Technology  
* Determination of the Importance of Colonization History in the Assembly of the Gastrointestinal Microbiota  
$1,205,011  
Benson, Andrew  
Petersen, Daniel  

Food Science and Technology  
Food Science and Technology  

Weissinger, Ellen  
Academic Affairs  
Great Plains National Security Education Consortium (GP-NSEC)  
$1,200,000  
Adenwalla, Shireen  
Lesueur, James  
McMahon, Patrice  
Wedeman, Andrew  
Wood, Simon  
Paul, Prem  

Physics and Astronomy  
History  
Political Science  
Political Science  
Classics and Religious Studies  
Research and Economic Development  

$1 MILLION — $2,999,999
Whitbeck, Les  Sociology
* Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents
$1,303,987  NIH-NIAAA
Cheadle, Jacob  Sociology
Hayt, Dan  Sociology
Resilience through the High School Years
$2,609,905  NIH-NIMH

Wilson, Mark  Biochemistry/Nebraska Center for Redox Biology
Redox Regulation of DJ-1 Function
$1,339,726  NIH-NIGMS

Wood, Charles  Biological Sciences/Nebraska Center for Virology
Neuropathogenesis and Neuroinvasiveness of Subtype C Human Immunodeficiency Virus-1
$1,727,755  DHHS-NINDS

Programs in HIV & AIDS Assoc Diseases/Malignancies
$2,634,627  NIH-FIC
Research Training in Comparative Viral Pathogenesis
$1,318,857  NIH-NIAID
Vaccination against Mucosal HIV Clade C Transmission
$1,291,235  NIH-DFCI

Yamamoto, Catherine  Student Affairs
Student Support Services Program
$2,559,875  ED

Zempleni, Janos  Nutrition and Health Sciences
Biotin Deficiency Impairs Silencing of Repeat Regions and Retrotransposons
$1,224,019  NIH-NIDDK
Awards of $200,000 - $999,999
Active awards, July 1, 2011-June 30, 2012
* Indicates new in 2011-2012

Adenwalla, Shireen  Physics and Astronomy/
Center for Materials and Nanoscience
* Magnetolectric 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
Food Safety for Diverse Families with Young Children
$554,302  USDA-NIFA

Alexander, Dennis  Electrical Engineering
Ultrafast Laser Interaction Processes
for Libs & Other Sensing Technologies
$702,784  DoD-ARO through University of Central Florida

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
$213,461  NASA through Rutgers University

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

* Memory of a Drought:
    Training Arabidopsis Plants to Withstand Dehydration Stress
$705,000  NSF
Fromm, Michael  Center for Biotechnology/
    Center for Plant Science Innovation
Riethoven, Jean-Jack  Center for Biotechnology

Lipid-Signaling and Epigenetic Regulations in Arabidopsis:
    Are Myotubularins the Link?
$462,000  NSF

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
$224,218  USDA-ARS
Wegulo, Stephen  Plant Pathology

Developing Small Grains Cultivars
    Optimally Suited for Organic Production
$755,937  USDA-NRICGP
Flores, Rolando  Food Science and Technology
Wegulo, Stephen  Plant Pathology
Russell, William  Agronomy and Horticulture
Shapiro, Charles  Agronomy and Horticulture
Schlegel, Vicki  Food Science and Technology
Wehlerl, Randy  Food Science and Technology
Knezevic, Stevan  Northeast Research and Extension Center
Hein, Gary  Panhandle Research and Extension Center
Lyon, Drew  Panhandle Research and Extension Center

Barker, Bradley  4-H Youth Development

4-H Robotics: Engineering for Today and Tomorrow
$545,662  USDA-CSREES-National 4-H Headquarters

Barletta, Raul  Veterinary Medicine and Biomedical Sciences

Design of Multi-Target D-Ala-D-Ala Ligase Ligands
$204,322  NIH-NIAID through Southern Research Institute

Barletta-Chacon, Ofelia  Veterinary Medicine and Biomedical Sciences

Essentiality of Mycobacterium tuberculosis D-alanine Racemase
$393,164  NIH-NIAID
Powers, Robert  Chemistry

Bartelt-Hunt, Shannon  Civil Engineering

* Evaluating Air Emissions and Fuel Efficiency
    of Solid Waste Collection Vehicles
$262,602  Environmental Research & Education Foundation
Jones, Elizabeth  Civil Engineering

Fate and Bioavailability of Steroids in Aquatic Sediment
$221,981  NSF
Snow, Daniel  Natural Resources
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<td>Modeling Heterogeneity for Safe Cancer Prevention and Detection</td>
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Beukelman, David  
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Rehabilitation Engineering Research Center on Communication Enhancement  
$392,328  
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Billesbach, David  
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* SGP-Carbon Project  
$217,219  
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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  
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Springer, Paul  
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Reisbig, Allison  
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Bloom, Kenneth  
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* Any Data, Anytime, Anywhere  
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Dominguez, Aaron  
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Swanson, David  
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Blum, Paul  
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Uranium Mobilization by Extremely Thermoacidophilic Archaea  
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$279,592  
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  * Quantifying Gamma/Neutron Discrimination in Gadolinium-Rich Real-Time Neutron Detection Materials and Devices
    $349,664  DoD-DTRA
  Dowben, Peter  Physics and Astronomy
  Hallbeck, Susan  Mechanical & Materials Engineering/Biological Systems Engineering

Novel Rare-Earth Semiconductors for Solid-State Neutron Detectors
$867,242  DoD-DTRA
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Dowben, Peter  Physics and Astronomy

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

Brown, Deborah  Biological Sciences
  Vaccine Strategies that Target Cytolytic CD4 T Cells to the Lung
    $398,919  NIH-NIAID

Brown, Mary  Natural Resources
  Advancing Tern and Plover Common Sense Conservation into the Future
    $270,000  Nebraska Environmental Trust

Bulling, Denise  Public Policy Center
  Developing Nebraska’s Homeland Security Planning Capacity
    $356,500  DHS through Nebraska Military Department-NEMA

  Tri-County Urban Area Security Initiative (UASI) Planning
    $200,000  DHS through Nebraska Military Department-NEMA

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
    $240,448  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

Cady, Daniel  Extension
  Nebraska Technology Transfer Center at UNL
    $594,431  Nebraska Department of Roads

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Cahoon, Edgar  
**Biochemistry/Center for Plant Science Innovation**  
* Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis  
$686,815  
Stone, Julie  
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* Center for Enhanced Camelina Oil (CECO)  
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* Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis  

Development of Bio-Based Lubricants in a Dedicated Industrial Oilseed Crop  
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Probing the Metabolic and Physiological Significance of Sphingolipid Long-Chain Base Desaturation in Plants  
$550,500  

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$948,028  

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Cantrell, Randolph  
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Marketing Rural Communities to Attract and Retain Workers  
$498,558  
Burkhart-Kriesel, Cheryl  
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An Ecological Model of Latino Youth Development  
$315,000  
Buhs, Eric  
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Carranza, Miguel  
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Crockett, Lisa  
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De Guzman, Maria  
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Cassman, Kenneth  
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$970,147  

Centurion, Martin  
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* Ultrafast Imaging of Electronic Motion in Atoms and Molecules  
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Starace, Anthony  
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Histone H3 Phosphorylation and Gene Silencing in Chlamydomonas and Arabidopsis
$591,661  NSF

Chen, Xun-Hong  Natural Resources
Development of Groundwater Flow Model in the Lower Platte North NRD Area
$220,458  Lower Platte North NRD

Cheung, Chin Li  Chemistry
Boron Coatings for Scalable Solid-State Neuron Detectors
$400,000  DOE-Livermore National Laboratory

Choueiry, Berthe  Computer Science and Engineering
* RI: Small: Towards Practical Tractability in Constraint Processing
$401,564  NSF

Ci, Song  Computer and Electronics Engineering
IHCS: ARMS: A Novel Adaptive Configurable Multi-Cell Battery System for Power-Aware Electronics
$299,626  NSF
Alahmad, Mahmoud Durham School of Architectural Engineering and Construction
Sharif-Kashani, Hamid Computer and Electronics Engineering

Clemente, Thomas  Agronomy and Horticulture/
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Center for Biotechnology
* Testing Replacement of Fishmeal and Fish Oil in Seriola Rivoliana (Kona Kampachi) Diet with Soy-Based Protein and Oil
$389,948  United Soybean Board/Smith/Bucklin

* Engineering Hydrocarbon Biosynthesis and Storage Together with Increased Photosynthetic Efficiency into the Saccharinae
$386,403  DOE through University of Illinois at Urbana-Champaign

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

Comfort, Steven  Natural Resources
Field-Scale Demonstrations of Innovative Remediation Techniques for Contaminated Soil and Water
$994,100  EPA
Conley, Dennis  
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$224,982  
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Burkhart-Kriesel, Cheryl  
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Narjes, Charlotte  
Center for Applied Rural Innovation  

De Ayala, Rafael  
Educational Psychology  
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$528,608  
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Ansorge, Charles  
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Geisinger, Kurt  
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Detweiler, Carrick  
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* RI: Small: Adaptive Sampling with Robots for Marine Observations  
$249,971  
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DiMagno, Stephen  
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New Approaches to Catalyst Screening & Development  
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Dominguez, Aaron  
Physics and Astronomy  
PIRE: Collaborative Research with the Paul Scherrer Institute and Eidgenoessische Technische Hochschule on Advanced Pixel Silicon Detectors for the CMS Detector  
$782,447  
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Dowben, Peter  
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Doped Boron Carbide Polymers: Fundamental Studies of a Novel Class of Materials for Enhanced Radiation Detection  
$300,000  
DoD-DTRA through University of North Texas  

Du, Liangcheng  
Chemistry  
* Discovering New Anti-Infective Agents from Lysobacter  
$851,814  
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Ducharme, Stephen  
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* Ferroelectric-Enhanced Organic Electronics  
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Gruverman, Alexei  
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Huang, Jinsong  
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Rational Design of Molecular Ferroelectric Materials and Nanostructures  
$449,054  
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Takacs, James  
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<td>Treatment Implementation and Mental Health Outcomes for Youth in Residential Care</td>
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Midwest Roadside Safety Facility
Wisconsin DOT Roadside Safety Research Program FY 2010
$601,736  Nebraska Department of Roads
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Reid, John  Mechanical & Materials Engineering

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Bridge Railing System
$229,820  Nebraska Department of Roads
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Tadros, Maher  Civil Engineering

Farritor, Shane  Mechanical & Materials Engineering
Robotic Devices to Support Long-Term Human Space Flight
$675,000  NASA through UNO

Feng, Song  Natural Resources
Megadrought: Local vs. Remote Causal Factors
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$469,398  NSF
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Fomenko, Dmitri  Biochemistry
*Methionine Sulfoxide Reduction, Selenium and Aging
$248,679  NIH-NIA through Harvard
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Fontaine, Joseph  Natural Resources
* Assessing the Effects of Habitat Incentive Programs and
Public Access Programs on Pheasant Population Dynamics and
Hunter Harvest
$224,283  Nebraska Game and Parks Commission
Powell, Larkin  Natural Resources

Assessing Landscape Constraints
on Habitat Management of Upland Birds
$245,845  Nebraska Game and Parks Commission
Powell, Larkin  Natural Resources

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

$200,000 – $999,999
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$571,988  USDA-CSREES through Iowa State University  
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Fromm, Michael  Agronomy and Horticulture/Center for Biotechnology  
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$714,750  NSF

Gardner, Scott  Biological Sciences/University of Nebraska State Museum  
Mongolia Vertebrate Parasite Project  
$627,491  NSF  
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$546,597  NSF  
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Gaussoin, Roch  Agronomy and Horticulture  
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$204,252  Syngenta  
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Gay, Timothy  Physics and Astronomy  
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Uiterwaal, Kees  Physics and Astronomy

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$593,103  Keystone Alternate Assessment Design  
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Foley, Brett  Educational Psychology

Giannakas, Konstantin  Agricultural Economics  
* Center For Agricultural and Food Industrial Organization-Policy Research Group (CAFIO-PRG)  
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Burbach, Mark  Natural Resources  
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Perrin, Richard  Agricultural Economics  
Schoengold, Karina  Agricultural Economics  
Thompson, Eric  Bureau of Business Research  
Yiannaka, Amalia  Agricultural Economics
Gitelson, Anatoly  Natural Resources
A Satellite-Based Quantification of Carbon Exchange of the Dominant Ecosystem (Maize-Soybean) in the NACP Mid-Continent Intensive (MCI) Region
$496,124  NASA
Verma, Shashi  Natural Resources
Suyker, Andrew  Natural Resources

Glover, Todd  Nebraska Center for Research on Children, Youth, Families and Schools
State-Wide Response-to-Intervention Consortium for Training & Evaluation
$499,989  Nebraska Department of Education
Ihlo, Tanya  Nebraska Center for Research on Children, Youth, Families and Schools

Goddard, Stephen  Computer Science and Engineering
* CSR: Small: Systematic Approaches for Real-Time Stream Data Services
$250,000  NSF
Liu, Xue  Computer Science and Engineering

Gogos, George  Mechanical & Materials Engineering
Innovative Propane Flaming Technology for Crop Production
$274,000  Propane Education and Research Council
Knezevic, Stevan  Northeast Research and Extension Center

Goodman, Richard  Food Science and Technology
* In Vitro IgE Testing of a Biotech Soybean Event LEPI 2800
$200,470  Pioneer Hi-Bred

Differentiating Biologically Relevant from Irrelevant IgE Binding to Food Antigens for Improved Risk Assessment and Diagnostic Studies Using a Humanized Rat Basophil Cell Line (RBL 30/25)
$372,340  EPA
Siddanakoppalu, Pramod  Food Science and Technology

Food Allergen Database
$679,742  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

$200,000 — $999,999
Graef, George  Agronomy and Horticulture  
Quality Traits Regional Tests  
United Soybean Board/Smith/Bucklin  
$236,490

Soybean Breeding and Genetic Research for Nebraska  
$208,544  Nebraska Soybean Board  
Specht, James  Agronomy and Horticulture

Green, Jordan  Special Education and Communication Disorders  
* Development of Childhood Chewing  
Nestec Ltd.  
$429,360

Grosskopf, Kevin  Durham School of Architectural Engineering and Construction  
* Energy Efficient Housing Research Partnerships  
DOE-NREL  
Alahmad, Mahmoud  Durham School of Architectural Engineering and Construction  
Cho, Yong Kwon  Durham School of Architectural Engineering and Construction  
Goedert, James  Durham School of Architectural Engineering and Construction  
Hemsath, Timothy  Architecture  
Li, Haorong  Durham School of Architectural Engineering and Construction  
Norton, Terri  Durham School of Architectural Engineering and Construction  
Schwer, Avery  Durham School of Architectural Engineering and Construction  
Shen, Zhigang  Durham School of Architectural Engineering and Construction  
Shi, Jonathan  Durham School of Architectural Engineering and Construction  
Tiller, Dale  Durham School of Architectural Engineering and Construction  
Waters, Clarence  Durham School of Architectural Engineering and Construction  
Yuill, Grenville  Durham School of Architectural Engineering and Construction

Gruverman, Alexei  Physics and Astronomy  
Nanoscale Resistive Switching Behavior of Ferroelectric and Multiferroic Tunnel Junctions  
DOE  
$750,000  Tsymbal, Evgeny  Physics and Astronomy

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

Materials World Network: Critical Scaling of Domain Dynamics in Ferroelectric Nanostructures  
NSF  
$314,950
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

Mamo, 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

Gursoy, Mustafa  Electrical Engineering
  Energy Efficiency in Wireless Communications under Queuing Constraints
  $335,856  NSF
  Velipasalar, Senem  Electrical Engineering

Hage, David  Chemistry
  * Chromatographic Automation of Immunoassays
  $816,026  NIH-NIGMS

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

  Chromatographic Studies of Functional Proteomics
  $756,640  NIH-NIDDK

Hallbeck, M. Susan  Industrial and Management Systems Engineering
  VA Engineering Research Center
  Savory, Paul  VA Medical Center-Omaha

Han, Ming  Electrical Engineering
  Highly Sensitive and Multiplexed Fiber-Optic Ultrasonic Sensors
  $305,658  DoD

  Distributed Fiber-Optic Laser Ultrasound Generation
  $300,103  DoD

Harms, Peter  Management
  Comprehensive Soldier Fitness Program Assessment
  $954,906  TKC Global Solutions

Bien, Mary  Management
Bulling, Denise  Public Policy Center
Pearce, Craig  Management
Harshman, Lawrence  
**Biological Sciences**  
Molecular Evolution of Genes Expressed in D. melanogaster Sperm Storage Structures  
$302,713  
NSF  
Moriyama, Etsuko  
**Center for Plant Science Innovation**  
Genome Biology of Innate Immunity: Genetic Dissection of Drosophila melanogaster Responses to Bacillus Infection  
$454,013  
DoD  
Benson, Andrew  
**Food Science and Technology**  
Kachman, Stephen  
**Statistics**

Harvey, F. Edwin  
**Natural Resources**  
Investigation of the Role of Rainwater Basin Wetlands in Contributing to the Functions of Groundwater Recharge, Water Quality Improvement, and the Wildlife Habitat, Including an Assessment of the Impact of Sediment on These Functions  
$386,520  
Nebraska Game and Parks Commission  
Hayes, Michael  
**Natural Resources**  
Drought Mitigation, Nebraska Project  
$558,401  
USDA-NIFA  
Svoboda, Mark  
**Natural Resources**  
Knutson, Cody  
**Natural Resources**  
Wardlow, Brian  
**Natural Resources**  
Transitioning the Drought Impact Reporter into an Operational System  
$445,257  
DOC-NOAA  
Heemstra, Jill  
**Northeast Research and Extension Center**  
Engaging Young Farmers and Ranchers in Environmental Management Education  
$644,408  
USDA-CSREES  
Hein, Gary  
**Entomology**  
National Needs Fellow: Integrated Practitioners for Tomorrow’s Sustainable Agricultural Systems  
$234,000  
USDA-CSREES  
Lagrimini, Mark  
**Agronomy and Horticulture**  
Steadman, James  
**Plant Pathology**  
Brewer, Gary  
**Entomology**

Heng-Moss, Tiffany  
**Entomology**  
* Mitigating Insect Herbivory of Warm-Season Bioenergy Grasses – Getting Ahead of the Curve  
$734,477  
USDA-ARS  
Bradshaw, Jeffrey  
**Entomology**  
Lagrimini, Mark  
**Agronomy and Horticulture**
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<tr>
<th>Name(s)</th>
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<td>Economic Implications of Reduced Ground Water Allocations in the Nebraska</td>
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<td>Panhandle and Educational Programming to Improve Management with Less Water</td>
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<td>Enhancing Irrigation Management Tools &amp; Developing a Decision Support System</td>
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<td>DHB: Identifying the Biological Underpinnings of Political Temperaments</td>
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<td>Hogan, Tiffany</td>
<td>Working Memory and Word Learning in Children with Typical Development and</td>
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<td>Language Impairment</td>
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<td>The Lexicon and Phoneme Awareness</td>
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<td>$200,000 — $999,999</td>
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**Horn, Christy**  
**Equity, Access and Diversity Programs**  
Building Accepting Campus Communities  
$976,900 — ED

**Bruning, Roger**  
**Educational Psychology**

**Sydik, Jeremy**  
**Equity, Access and Diversity Programs**

**Houston, Adam**  
**Earth and Atmospheric Sciences**  
* Criticality: A Theory for Understanding and Forecasting Deep Convective Initiation  
$226,730 — NSF

**Hu, Qi (Steve)**  
**Natural Resources**

Development of a Northern Hemisphere Gridded Precipitation Dataset  
Spanning the Past Half Millennium for Analyzing Interannual and Longer-Term Variability in the Monsoons  
$529,501 — DOC-NOAA

**Feng, Song**  
Natural Resources

**Oglesby, Robert**  
**Earth and Atmospheric Sciences**

Understanding and Predicting Tropical and North Atlantic SST Forcing on Variations in Warm Season Precipitation over North America  
$292,000 — DOC-NOAA

**Oglesby, Robert**  
**Earth and Atmospheric Sciences**

**Feng, Song**  
Natural Resources

**Huang, Jinsong**  
**Mechanical & Materials Engineering**  
* 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  
$410,000 — NSF

**Ducharme, Stephen**  
**Physics and Astronomy**

Highly Sensitive, Low Cost Organic Photodetector Based Photomultiplication  
$200,000 — DoD-DTRA

**Hudgins, Jerry**  
**Electrical Engineering**

$999,504 — DOT-FHWA

**Jones, Elizabeth**  
**Civil Engineering**

**Qiao, Wei**  
**Electrical Engineering**

**Rilett, Laurence**  
**Civil Engineering**

**Sharma, Anuj**  
**Civil Engineering**

**Hunt, William**  
**Anthropology**  
* Pilot Project: A Multidisciplinary Exploratory Study of Alpine Cairns, Baranof Island, Southeast Alaska  
$201,697 — NSF

**Hartley, Ralph**  
**Anthropology**
<table>
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<td>Hutkins, Robert</td>
<td>Food Science and Technology</td>
<td>Assessing and Enhancing Stability of Prebiotics in Processed Foods</td>
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<td>UNO-NASA Space Grant: Satellite Contaminant Materials Research Program</td>
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<td>Irmak, Ayse</td>
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<td>CPN RD Mapping Evapotranspiration with High Resolution Satellite Data</td>
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<td>Irmak, Suat</td>
<td>Biological Systems Engineering</td>
<td>* Water Use, Surface Energy Balance, and Vegetation Dynamics of Phragmites (Phragmites australis) in the Central Platte River Valley</td>
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<td>Itskov, Vladimir</td>
<td>Mathematics</td>
<td>* Topology of Neural Coding in Recurrent Networks: Theory and Data Analysis</td>
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<td>Iyengar, Srikanth</td>
<td>Mathematics</td>
<td>* Commutative Algebra: Homological and Homotopical Aspects</td>
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<td>Derived Categories of Complete Intersections and Hochschild Cohomology</td>
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<td>Turbo Button: A Semantically Smart Flash Memory Layer for Internet-Scale Storage Systems</td>
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<td>CSR: Small: ProActive: A RAID Protection Activator for High Availability</td>
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<td>HECURA: A New Semantic-Aware Metadata Organization for Improved File-System Performance and Functionality in High-End Computing</td>
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$200,000 – $999,999
Johnson, Scott  Biological Process Development Facility
* STTR: Process Research, Development and Stability Testing of cv-PDG-NLS.
Van Cott, Kevin  Chemical and Biomolecular Engineering
$763,023  DHHS-NIH through Restoration Genetics Inc

* Recombinant Type E Botulinum Neurotoxin Vaccine
Van Cott, Kevin  Chemical and Biomolecular Engineering
$362,145  Industry Client

* Cell Line Development, Early Stage Production and Establishment of a Research Cell Bank
$306,474  NovaDigm Therapeutics Inc.
Blum, Paul  Biological Sciences

Process Research and Development of a Streptococcus pneumoniae Whole Cell Vaccine (SPWVC)
$543,410  PATH, through Bill & Melinda Gates Foundation

Jones, Clinton  Veterinary Medicine and Biomedical Sciences
Analysis of Viral Factors that Regulate the Bovine Herpesvirus 1 (BHV-1) Latency Reactivation Cycle
$375,000  USDA-CSREES

Functional Analysis of biCPO
$375,000  USDA-NRICGP

Josiah, Scott  Nebraska State Forest Service
Forest Legacy Program: Pine Ridge Project
$500,000  USDA-FS

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

Expansion of Hazelnut Production, Feedstock and Biofuel Potential Through Breeding for Disease Resistance and Climatic Adaption
$389,224  USDA-CSREES through Oregon State University
Adams, Dennis  Natural Resources
Hanna, Milford  Industrial Agricultural Products Center

NRCS-Technical Service Provider Project
$726,347  USDA-NRCS

Hazardous Fuels Reduction: Pine Ridge
$250,000  USDA-FS

Kamil, Alan  Biological Sciences
Operant Research on Episodic Memory in an Animal Model
$405,625  NIH-NIMH
Bond, Alan  Biological Sciences
Khattak, Aemal  Civil Engineering  
* HMEP Public Sector Planning Grant-Commodity Flow Survey $225,000  Nebraska Military Department-NEMA Civil Engineering  
Rilett, Laurence

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

Knutson, Cody  Natural Resources  
* Transforming Climate Variability and Change Information for Cereal Crop Producers $284,468  USDA-NIFA through Purdue University Natural Resources  
Shulski, Martha

* Predictability and Prediction of Decadal Climate and Its Societal Impacts in the Missouri River Basin $215,142  USDA-NIFA through Center for Research on Changing Earth System

* Transition of an Interactive Drought Management Database for the Identification and Comparison of Drought Mitigation and Response Strategies $203,861  DOC-NOAA Natural Resources  
Hayes, Michael

Ko, Jeonghan  Mechanical & Materials Engineering  
* GOALI: Module-Centric Approach to Integrated Adaptation of Assembly Products and Supply Chains $202,770  NSF

Koelsch, Richard  Biological Systems Engineering/Extension  
Nebraska EIPM-CS Coordination Program $669,915  USDA-CSREES Biological Systems Engineering/Extension  
Wright, Robert  Entomology  
Bernards, Mark  Agronomy and Horticulture  
Ogg, Clyde  Entomology  
Kamble, Shripat  Agronomy and Horticulture  
Gaussoin, Roch  Entomology  
Baxendale, Fred  Agronomy and Horticulture  
Streich, Anne  Entomology  
Hygnstrom, Scott  Agronomy and Horticulture  
Bradshaw, Jeffrey  Panhandle Research and Extension Center  
Jackson, Tamra  Plant Pathology  
Timmerman, Amy  Plant Pathology  
Reicher, Zac Agronomy and Horticulture

Koszewski, Wanda  Nutrition and Health Sciences  
Growing Healthy Kids through Healthy Communities $947,093  USDA-AFRI

Bergman, Gary Southeast Research and Extension Center

$200,000 — $999,999
Kranz, William  Northeast Research and Extension Center  Sustainable Energy Options for Rural Nebraska  $500,000  DOE
Hay, Francis  Biological Systems Engineering
Hudgins, Jerry  Electrical Engineering
Isom, Loren  Industrial Agricultural Products Center
Keshwani, Deepak  Biological Systems Engineering
Shelton, David  Northeast Research and Extension Center

Krehbiel, Michelle  Extension  Nebraska CYFAR Sustainable Community Project  $635,967  USDA-NIFA
De Guzman, Maria  Child, Youth and Family Studies

Lackey, Susan  Natural Resources  Developing Hydrogeologic Databases to Assist in Water Resources Management  $459,600  Lower Elkhorn NRD
Developing Hydrogeologic Databases to Assist in Water Resources Management — UENRD  $203,353  Upper Elkhorn NRD

Langell, Marjorie  Chemistry  Metal Oxide Solid Solutions: Macroscopic to Nano-Scale  $449,855  NSF
GAANN Fellowships in Chemistry: Research First at UNL  $396,456  ED

Ledder, Glenn  Mathematics  UBM: Research for Undergraduates in Theoretical Ecology (RUTE)  $905,000  NSF
Deng, Bo  Mathematics
Gibson, Robert  Biological Sciences
Loladze, Irakli  Mathematics
Louda, Svata  Biological Sciences

Lee, Jaekwon  Biochemistry  * Mechanistic Insights into Copper Metabolism  $844,614  NIH-NIDDK
Kim, Heejeong  Biochemistry

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

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

$200,000 — $999,999
Lewis, Charlotte  Center on Children, Families and the Law
   Nebraska Aging and Disability Resource Center
$343,707  Nebraska Department of Health and Human Services

Answers4Families/NRRS Database
$308,232  Nebraska Department of Health and Human Services

Li, Haorong  Durham School of Architectural Engineering and Construction
   Enterprise Plug n Play Diagnostics and Optimization for Smart Buildings
$617,013  Sensus Machine Intelligence
Lu, Ying  Computer Science and Engineering

Intelligent Controls for Net-Zero Energy Buildings
$475,750  DOE
Cho, Yong Kwon  Durham School of Architectural Engineering and Construction
Peng, Dongming  Computer and Electronics Engineering
Goedert, James  Durham School of Architectural Engineering and Construction
Cogdill, Robert  Engineering

Li, Xu  Civil Engineering
Bioaccumulation of Antibiotic Resistant Salmonella in Produce after Irrigation Using Recycled Waters
$500,000  USDA-AFRI
Bartelt-Hunt, Shannon  Civil Engineering
Hodges, Laurie  Agronomy and Horticulture
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

Contribution of Fusarium lateritium to Weed Suppressive Soils & Weed Abundance
$366,186  USDA-NRICGP
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Yuen, Gary  Plant Pathology

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

Advanced Probes for Characterizations of Magnetic Nanostructures
$539,998  DoD
Sellmyer, David  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Skomski, Ralph  Physics and Astronomy
Lodl, Kathleen  
Extension  
Communicating Capacity Building: Supporting Military Children & Families: An Environmental Scan of Child Care Provider Training  
$250,000  
USDA-NIFA through Purdue University  
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Lu, Ying  
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CSR: Small: Energy Management for Heterogeneous MapReduce Data Centers  
$432,932  
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Swanson, David  
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Lu, Yongfeng  
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* Fast Deposition of Diamond Films in Open Air for Thermal Management, Wear Resistance, and Corrosion Resistance  
$795,389  
DoD-MDA  
* 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  
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Black, Paul  
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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

Coating and Patterning Diamond Films by Laser Resonant Bond Breaking in Polymer Precursors  
$259,384  
NSF
Mackenzie, Sally  Biological Sciences/Agronomy and Horticulture/Center for Plant Science Innovation
* 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  Center for Biotechnology/Agronomy and Horticulture
Lorenz, Aaron  Agronomy and Horticulture
Riethoven, Jean-Jack  Center for Biotechnology
Xu, Yingzhi  Center for Plant Science Innovation
Yu, Bin  Biological Sciences

Marston, Twig  Northeast Research and Extension Center
Extension and Educational Programs and Materials for Small- and Medium-Sized Pork Operations
$258,644  USDA-NRICGP

Martin, Derrel  Biological Systems Engineering
Modeling and Field Experimentation to Determine Effects of Land Terracing-Republican River Basin (CESU)
$515,775  DOI-BR

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

Mcquillan, Julia  Sociology
* Student Health and Risk Prevention Survey 2011-2013
$296,047  Nebraska Department of Health and Human Services
Richardson, Amanda  Sociology
Smyth, Jolene  Sociology

Infertility: Pathways & Psychosocial Outcomes
$637,373  NIH through Pennsylvania State University

Moore, Raymond  Engineering
Students United in Classes, Community, Engineering, Service and Study Abroad
$591,995  NSF

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

$200,000 — $999,999
Moriyama, Etsuko  
Biological Sciences/  
Center for Plant Science Innovation  
Efficient and Sensitive Mining System  
for G-Protein Coupled Receptors  
$577,014  
NIH-NLM

Large-Scale Simultaneous Multiple  
Alignment & Phylogeny Estimation  
$266,830  
NSF

Mower, Jeffrey  
Agronomy/Horticulture  
* Tracing Processes of Genome Evolution using Plantaginaceae  
$594,190  
NSF

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
Chandra, Namas  
Mechanical & Materials Engineering

Nelson, Carl  
Mechanical & Materials 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

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  
Educational Psychology

Newman, Ian  
Educational Psychology  
Nebraska Collegiate Consortium to Reduce High Risk Drinking  
$374,993  
ED
Shell, Duane  
Educational Psychology

Nguyen, Lim  
Computer and Electronics Engineering  
Self-Encoded Spread Spectrum Modulation  
for Robust Anti-Jamming Communication  
$379,767  
DoD
Jang, Won  
Computer and Electronics Engineering

$200,000 – $999,999
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<td>Porcine Reproductive and Respiratory Virus: Role of Viral Genes in Virulence/Attenuation</td>
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<td>Microarray Analysis of Gene Expression Profiles in Cells Transfected with Nonviral Gene Delivery Vectors</td>
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  * 2012 Math Science Partnership Learning Network Conference
  $255,394  NSF
Heaton, Ruth  Teaching, Learning and Teacher Education
Smith, Wendy  Center for Science, Mathematics and Computer Education

NASA EPSCoR RFID and RTLS Enhancement for Inventory Management and Logistics of Space Transportation Systems
$690,000  NASA through UNO
Williams, Robert  Mechanical & Materials Engineering

GAANN in Engineering & Assistive Technology
$387,165  ED
Goddard, Stephen  Computer Science and Engineering

Peterson, Daniel  Food Science and Technology
  Adaptive Immune Response to Symbiotic Bacteria as a Mediator of Gut Homeostasis
  $379,890  NIH-NIAID

Pickard, Gary  Veterinary Medicine and Biomedical Sciences
  Retinal Neurons Afferent to the Circadian System
  $848,196  NIH-NEI
Sollars, Patricia  Veterinary Medicine and Biomedical Sciences

Pope, Kevin  Natural Resources
  Recruitment of Walleye and White Bass in Irrigation Reservoirs
  $678,884  Nebraska Game and Parks Commission

Powell, Larkin  Natural Resources
  * Persistent Effects of Wind-Power Development on Prairie Grouse in Nebraska
  $598,000  Nebraska Game and Parks Commission
Brown, Mary  Natural Resources
Fontaine, Joseph  Natural Resources

Assessing Local & Regional Variability in Productivity & Fidelity of Grassland Birds on National Park Service Units in the Great Plains
$212,122  DOI-GS
Allen, Craig  Natural Resources

Powers, Thomas  Plant Pathology
  * Integrative Taxonomy and Biogeography of Criconematidae
  $528,561  NSF
Pytlík Zillig, Lisa  Educational Psychology/ Public Policy Center

* Central Great Plains Climate Change Education Partnership (CGP-CCEP) Partnership Proposal:
Expanding our Reach and Research

$287,125  NSF through Kansas State University
Abdel-Monem, Tarik  Public Policy Center
Hu, Qi  Natural Resources
Hubbard, Kenneth  Natural Resources
Nugent, Gwen  Nebraska Center for Research on Children, Youth, Families and Schools
Shulski, Martha  Natural Resources
Tomkins, Alan  Public Policy Center

Developing an Empirically-Based, Multi-Level, Social-Cognitive Model of Public Engagement in Science & Innovation Policy Development

$499,134  NSF
Dzenis, Yuris  Mechanical & Materials Engineering
Morris, T. Jack  Biological Sciences
Pardy, Ted  Biological Sciences
Tomkins, Alan  Law/Public Policy Center
Turner, Joseph  Mechanical & Materials Engineering

Qian, Yi  Computer and Electronics Engineering

* NeTS: Medium: AC-MWN: Application-Aware Cognitive Multihop Wireless Networks

$455,999  NSF
Sharif-Kashani, Hamid  Computer and Electronics Engineering
Yang, Yaoqing  Computer and Electronics Engineering

Qiao, Wei  Electrical Engineering

Intelligent Optimal Mechanical Sensorless Control for Variable-Speed Wind Energy Systems Considering System Uncertainties

$214,754  NSF

Rack, Frank  Earth and Atmospheric Sciences/ Antarctic Geological Drilling Program

* EAGER: Handbook of Hot Water Drill System (HWDS) Design Considerations and Best Practices

$299,724  NSF
Fischbein, Steven  Earth and Atmospheric Sciences/ Antarctic Geological Drilling Program

Promoting Environmental Literacy through Teacher Professional Development Workshops and Climate Change Student Summits (C2S2)

$696,672  DOC-NOAA
Huffman, Louise  Antarctic Geological Drilling Program

Raikes, Helen  Child, Youth and Family Studies

* Evaluation of Early Steps to School Success

$605,303  Save the Children
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<td>Faunistic Survey of Dynastinae of Mexico, Guatemala, &amp; Belize</td>
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Reid, John  Mechanical & Materials Engineering
* Wisconsin DOT Roadside Safety Research Program FY 2012
$606,572  DOT-FHWA through Nebraska Department of Roads
Bielenberg, Robert  Midwest Roadside Safety
Faller, Ron  Midwest Roadside Safety
Lechtenberg, Karla  Midwest Roadside Safety
Sicking, Dean  Midwest Roadside Safety

Testing of a New Guardrail Post for the Midwest Guardrail System
$237,901  Roll Form Group
Faller Ronald  Midwest Roadside Safety

Downstream Anchoring for MGS, Minimum Effective Guardrail Length for MGS, Short-Radius Guardrail w/Large Radii
$415,471  Nebraska Department of Roads
Bielenberg, Robert  Midwest Roadside Safety Facility
Faller, Ron  Civil Engineering/Midwest Roadside Safety Facility
Lechtenberg, Karla  Midwest Roadside Safety Facility
Sicking, Dean  Civil Engineering/Midwest Roadside Safety Facility

Midwest States Regional Pooled Fund Program
Midwest States Regional Pooled Fund Program
$650,000  Nebraska Department of Roads
Sicking, Dean  Civil Engineering/Midwest Roadside Safety Facility
Faller, Ron  Civil Engineering/Midwest Roadside Safety Facility
Bielenberg, Robert  Civil Engineering/Midwest Roadside Safety Facility

Rilett, Laurence  Civil Engineering
Nebraska Transportation Center Seed Funding
$300,000  Nebraska Department of Roads

Intelligent Transportation System Deployment Project
$831,942  Nebraska Department of Roads
Jones, Elizabeth  Civil Engineering
Khattak, Aemal  Civil Engineering

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

Robertson, Brian  Mechanical & Materials Engineering
Nebraska Center for Materials and Nanoscience
Spintronic Devices Enabled by Semiconducting Boron Carbide
$299,998  NSF
Adenwalla, Shireen  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Dowben, Peter  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Rothermel, Gregg  Computer Science and Engineering
II-EN: Infrastructure Support for Software Testing Research
$345,985  NSF

Ruser, Kevin  Law
UNL-UNAM Rule of Law Partnership
$449,384  American Council on Education-HED
Bennett, Robert  Law
Lenich, John  Law
Lepard, Brian  Law
Lyons, William  Law
Moberly, Richard  Law
Pierce, Glenda  Law
Poser, Susan  Law
Schmidt, Steven  Law
Schopp, Robert  Law
Willborn, Steven  Law

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

Building Knowledge Discovery & Information Fusion Tools for Collaborative Systems to Adaptively Manage Uncertain Hydrological Resources
$651,816  NSF
Chen, Xun-Hong  Natural Resources
Soh, Leen-Kiat  Computer Science and Engineering
Tomkins, Alan  Law/Public Policy Center
Zellmer, Sandra  Law

Saraf, Ravi  Chemical and Biomolecular Engineering
Electronic Interfacing between a Living Cell and a Nanodevice: A Bio-Nano Hybrid System
$900,000  DOE

Nanodevice for Digital Imaging of Palpable Structure at Human-Finger Resolution for Clinical Breast Examination
$377,552  NIH-NIBIB

Sarma, Anita  Computer Science and Engineering
* HCC: Large: Large-Scale Human-Centered Coordination Systems to Support Interdependent Tasks in Context
$267,936  NSF

Sayood, Khalid  Electrical Engineering
* ATD: Algorithms for the Analysis of Microbiomes
$246,367  NSF
Scalora, Mario  Psychology
Post-Secondary Institutions Safety Threat Assessment
Technical Assistance Center
$535,537  DHS through Nebraska Military Department-NEMA
Yardley, Owen  UNL Police
Bulling, Denise  Public Policy Center

Scheffler, Marilyn  Special Education and Communication Disorders
Project RTI: Building Capacity Together
to Implement Response to Intervention
$800,000  ED
Sanger, Dixie  Special Education and Communication Disorders
Project Re-entry: Preparing Speech-Language
Pathologists to Serve Students with Traumatic Brain Injury
$800,000  ED
Hux, Karen  Special Education and Communication Disorders

Schubert, Mathias  Electrical Engineering
STTR: THz Ellipsometer for Reflection-Mode Signature Acquisition
$225,000  J.A. Woollam Company
MRI: Development of an Optical Hall Effect Instrumentation
for Non-Contact Nanostructure Electrical Characterization
$299,915  NSF
Lu, Yongfeng  Electrical Engineering
Han, Ming  Electrical Engineering
Schubert, Eva  Electrical Engineering
Binek, Christian  Physics and Astronomy
Ducharme, Stephen  Physics and Astronomy
Tsymbal, Evgeny  Physics and Astronomy
Shield, Jeffrey  Mechanical & Materials Engineering
Hofmann, Tino  Electrical Engineering

Sellmyer, David  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Studies of Artificially Structured Composite Magnets
$948,000  DOE

Shadwick, Bradley  Physics and Astronomy
* Multi-Physics Modeling of Intense, Short-Pulse Laser-Plasma Interactions
$342,000  NSF
Kalmykov, Serguei  Physics and Astronomy
Wavebreaking and Particle Trapping in Collisionless Plasmas
$561,840  DOE

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

$200,000 – $999,999
Sharif-Kashani, Hamid  Computer and Electronics Engineering
Research & Development - Development of a Standard
Communication Protocol for Wireless Sensor Network
in Mobile Railroad Environment
$499,985  DOT-FRA

Hempel, Michael  Computer and Electronics Engineering

Shearman, Robert  Agronomy and Horticulture
Buffalograss Breeding, Evaluation and
Management for Golf Course
$300,000  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
Franti, Thomas  Biological Systems Engineering
Rodie, Steven  Agronomy and Horticulture

Sheridan, Susan  Educational Psychology/
Nebraska Center for Research on
Children, Youth, Families and Schools
* A Meta-Analysis of Parent Involvement Interventions
and Family-School Partnerships’ Effects on Student Outcomes
$699,997  ED-IIES

Kim, Elizabeth  Nebraska Center for Research on
Children, Youth, Families and Schools

Consultation Based Interventions for Students
with Social and Behavioral Concerns
$599,694  ED

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

Shield, Jeffrey  Mechanical & Materials Engineering/
Nebraska Center for Materials and Nanoscience
* Multiscale Development of L10 Materials
for Rare-Earth-Free Permanent Magnets
$288,933  DOE through Northeastern University
Skomski, Ralph  Physics and Astronomy

Measurement of Vertical Track Deflection:
Testing, Demonstration & Implementation
$546,000  DoT-FRA
Farritor, Shane  Mechanical & Materials Engineering

Phase Transformations in Confined Nanosystems
$450,000  DOE
Belashchenko, Kirill  Physics and Astronomy
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Soh, Leen-Kiat  Computer Science and Engineering
* Integrating Computational and Creative Thinking (IC2Think)
$250,000  NSF
Ingraham, Elizabeth  Art and Art History
Ramsay, Stephen  English
Shell, Duane  Educational Psychology

CPATH CDP: Renaissance Computing:
Concept Development and Planning

$217,970  NSF
Meyer, George  Biological Systems Engineering
Moore, Brian  Music
Moriyama, Etsuko  Biological Sciences/
Center for Plant Science Innovation
Ramsay, Stephen  English
Samal, Ashok  Computer Science and Engineering
Scott, Stephen  Computer Science and Engineering
Shell, Duane  Educational Psychology
Thomas, William  History

iLOG: Embedding & Validating Empirical
Usage Intelligence in Learning Objects

$409,705  NSF
Samal, Ashok  Computer Science and Engineering
Nugent, Gwen  Nebraska Center for Research on
Children, Youth, Families and Schools

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

Spalding, Roy  Agronomy and Horticulture
Impact of 30,000 Gallon Ethanol Release on Equus Beds Aquifer
beneath South Hutchinson, Kansas
$204,390  Nebraska Ethanol Board
Spalding, Mary  Natural Resources

Effectiveness of Irrigated Crop Management Practices
in Reducing Groundwater Nitrate Contamination

$630,768  USDA-CSREES
Ferguson, Richard  Agronomy and Horticulture
Marx, David  Statistics
Spalding, Mary  Natural Resources

Spangler, Matthew  Animal Science
* National Program for Genetic Improvement
of Feed Efficiency in Beef Cattle
$398,937  USDA-NIFA through University of Missouri

Specht, James  Agronomy and Horticulture
Development and Analysis
of Nested Association Mapping Populations in Soybean
$213,384  USDA-ARS
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<td>$616,052 Harvard School of Public Health</td>
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<td>Whole-Farm Economic Biological Stochastic Simulation Model of Small to Medium Cow-calf Firms with Research, Teaching and Extension Modules</td>
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Subbiah, Jeyamkondan  Biological Systems Engineering/
Food Science and Technology
Improving the Safety of Prepared, But Not Ready-To-Eat
Microwavable Foods through Heat Transfer
and Pathogen Destruction Modeling
$599,985  USDA-CSREES
Jones, David  Biological Systems Engineering
Thippareddi, Harshavardhan  Food Science and Technology

Svoboda, Mark  Natural Resources
NIDIS Portal Content Development and Help Desk Support
$497,496  DOC-NOAA

Integrating Enhanced GRACE Water Storage Data
into the U.S. and North American Drought Monitors
$224,991  NASA-Goddard Space Flight Center
Wardlow, Brian  Natural Resources
Fuchs, Brian  Natural Resources
Scott, Soren  Natural Resources

Swanson, David  Computer Science and Engineering
Open Science Grid Consortium
$561,000  NSF through University of Wisconsin-Madison

Takacs, James  Chemistry
* Catalytic Asymmetric Hydroboration:
Uncapping the Potential with Two-Point Binding Substrates
$907,820  NIH-NIGMS

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

Self-Organized Nanolayers for Organic Thin-Film Transistors
$387,463  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

$200,000 — $999,999
Thippareddi, Harshavardhan  Food Science and Technology
$599,992  USDA-CSREES
Burson, Dennis  Animal Science
Ellis, Jason  Agricultural Leadership, Education and Communication

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
FIBR: Linking Genes to Ecosystems
$477,335  NSF through University of California-Riverside

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

Turner, Joseph  Mechanical & Materials Engineering
Ultrasonic Scattering for Measurement of Longitudinal Rail Stress
$461,999  DOT-FRA
Development of Improved Product Performance through Optimization and Modeling of Engineering Materials, Processing, and Function
$408,516  Brenco/Amsted Industries
Shield, Jeffrey  Mechanical & Materials Engineering

Tyre, Richard  Natural Resources
Quantifying Uncertainty in Missouri River Adaptive Management Processes
$410,858  DOI-GS
Allen, Craig  Natural Resources

Uiterwaal, Cornelis  Physics and Astronomy
REU Site: Optics and Laser Physics
$246,450  NSF
Batelaan, Herman  Physics and Astronomy
Molecules and Intense Light in a Photodynamical Test Tube
$440,000  NSF

Van Cott, Kevin  Chemical and Biomolecular Engineering
Structural Characterization of Recombinant Glycoproteins
$250,000  Inspiration Biopharmaceuticals

$200,000 — $999,999
van Donk, Simon  West Central Research and Extension Center
Irrigation Management with Limited Water: A Farm Education Program
$287,080  DOI-BR
Martin, Derrel  Biological Systems Engineering
Corr, Alan  West Central Research and Extension Center
Melvin, Steven  West Central Research and Extension Center

**Van Tassell, Larry**  Agricultural Economics
* Developing Economic Improvements through Cooperative Businesses in Rural Nebraska
$224,995  USDA-RD
Burkhart-Kriesel, Cheryl  Panhandle Research and Extension Center
Hancock, Connie  Panhandle Research and Extension Center
Henneman, Alice  Southeast Research and Extension Center

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

**Velipasalar, Senem**  Electrical Engineering
CSR-DMSS, SM: Cooperative Activity Analysis in Wireless Smart-Camera Networks (Wi-SCaNs)
$300,000  NSF
Gursoy, Mustafa  Electrical Engineering

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

**Wagner, William**  Biological Sciences
Effects of Predation by a Phonotactic Parasitoid on Male and Female Reproductive Behavior in a Field Cricket
$523,414  NSF

**Walia, Harkamal**  Agronomy and Horticulture
* Early Seed Development under Stressful Environments
$557,708  NSF
Wang, Dong  Statistics
Southeast Research and Extension Center

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$200,000 — $999,999
Walter, Jens  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  
Hutkins, Robert  Food Science and Technology  

* Quantitative Evaluation of the Colonization and Persistence of Bifidobacterium longum AH1206 in the Gastrointestinal Tract and its Tolerance by Human Subjects  
$204,340  Mead Johnson Nutrition  
Hutkins, Robert  Food Science and Technology  

Wang, Dong  Statistics  
Expanding the Scope of Association Mapping in Important Crop Species with Methodology Development in Statistics  
$282,000  USDA-AFRI  
Eskridge, Kent  Statistics  
Baenziger, P. Stephen  Agronomy and Horticulture  
Dweikat, Ismail  Agronomy and Horticulture  

Wang, Jun  Earth and Atmospheric Sciences  
* Evaluate and Enhance the VIIRS Aerosol EDRs for Air Quality and Public Health Applications  
$372,894  NASA  
AERONET Skylight Retrievals Using Polarimetric Measurements: Toward Physically Consistent Validation of APS Aerosol Products  
$443,464  NASA  
A Combined EOS Data and GEOS-Chem Modeling Study of the Direct Radiative Forcing of Volcanic Sulfate Aerosols  
$359,638  NASA  
Regional Air Quality and Climate Impact of Biomass-Burning Aerosols from Central America: An Analysis with EOS Data and Numerical Models  
$300,676  NASA  

Weber, Karrie  Biological Sciences  
Feammox - A New Pathway for Nitrogen Loss from Terrestrial Ecosystems: REU  
$202,210  NSF  

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

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  
Baenziger, P. Stephen  Agronomy and Horticulture  
Hein, Gary  Doctor of Plant Health Program  

$200,000 — $999,999
Whitbeck, Les  Sociology
  * Culturally-Based, Family-Centered Mental Health Promotion for Aboriginal Youth II
  $749,958  Government of Canada-Public Health Agency though Jewish General Hospital-CMHRU
  * A Lakota Type 2 Diabetes Mellitus Prevention
  $231,359  Aberdeen Area Tribal Chairmen’s Health Board

Wiebe, Matthew  Veterinary Medicine and Biomedical Sciences
  BAF: an Intrinsic Host Defense Responsive to Foreign DNA
  $270,000  NIH-NIAID

Wiegand, Roger  Mathematics
  GAANN Fellowship Program: Mathematics at UNL
  $525,128  ED
  Lewis, Jim  Mathematics
  Walker, Judy  Mathematics
  Meakin, John  Mathematics
  Bellows, Laurie  Graduate Studies

Wiener, Richard  Psychology
  * Objectification, Affective Forecasting, and Sexual Harassment
  $300,000  NSF
  Gervais, Sarah  Psychology

  REU Site: Psychology and Law
  $200,000  NSF
  Self-referencing, Social Identity & Judgments of Sexual Harassment
  $302,364  NSF

Wilson, Richard  Plant Pathology
  * Pathogenic Gene Discovery and Elucidation of Genetic Regulatory Networks in the Rice Blast Fungus
  $500,955  NSF

Wilson Jr., Robert  Panhandle Research and Extension Center
  Assessing the Long Term Viability of Roundup Ready Technology as a Foundation for Cropping Systems
  $945,000  Monsanto Co.

Wood, Charles  Biological Sciences/Nebraska Center for Virology
  * Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center
  $219,472  NIH-NIMH through UNMC

Xiang, Shi-Hua  Biological Sciences
  Mucosal Delivery and Retention of Anti-HIV Agents Using Lactobacillus
  $611,119  Bill & Melinda Gates Foundation
Xu, Lisong  Computer Science and Engineering
NeTs: Small: Internet Congestion Control Census
$450,000  NSF
Deogun, Jitender  Computer Science and Engineering
Lu, Ying  Computer Science and Engineering

Yang, Yiqi  Textiles, Clothing and Design
Resistance of Sulfur Dyed Fabrics to Oxidative Bleaching & Acidic Tendering: Improvement & Application
$300,618  Procter & Gamble

Yoder, Ronald  Biological Systems Engineering
Enhancing the Value of Water through Management Education
$225,000  Nebraska Department of Natural Resources

Zempleni, Janos  Nutrition and Health Sciences
Biotin Sensing and Chromatin Remodeling by Holocarboxylase Synthetase
$800,742  NIH-NIDDK

Zera, Anthony  Biological Sciences
* Nutritional Physiology of Life History Allocation Trade-Offs
$331,500  NSF

Zhang, Tian  Civil Engineering
Influence of Soil Particle Size Fractions and Environmental Conditions on Fate and Transport of Hormones in Soils
$300,000  NSF

Zlotnik, Vitaly  Earth and Atmospheric Sciences
Mechanisms Producing Variation in Lake Salinity in Dune Environments: Nebraska Sand Hills
$219,958  NSF

$200,000 — $999,999
# 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.

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<td>Isolation and Verification of <em>Mycobacterium tuberculosis</em> Mutant Strains</td>
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Chandra, Namas  Engineering
Factors that Facilitate or Inhibit Enrollment of Domestic Engineering PhD Students: A Mixed Methods Study
$149,851  NSF
Weissinger, Ellen  Educational Psychology
Smith, Michelle Howell  Graduate Studies

Crabtree, Kay  Biological Sciences/Nebraska Center for Virology
Epidemiology of HHV-8 Transmission in Lusaka, Zambia
$63,468  NIH-NIAID
Wood, Charles  Biological Sciences/Nebraska Center for Virology

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

Diamond, Judy  University of Nebraska State Museum
World of Viruses Supplement to NIH-NCRR Grant
$200,000  NIH-NCRR
Cattingham, Ian  Computer Science and Engineering
Dugas, William  University Television
Wagler, Adam  Journalism and Mass Communications
Angeletti, Anisa  Biological Sciences

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

Gay, Timothy  Physics and Astronomy
Polarized Electron Physics
$610,000  NSF

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

Building a Green Economy: Nebraska Workforce Development in New and Emerging Industries
$1,253,000  Nebraska Department of Labor
Norton, Terri  Durham School of Architectural Engineering and Construction
Shi, Jonathan  Durham School of Architectural Engineering and Construction
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<td>Linking Loess Landforms and Eolian Processes</td>
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<td>Johnson, Scott Development of a Next Generation PA Vaccine, dmPA7909</td>
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<td>Knoche, Lisa Nebraska Center for Research on Children, Youth, Families and Schools Phase II Coaching Support Evaluation</td>
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<td>Nebraska Children and Families Foundation</td>
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<td>Li, Qingsheng</td>
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<td>Li, Qingsheng Cellular Innate Activation as a Tactic to Prevent HIV-1 Transmission</td>
<td>$38,514</td>
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<td>Li, Yusong</td>
<td>Civil Engineering</td>
<td>Li, Yusong Fate and Transport of Metal-Based Nanoparticles in the Subsurface</td>
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<td>NSF through Tufts University</td>
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<td>Lubben, Bradley 2009 Trade Adjustment Assistance for Farmers</td>
<td>$855,000</td>
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$1,825,345  NSF
Chandra, Namas  Mechanical & Materials Engineering  
Lu, Yongfeng  Electrical Engineering
Umstadter, Donald  Physics and Astronomy  
Wedige, Alan  Facilities Management

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

Norton, Terri  Durham School of Architectural Engineering and Construction  
City Owned Facility Assessment and Energy Audit Component  
$160,871  City of Omaha
Schwer, Avery  Durham School of Architectural Engineering and Construction

Nowak, Andrzej  Civil Engineering  IRES Poland: Experience in Civil Infrastructure Systems  
$144,108  NSF
Rilett, Laurence  Civil Engineering
Szwerszen, Maria  Civil Engineering

Othman, Shadi  Biological Sciences  Regenerative Elastography: Monitoring Soft Tissue Reconstruction  
$144,900  NIH-NIBIB

Paul, Prem  Research and Economic Development  Construction of a Nanoscience Metrology Facility  
$6,904,993  DOC-NIST
Nebraska Center for Virology Facility Expansion  
$8,000,000  NIH-NCRR
Wood, Charles  Biological Sciences/Nebraska Center for Virology

Powers, Robert  Chemistry  Revealing Functions for Newly Discovered Proteins by FAST-NMR  
$375,670  NIH-NIAID
Cerny, Ronald  Chemistry
Hage, David  Chemistry
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

Online Nonintrusive Condition Monitoring and Fault Detection for Wind Turbines
$380,398  DOE
Hudgins, Jerry  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
$2,225,720  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
Harwood, David  Earth and Atmospheric Sciences
Fischbein, Steven  Antarctic Geological Drilling Program

Rosenbaum, David  Economics
An Economic Evaluation of the Benefits of Nebraska’s Weatherization Program
$499,469  Nebraska Energy Office
DeKraai, Mark  Psychology/Public Policy Center
Thompson, Eric  Bureau of Business Research

Energy Loan Program Evaluation
$453,514  Nebraska Energy Office
DeKraai, Mark  Psychology/Public Policy Center
Thompson, Eric  Bureau of Business Research

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

Schubert, Mathias  Electrical Engineering
Effects of Polarization Fields and Surface Charge Layers on p-type Conductivity in In(Ga)N
$231,857  NSF
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<td><strong>MRI-R2: Acquisition of FEG TEM/STEM for Materials and Nanotechnology Research and Education; $1,300,000 NSF</strong></td>
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<td>Public Policy Center</td>
<td>Health Information Technology Extension Program (HIT EP) Local Workforce Development Coordination</td>
<td>$285,861 CIMRO of Nebraska</td>
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<td><strong>Shield, Jeffrey</strong></td>
<td>Mechanical &amp; Materials Engineering</td>
<td>REU Site: Undergraduate Research Opportunities in Nanomaterials and Nanoscience at the University of Nebraska–Lincoln</td>
<td>$360,000 NSF</td>
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<td>Skomski, Ralph</td>
<td>Physics and Astronomy</td>
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<td><strong>Subramanian, Anuradha</strong></td>
<td>Chemical and Biomolecular Engineering</td>
<td>Design and Evaluation of Ultrasound Stimulation-Aided Bioreactor Configurations</td>
<td>$533,941 NIH-NCRR</td>
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<td>Turner, Joseph</td>
<td>Mechanical &amp; Materials Engineering</td>
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<td>Tan, Li</td>
<td>Mechanical &amp; Materials Engineering</td>
<td>Free-Standing All-Nanoparticle Thin Fibers: A Novel Building Block for Organic Photovoltaic Applications</td>
<td>$300,002 NSF</td>
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<td><strong>Toundykov, Daniel</strong></td>
<td>Mathematics</td>
<td>Stabilization and Control in Nonlinear Structural-Acoustics, Magnetic Imaging, and Elasticity</td>
<td>$96,436 NSF</td>
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<td>Tsymbal, Evgeny</td>
<td>Physics and Astronomy</td>
<td>FRG: Switchable Two-Dimensional Materials at Oxide Hetero-Interfaces</td>
<td>$210,000 NSF through University of Wisconsin-Madison</td>
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<td><strong>Turner, Joseph</strong></td>
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<td>Sonolysis in Acute Coronary Syndromes</td>
<td>$64,073 NIH-NIBIB through UNMC</td>
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<td><strong>Cheung, Chin Li</strong></td>
<td>Chemistry</td>
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<td><strong>Robertson, Brian</strong></td>
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<td><strong>Schubert, Eva</strong></td>
<td>Electrical Engineering</td>
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<td><strong>Sellmyer, David</strong></td>
<td>Physics and Astronomy/Nebraska</td>
<td>Center for Materials and Nanoscience</td>
<td><strong>MRI-R2: Acquisition of FEG TEM/STEM for Materials and Nanotechnology Research and Education; $1,300,000 NSF</strong></td>
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<td>Cheung, Chin Li</td>
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<td>Robertson, Brian</td>
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<td>Schubert, Eva</td>
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<td>Shield, Jeffrey</td>
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<tr>
<td>Name</td>
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<td>Project Description</td>
<td>Funding</td>
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<td></td>
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<td>Scott Engineering Center Convert</td>
<td>$247,910</td>
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<td></td>
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<td>Constant-Volume Dual Duct System to Variable-Volume</td>
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<td></td>
<td></td>
<td>Othmer Hall Room Occupancy Sensors and Room Controls Upgrade</td>
<td>$145,990</td>
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<td>Beadle Center, Bessey Hall, and Home Economics Buildings Upgrade Fluorescent Lights</td>
<td>$136,810</td>
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<td>UNL Hamilton Hall Energy Efficient Retrofits</td>
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<td>Whitbeck, Les</td>
<td>Sociology</td>
<td>Novel Approaches to Understanding Mental Disorder, Substance Abuse and HIV-Risk Among Homeless Women</td>
<td>$400,715</td>
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<td>Wood, Charles</td>
<td>Biological Sciences/Nebraska Center for Virology</td>
<td>Immunofocusing for Kaposi’s Sarcoma-Associated Herpesvirus Neutralizing Epitopes</td>
<td>$990,796</td>
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<td>Nebraska Center for Virology T1</td>
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<td>Vaccination Against Mucosal HIV Clade C Transmission</td>
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<td>Nebraska Center for Virology</td>
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<td>Programs in HIV and AIDS-Associated Diseases/Malignancies</td>
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<td>Zhang, Shunpu</td>
<td>Statistics</td>
<td>A Computational Genotyping System for Improved Influenza Surveillance</td>
<td>$203,488</td>
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<td>Zhang, Luwen</td>
<td>Biological Sciences/Nebraska Center for Virology</td>
<td>Modulation of Apoptosis by IRF-4 in EBV Transformation</td>
<td>$545,682</td>
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Early Career Awards
Active awards, July 1, 2011-June 30, 2012
* Indicates new in 2011-2012

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

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

Binek, Christian
Physics and Astronomy
Education & Research on Nanoscale Spintronic Systems & Heterostructures
$500,000  NSF

Bloom, Kenneth
Physics and Astronomy
Top-Quark Physics, Computing & Software at Large Hadron Collider
$550,000  NSF

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

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

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

Dominguez, Aaron
Physics and Astronomy
Superior Silicon Tracking & Discovery as CMS & D0
$550,000  NSF
<table>
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<tr>
<th>Name</th>
<th>Field</th>
<th>Project Title</th>
<th>Funding</th>
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<td>Enders, Axel</td>
<td>Physics and Astronomy</td>
<td>Self-Assembled Magnetic Nanostructures</td>
<td>$411,850</td>
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<td>Frank, Tracy</td>
<td>Earth and Atmospheric Sciences</td>
<td>Exploring the Geologic Record of Major Climate Transitions: Causes, Consequences, &amp; Impacts on the Evolution of Earth Systems</td>
<td>$583,816</td>
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<tr>
<td>Gursoy, Mustafa</td>
<td>Electrical Engineering</td>
<td>CAREER: Energy-Efficient Wireless Communications under Channel Uncertainty</td>
<td>$400,000</td>
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<td>Hebets, Eileen</td>
<td>Biological Sciences</td>
<td>Evolution and Function of Complex Signaling in Wolf Spider Genus Schizocosa</td>
<td>$692,351</td>
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<td>Hong, Xia</td>
<td>Physics and Astronomy</td>
<td>* CAREER: Interface Engineered Multiferroics and Nanoscale Phase Modulaton in Complex Oxide Heterostructures</td>
<td>$600,000</td>
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<td>Kim, Yong Rak</td>
<td>Civil Engineering</td>
<td>Research &amp; Education on Advanced Multiscale Modeling-Analysis of Roadway Materials, Mixtures, &amp; Infrastructure Systems</td>
<td>$402,044</td>
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<tr>
<td>Lai, Rebecca</td>
<td>Chemistry</td>
<td>CAREER: Ligand-Induced Folding in Peptides for Biosensing Applications</td>
<td>$455,000</td>
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<tr>
<td>Qiao, Wei</td>
<td>Electrical Engineering</td>
<td>CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration</td>
<td>$399,999</td>
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<td>Schubert, Eva</td>
<td>Electrical Engineering</td>
<td>Chiral Nanostructure Hybrid Materials for Application in Terahertz Resonator and Magnetic Storage Devices</td>
<td>$400,000</td>
</tr>
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</table>
EARLY CAREER AWARDS

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

**Xu, Lisong**
Computer Science and Engineering  
Stochastic TCP Friendliness: Exploring the Design Space of TCP-Friendly Traffic Control in Best-Effort Internet  
$400,000  NSF

K Awards
National Institutes of Health K Awards support intensive development experiences leading to research independence in one of the biomedical, behavioral or clinical sciences. The proposed career-development experience must be in a research area new to the applicant and/or one in which an additional supervised research experience will substantially add to the applicant’s research capabilities. Candidates must provide a plan for achieving independent research support by the end of the award, and must be willing to spend a minimum of .75 FTE on research and career development during the award project period.

**Peterson, Daniel**
Food Science and Technology  
Adaptive Immune Response to Symbiotic Bacteria as a Mediator of Gut Homeostasis  
$379,890  NIH-NIAID

**Sayood, Khalid**
Electrical Engineering  
Identification of Biological Materials of Unknown Origin  
$764,005  NIH-NIAID

Young Investigator Research Program (YIP)
The Department of Defense bestows its Young Investigator Research Program (YIP) award on scientists and engineers at research institutions across the United States who have received Ph.D. or equivalent degrees in the last five years and show exceptional ability and promise for conducting basic research. The objective of the program is to foster creative basic research in science and engineering, and enhance early career development of outstanding young investigators. Those selected receive the grants over a three-year period.

**Cohen, Myra**
Computer Science and Engineering  
$316,551  DoD-AFOSR
Arts and Humanities Awards
$50,000 or more
Active awards, July 1, 2011–June 30, 2012
* Indicates new in 2011-2012

Awakuni-Swetland, Mark
Anthropology/Ethnic Studies
Omaha and Ponca Digital Dictionary
$348,800  NEH
9/1/08 – 8/31/12
Walter, Katherine
University Libraries/Center for Digital Research in the Humanities
Mark Awakuni-Swetland, assistant professor of anthropology, and colleagues are creating a comprehensive Omaha and Ponca digital dictionary that will be available online for native communities, students, researchers and the public. The National Endowment for the Humanities funds this work through a joint NEH-National Science Foundation-Smithsonian Institution “Documenting Endangered Languages” initiative. It’s also a “We the People” project, a special NEH recognition for model projects advancing the study, teaching and understanding of American history and culture. This project will provide extensive information on the Omaha and Ponca language and will be far more robust and usable than existing resources.

Engen-Wedin, Nancy
Teaching, Learning and Teacher Education/Lied Center for Performing Arts
The Teaching Artist Initiative (Nebraska)
$50,000  Dana Foundation
1/1/09 – 8/31/11
Nancy Engen-Wedin, lecturer in the Department of Teaching Learning and Teacher Education and ArtsREACH coordinator with the Lied Center for Performing Arts, is using funding from the Dana Foundation to support the Nebraska Teaching Artist Initiative. This program helps community and teaching artists plan artist residencies for K-12 students in Nebraska’s rural school districts.
Graybill, Andrew  
History  
A Mixture of So Many Bloods: A Family Saga of the American West  
$50,400  NEH  
8/1/10 – 7/31/11

Andrew Graybill, associate professor of history, has been awarded a prestigious National Endowment for the Humanities Fellowship to support completion of his book, *A Mixture of So Many Bloods: A Family Saga of the American West*, to be published in 2012. The book follows five members of three generations of a mixed-blood Montana family from approximately 1850 to 1950. Peoples of mixed ancestry spoke English and indigenous languages and helped smooth relations between native peoples and Anglo newcomers. After about 1870, with the arrival of more white settlers and the development of mining and logging industries, many mixed-blood people were marginalized and pushed onto reservations. Using federal records, archived personal papers, newspaper stories and clippings and catalogs from museum exhibits, Graybill has been able to recreate the history of one remarkable family, which in turn tells the story of the evolving American frontier.

Kooser, Ted  
English  
American Life in Poetry Project  
$236,800  Poetry Foundation  
1/1/05 – 12/31/11

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.
Moeller, Aleidine

Teaching, Learning and Teacher Education

* Chinese Academy

$84,778

Hurlbut, Sherri

Teaching, Learning and Teacher Education

Aleidine Moeller, professor of foreign language education/second language acquisition, with a grant from the National Security Agency, directs the Chinese Academy, designed to provide an immersion for high school students in Chinese language and culture, develop and spark interest in Chinese language and culture, and initiate new programs and expand Chinese programs in Nebraska. A continuation of Chinese language programs is available for rural and other interested schools through an established distance education program provided by ESU #5. Collaborative efforts between UNL, the UNL Confucius Institute, Nebraska Department of Education, Omaha Public Schools, Lincoln Public Schools and Millard Public Schools will ensure the establishment and expansion of Chinese programs.

Price, Kenneth

English/Center for Digital Research in the Humanities

* An Integrated Guide to Walt Whitman’s Literary Manuscripts

$275,000

Walter, Katherine

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, professor of English and Hillegass University Professor of 19th Century American Literature, 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.
Walt Whitman and Reconstruction

Ken Price, professor of English and Hillegass University Professor of 19th Century American Literature, is primary investigator for grants from the National Endowment for the Humanities and the National Historical Publications and Records Commission. With these grants, the Walt Whitman Archive is creating a comprehensive edition of the Civil War writings of Walt Whitman. The War profoundly shaped *Leaves of Grass*, the first masterpiece of American poetry, and Whitman extensively depicted and analyzed the Civil War in journals, notebooks, letters, essays, memoirs and manuscript drafts. The hundreds of documents that give voice to Whitman’s experience of the war will be electronically edited, arranged and published. In addition to making these documents freely available, this work will help to model for other scholars best practices in creating, publishing and sustaining electronic editions. The project will provide scholars and students a site where they can read, evaluate and experience a set of texts that provide unique insight into the American experience of the Civil War.

Seefeldt, William

William Cody Research Project

William Seefeldt, assistant professor of history, has received support from the Buffalo Bill Historical Center to develop a series of thematic digital datasets that can be used to provide historical context for the center’s Cody Papers project. The digital datasets will include the rosters of the various Wild West shows from published programs and other business records and biographical sketches of the participants, including the Show Indians. They will be marked and encoded for inclusion in the larger Buffalo Bill digital archive collection hosted by BBHC. Other research projects may include a database containing encoded full-text transcriptions of newspaper coverage of the tour stops throughout North America and Europe and a geospatial database of Cody’s travels and residences throughout his lifetime that could be used to create maps and visualizations by date or location.
Shear, Donna  
University of Nebraska Press  
Recovering Languages and Literacies of the Americas: A Collaborative Initiative  
$781,900  
1/3/11 – 11/30/14  
Andrew W. Mellon Foundation

This three-year, $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.

Thomas, William  
History/Center for Digital Research in the Humanities  
Railroads and the Making of Modern America—Tools for Spatio-Temporal Correlation, Analysis and Visualization  
$99,493  
1/1/10 – 8/31/11  
NEH

With support from the National Endowment for the Humanities, history professor William Thomas plans to develop useful tools for spatio-temporal visualization of data on the railroad system and the relationships among them. Because the railroad “system” and its spatio-temporal configuration appear differently from locality to locality and region to region, it’s important to adjust how the system is “located” and “seen.” By applying data mining and pattern recognition techniques, software systems can be created that dynamically redefine the way spatial data are represented. Utilizing processes common to analysis in computer science, researchers will develop a software framework that allows these embedded concepts to be visualized and further studied.
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.

The National Endowment for the Humanities also is supporting the construction of a technical infrastructure and institutional framework that will enable centerNet to play a vital role in developing both national and international cyberinfrastructure and become a stable, self-supporting organization. Through centerNet, digital humanities centers can collaborate and maximize their capacity for sparking further innovation in the digital humanities.
National Digital Newspaper Program: Nebraska
$563,012  NEH
7/1/07 – 8/31/12
Wunder, John  Journalism and Mass Communications
Mering, Margaret  Center for Digital Research in the Humanities
Pytlik Zillig, Brian  Center for Digital Research in the Humanities
Katherine Walter, who co-directs UNL’s Center for Digital Research in the Humanities, leads the Nebraska Digital Newspapers Project, through which about 100,000 pages of Nebraska newspapers from 1880 through 1910 will be digitized for inclusion in the Library of Congress’ national “Chronicling America” website. UNL Libraries is partnering with the College of Journalism and Mass Communications and the Nebraska State Historical Society on this “We the People” grant. Nebraska is one of nine states selected in the early phases of this project, which eventually will include all 50 states. “We the People” grants recognize model projects that advance the study, teaching and understanding of American history and culture.

Winkle, Kenneth  History
Civil War Washington Collaborative Research
$220,000  NEH
7/1/10 – 6/30/13
Lawrence, Susan  History
Price, Kenneth  English/Center for Digital Research in the Humanities
History professor Kenneth Winkle received a three-year, $220,000 collaborative research grant from the National Endowment for the Humanities to expand digital research on Civil War-era Washington, D.C., especially its pivotal role in the antislavery and civil rights movements. The Civil War Washington project examines the war’s impact on the nation’s capital. The grant received “We the People” designation, which recognizes projects that advance the study, teaching and understanding of American history and principles. The grant will enable researchers to study how race, slavery and emancipation changed the capital a century and a half ago. Researchers will investigate how African Americans living in Washington during the Civil War gained their freedom, won the fight for the Union and against slavery and achieved legal equality.
### Arts and Humanities Awards

**$5,000-$49,999**

*Active awards, July 1, 2011–June 30, 2012*

* Indicates new in 2011-2012

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<th>Award Recipient</th>
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<td>Ducey, Carolyn</td>
<td>Textiles, Clothing and Design/ International Quilt Study Center</td>
<td>The Ardis and Robert James Collection Conservation</td>
<td>Institute of Museum and Library Services</td>
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<td>Elias Rowley, Kristen</td>
<td>University of Nebraska Press</td>
<td>Literary Publishing at the University of Nebraska Press</td>
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<td>$20,000</td>
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<td>Engen-Wedin, Nancy</td>
<td>Teaching, Learning and Teacher Education/Lied Center for Performing Arts</td>
<td>Lied Center Community Engagement Touring Grant – MAAA</td>
<td>Mid-America Arts Alliance</td>
<td>$15,000</td>
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<td>Hanson, Marin</td>
<td>International Quilt Study Center</td>
<td>Quilt Index Internationalization Collaborative Planning</td>
<td>Michigan State University</td>
<td>$9,879</td>
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<td>Jacobs, Margaret</td>
<td>History</td>
<td>* Pauley Symposium on History, Truth, and Reconciliation</td>
<td>Nebraska Humanities Council History</td>
<td>$5,000</td>
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<td>Richmond, John</td>
<td>Music</td>
<td>2010 Honors Jazz Weekend &amp; Summer Camp</td>
<td>Berman Music Foundation Music</td>
<td>$12,000</td>
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<td>Seefeldt, William</td>
<td>History</td>
<td>Sustaining Digital History</td>
<td>NEH History</td>
<td>$49,116</td>
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<td>Shear, Donna</td>
<td>University of Nebraska Press</td>
<td>* Early American Regions</td>
<td>University of Georgia</td>
<td>$30,100</td>
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* * Literary Publishing, Digitization, and E-Pub Conversion at the University of Nebraska Press

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<td>Elias-Rowley, Kristen</td>
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<td>Faust, Jana</td>
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Wahlqvist, Petra  Lied Center for Performing Arts
   * Arts Across Nebraska Introduces Nebraskans of All Ages to Modern Dance, Leaving a Lasting Legacy Throughout the State $20,000  NEA

   * Mixing New with the Old in Music Provision across Nebraska $15,000  NEA

   Arts across Nebraska Extension  Nebraska Arts Council

Weiss, Wendy  Textiles, Clothing and Design
   TSA Textile Exhibitions Outreach $8,300  Woods Charitable Fund
   Hillestad Textiles Gallery $37,170  Friends of the Hillestad Textiles Gallery

Yoon, Hye Yung  Music
   * Music for Hope Concert Series $5,000  Woods Charitable Fund

   Commissioning/USA Meet the Composer: Amerindia $10,000  Meet the Composer
   Sirota, Jonah  Music
   Fischer, Rebecca  Music
   Beaver, Gregory  Music
NUtech Ventures connects innovators with the people and resources they need to start companies, develop products and create jobs. If you’re interested in starting a company, licensing your technologies or securing developmental funding for your leading-edge research, we can help you connect with industry partners, entrepreneurs and investors. Because we’re commercialization agents and not just brokers of intellectual property, we represent your interests to external partners. We 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 UNL startup companies and licensing agreements with our industry partners between July 1, 2011, and June 30, 2012. (UNL faculty and staff are indicated in red):

2011-2012 STARTUPS

Stephen G. DiMagno, Chemistry
Technology: Fluorination of Aromatic Ring Systems
Technology: Iodonium Cyclophanes for SECURE Arene Functionalization
Technology: Desalting Methods for Diaryliodonium Salts
Technology: 18F-Radiotracer Precursors and Methods for Their Synthesis

Stephen G. DiMagno, Haoran Sun, Chemistry
Technology: Anhydrous Fluoride Salts and Reagents and Methods for Their Production
Technology: Method and Agents for Preparation of 18F-Labeled Radiopharmaceuticals

Ashok Samal, Ian J. Cottingham, Brian Andrew Knapp, Kevin Farrell, Computer Science and Engineering; Thomas Casady, Lincoln Police Department; Alan Tomkins, Law/Public Policy Center; Juan Paulo Ramirez, Geography/Natural Resources
Technology: Proactive Police Patrol Information (P3i)

Ravi F. Saraf, Gaurav Singh, Chemical and Biomolecular Engineering
Technology: Electro-Optical Apparatus to Measure Electrochemical Processes at High Sensitivity and Applications Thereof
2011-2012 INTELLECTUAL PROPERTY LICENSE AGREEMENTS

David J. Andrews, Agronomy and Horticulture
Technology: New Gene Which Intensifies Purple Plant Color in Pearl Millet (temporarily designated PP3)

David J. Andrews, John Rajewski, Ismail M. Dweikat, Alan Heng, Agronomy and Horticulture
Technology: 26 Grain Sorghum Seed Parents N253-N278 and Their Respective Maintainers

David J. Andrews, John Rajewski, Ismail M. Dweikat, Agronomy and Horticulture
Technology: 7 Late-Maturing Grain Sorghum Seed Parents N552-N558 and 20 Tall Restorer Germplasms N559R-N575R

P. Stephen Baenziger, Agronomy and Horticulture
Technology: NE01643 (Overland) Hard Red Winter Wheat

P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn, Richard Little, Agronomy and Horticulture; Jerry Bohlmann; Chris Hoagland, Purdue University
Technology: Intermediate-Stage Wheat Germplasm, generation F8 (2010), 4 lines: NE07409, NE07444, NE07486, NE07487
Technology: Wheat Experimental Line: NI08707

Judy Diamond, Angie Fox, University Museum; Thomas Floyd, University Television; Ann Downer-Hazell and Martin Powell
Technology: “Confined!” Educational Graphic Novel
Technology: “Phantom Planet” Educational Graphic Novel

Judith Galeota, Alan R. Doster, Veterinary Medicine and Biomedical Sciences
Technology: Porcine Circovirus-2b

George L. Graef, Leslie Korte, Dennis White, Agronomy and Horticulture
Technology: Soybean Varieties U99-013032 and U97-307754
David S. Hage, Chemistry; Hai Xuan
*Technology*: Immobilization Method for Producing Active Alpha 1-Acid Glycoprotein (AGP)

David S. Hage, Chemistry; William Clarke
*Technology*: Sandwich Microcolumns
*Technology*: Microcolumn Displacement Immunoassay
*Technology*: Analysis of Free Drug and Hormone Fractions By Rapid ImmunoeXtraction Using Sandwich Microcolumns

Dale T. Lindgren, Agronomy and Horticulture
*Technology*: Bluestem (Schizachryium) #1 (proposed name “Little Red”)
*Technology*: Bluestem (Schizachryium) #2 (proposed name “Ember Waves”)

Dale T. Lindgren, Agronomy and Horticulture; Daniel M. Schaaf,
Nebraska West Central Research and Extension Center
*Technology*: Penstemon 24010
*Technology*: Penstemon 26085

Carl A. Nelson, Mechanical & Materials Engineering; Judith M. Burnfield, Peter Shu, Thad Buster and Adam Taylor, Madonna Rehabilitation Hospital
*Technology*: ICARE: Intelligently Controlled Assistive Rehabilitation Elliptical Machine

Asit Pattnaik, Fernando A. Osorio, Veterinary and Biomedical Sciences; Israrul H. Ansari
*Technology*: A Method for Significantly Enhancing the Production of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV)-Neutralizing Antibodies in Animals Inoculated/Vaccinated with PRRSV Strains of Varying Degrees of Attenuation

Donald Rundquist, Bryan Leavitt, School of Natural Resources
*Technology*: CALMIT Software

*Technology*: Sundancer, a Cultivar of Buffalograss (Buchloe dactyloides)

Blair Siegfried, Terence Spencer, Entomology
*Technology*: European Corn Borer Displaying Resistance to CRY1AB Bt Toxin “Kandiyohi”
2011-2012 OPTION AGREEMENTS

Dennis R. Alexander, Troy P. Anderson, Electrical Engineering; Craig Zuhlke, Computer Science and Engineering
Technology: Femtosecond Surface Modification Methods for Increasing Surface Area and the Release of Small Bubbles

Chin Li “Barry” Cheung, Neil J. Lawrence, Chemistry; Allan W. Kruse, Rare Earth Solar LLC
Technology: A Class of Functionalized Metal/Metal Oxide Clusters on Cerium Oxide Nanorod Support Acid Catalysts for the Conversion of Cellulose into Glucose and Other Lower Molecular Weight Carbon Based Fuel Through Tandem Catalysis

Steven Douglas Comfort, Mark Dean Christenson, Natural Resources
Technology: Slow-Release Oxidant Candles for Groundwater Remediation
Technology: Pneumatic Circulator Systems for Soil and Water Remediation

David S. Hage, Chemistry; Hai Xuan
Technology: Immobilization Method for Producing Active Alpha 1-Acid Glycoprotein (AGP)

David S. Hage, Chemistry; Chunling Wa
Technology: Development of Affinity Restricted Access Media

David S. Hage, Abby Jackson, Chemistry; Hai Xuan
Technology: Entrapment of Biomolecules in Hydrazide-Activated Supports

David S. Hage, Chemistry; William Clarke
Technology: Sandwich Microcolumns
Technology: Microcolumn Displacement Immunoassay
Technology: Analysis of Free Drug and Hormone Fractions By Rapid Immunoextraction Using Sandwich Microcolumns

Chris Henry, Biological Systems Engineering; Jason Gross
Technology: Movable Center Pivot Fence for Cattle

Jinsong Huang, Mechanical & Materials Engineering; Christopher L. Exstrom, University of Nebraska-Kearney
Technology: Synthesis of Air Stable Pyrite Nanocrystals for Photovoltaic Application
Haorong Li, Siu Kit Lau, Yanshun Yu, Durham School of Architectural Engineering and Construction; Tian Zhang, Civil Engineering

George A. Oyler, Biochemistry; Julian Rosenberg, Synaptic Research LLC
Technology: Highly Selective Single-Chain Antibody Complexes for Immobilization and Harvesting of Microalgae

Jeyamkondan Subbiah, Biological Systems Engineering; Harshavardhan Thippareddi, Food Science and Technology
Technology: MicroTrack: An Environmental Monitoring Software for the Food Industry

Anuradha Subramanian, Hendrik J. Viljoen, Scott Whitney, Chemical and Biomolecular Engineering
Technology: Detection of DNA Targets without a Nucleic Acid Amplification Step

Jens Walter, Robert Hutkins, Thomas E. Burkey, Food Science and Technology
Technology: Natural in vivo Selection of Prebiotic-Fermenting Bacteria from Animal and Human Gastrointestinal Tracts
Diane C. Barger  Music
Editor, for clarinet and piano. Pensieri Belliani-Fantasi; Duetto Concertato Omaggio sopra motivi dell'opera Norma; Fantasia sopra motivi della Norma di Bellini; Fantasia sopra motivi dell'opera Beatrice di Tenda; Melodie dei Puritani di Bellini; Gran Dueto Concertato sopra motivi dell’opera La Sonnambula; Fantasia sopra motivi dell’opera Norma; Andante con Variazioni sopra un tema dell’opera I Capuleti e Montecchi; Fantasia sopra motivi dell’opera Beatrice di Tenda; Souvenirs de Bellini; Adagio, Tema con Variazioni e Finale sopra il tema nell’opera Il Pirata del Bellini. Potenza Music, Louisville, KY.

Editor, for clarinet. A te, o cara nell’opera I Puritani di Bellini; D’un pensiero e d’un accento” Quintetto nell’opera La Sonnambula di Bellini. Potenza Music, Louisville, KY.

Performer, clarinet. Compact disc recording of music for clarinet and other instruments by American composer Scott McAllister, BlingBling. Louisville, KY.

Michael Burton  Textiles, Clothing and Design
Artist. Juried film festival, Open Call: Video Film Festival. Rhode Island School of Design Museum, Providence, RI.

Artist. Invited exhibition, Frequency. Rhode Island School of Design Museum’s Chase Center, Providence, RI.

Dana Fritz  Art and Art History

Artist, photography. Terraria Gigantica: the World Under Glass. Xi’an Jiaotong University Art Museum, Xi’an, Shaanxi, China.

Karen Kunc  Art and Art History
Artist, woodcut prints. Solo exhibition, The Nature of Abstraction. Alexandre Hogue Art Gallery, University of Tulsa, Tulsa, OK.


Artist, woodcut prints. IMPRINT 2011: Graphic Metropolis, Second Kulisiaewicz International Triennial. Academy of Fine Arts, Warsaw, Poland, Poland.


Jamie Reimer
Performer, lecture-demonstration. “Transcending Text: The song cycle *Heart on the Wall* as an example of Robert Owens’ compositional style and poetic interpretation.” Festival 500: The Phenomenon of Singing, an International Festival of Choral Music and Celebration of Song, St. John’s, Newfoundland, Canada.

Francisco E. Souto
Artist, hybrid prints, a combination of digital and traditional. Epicenter/Epicentro: Re Tracing the plains. University of Ca’ Foscari, Venice, Italy.
Artist, hybrid prints, a combination of digital and traditional. 3rd Qijiang International Invitational Print Exhibition and Symposium, Northwest University and the Sichuan Academy of Fine Arts, Chongqing, China.

Hans Sturm
Soloist, double bass. China Tour. Central Conservatory, Langzhou Conservatory, Tong Li Festival, Beijing, Langzhou, Tong Li, Shanghai, China.
Marco Abel  
**English**  
Editor, with Christoph Wahl, Jesko Jockenhoevel, Michael Wahl. *Im Angesicht des Fernsehens: Der Filmemacher Dominik Graf.* Munich, Germany: text + kritik.

John E. Anderson  
**Economics**  

J. Clark Archer  
**Geography/Natural Resources**  

Edward F. Becker  
**Philosophy**  

Robert F. Belli  
**Psychology/Survey Research and Methodology**  

John Bender  
**News-Editorial**  

Mary Bomberger Brown  
**Natural Resources**  
Author, with Stephen J. Dinsmore, Charles R. Brown. *Birds of Southwestern Nebraska.* Lincoln, NE: Conservation and Survey Division, School of Natural Resources, UNL.

Thomas Borstelmann  
**History**  

Susan Bullard  
**News-Editorial**  
Author. *Everybody’s an Editor.* Dubuque, IA: Great River Technologies.
Amy Burnett  History


Stephen G. Burnett  Classics and Religious Studies

Janet Carlson  BUROS
Editor, with Linda Murphy, Kurt Geisinger, BUROS, Robert Spies. Tests in Print VIII. Lincoln, NE: University of Nebraska Press.

Kenneth G. Cassman  Agronomy and Horticulture

Raymond Chollet  Biochemistry/Center for Plant Science Innovation

Frankie Condon  English

John Creswell  Educational Psychology

Rochelle L. Dalla  Child, Youth and Family Studies

Yasar Demirel  Chemical and Biomolecular Engineering

Wheeler Winston Dixon  English

Carolyn Edwards  Psychology/Child, Youth and Family Studies
Iker Gonzalez-Allende  Modern Languages and Literature

Marilyn Grady  Educational Administration


Rose Holz  History/Women's and Gender Studies

Melissa J. Homestead  English/Women's and Gender Studies
Editor, with Ellen A. Foster. Clarence; or, A Tale of Our Own Times. Peterborough, Ontario, Canada: Broadview Press.

Terry Housh  Nutrition and Health Sciences

Scott Hygnstrom  Natural Resources
Author, with Stephen Vantassel, Natural Resources, Paul D. Curtis, Natural Resources. National Wildlife Control Training Program. Lincoln, NE: University of Nebraska-Lincoln and Cornell University

Srikanth Iyengar  Mathematics

Jody Koenig Kellas  Communication Studies

Yaroslav Komarovski  Classics and Religious Studies

Richard A. Leiter  Law

Carole Levin  History/Medieval and Renaissance Studies
Fred Luthans  
Management  


Tom Lynch  
English  


Ann Mari May  
Economics  


Patrice C. McMahon  
Political Science  

Colleen E. Medill  
Law  

Nancy A. Mitchell  
Advertising/Academic Affairs  

Mehrdad Negahban  
Mechanical & Materials Engineering  

David L. Olson  
Management  

<table>
<thead>
<tr>
<th>Name</th>
<th>Department/Field</th>
<th>Title</th>
<th>Publisher</th>
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<tbody>
<tr>
<td>Karl J. Reinhard</td>
<td>Earth and Atmospheric Sciences/Natural Resources</td>
<td>Author, with Luiz Fernando Ferreira, Adauto Araújo. <em>Fundamentos de Paleoparasitologia.</em> Rio de Janeiro, Brazil: Editora Fiocruz.</td>
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<tr>
<td>Guy J. Reynolds</td>
<td>English</td>
<td>Editor, with Melissa J. Homestead, English. <em>Cather Studies Volume 9: Willa Cather and Modern Cultures.</em> Lincoln, NE: University of Nebraska Press.</td>
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<tr>
<td></td>
<td></td>
<td>Author. <em>The Other Book: Bewilderments of Fiction.</em> Lincoln, NE: University of Nebraska Press.</td>
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</table>
William G. Thomas  History

Cho Wing S. To  Mechanical & Materials Engineering

Evgeny Y. Tsymbal  Physics and Astronomy/Nebraska Center for Materials and Nanoscience

John D. Turner  Classics and Religious Studies

Editor, with Kevin Corrigan. *Religion and Philosophy in the Platonic and Neoplatonic Traditions. From Antiquity to the Early Medieval Period.* Sankt Augustin, Germany: Akademie Verlag.

Hendrik van den Berg  Economics


Frans Von der Dunk  Law

Brian D. Wardlow  Natural Resources

Roger Wiegand  Mathematics

Richard L. Wiener  Psychology

Kenneth J. Winkle  History
RECOGNITIONS AND HONORS
Faculty who have been elected to honor academies or who received national or international honors or awards, July 1, 2011-June 30, 2012
Submitted by faculty, chairs/heads or deans

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

William Splinter  Biological Systems Engineering, Emeritus/Larsen Tractor Test and Power Museum
National Academy of Engineers

James Van Etten  Plant Pathology
National Academy of Sciences

Sam Allgood  Economics
Henry H. Villard Research Award, National Association of Economic Educators and the Council for Economic Education

Kathleen P. Anderson  Animal Science
Excellence in Teamwork Award, Joint Council of Extension Professionals

Carlos Asarta  Economics
Phillip Sanders Best Research Paper in Economic Education Award, National Association of Economic Educators

Mark Balschweid  Agricultural Leadership, Education and Communication
Inducted into Gamma Sigma Delta, Honor Society of Agriculture

Kim J. Bearnes  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Terri Bek  Nebraska College of Technical Agriculture
Woman of the Year, National Association of Professional Women

Lloyd Bell  Agricultural Leadership, Education and Communication
Senior Fellow, American Association for Agricultural Education

Shubhapriya Bennur  Textiles, Clothing and Design

Eric Berger  Law
Winner of 2011 Richard D. Cudahy Writing Competition on Regulatory and Administrative Law, American Constitution Society
Robert Bielenberg  Midwest Roadside Safety
2011 Practice-Ready Paper Award, Transportation Research Board Design and Construction Group
2012 Best Paper Award, Transportation Research Board Committee AFB20 - Roadside Safety Design

Dawn O. Braithwaite  Communication Studies
Outstanding Book Award, National Communication Association, Family Communication Division

Cheryl Burkhart-Kriesel  Panhandle Research and Extension Center
Educational Technology Team Award, National Association of Community Development Extension Professionals

Dennis E. Burson  Animal Science
Signal Service Award, American Meat Science Association

Roger Butters  Economics
Phillip Sanders Best Research Paper in Economic Education Award, National Association of Economic Educators

Chris R. Calkins  Animal Science
Meat Research Award, American Society of Animal Science

Janet Carlson  Educational Psychology
Fellow, American Psychological Association Division 12: Clinical Psychology

Leslie C. Carlson  Marketing
Outstanding Article of the Year for 2011, *Journal of Marketing Education*

Ken Cassman  Agronomy and Horticulture
2011 Justin Smith Morrill Lecture Award, Association of Public Land-Grant Universities and the USDA-National Institute of Food and Agriculture

Xun-Hong Chen  Natural Resources
Fellow, The Geological Society of America

Lindsay Chichester  Southeast Research and Extension Center
Resources/Environmental Ed Team Award, National Association of Extension 4-H Agents

Stephen Comfort  Natural Resources
Fellow, International Union of Pure and Applied Chemistry

Scott Cotton  Panhandle Research and Extension Center
Disaster Education Specialist Award, Extension Disaster Education Network

Sidnie W. Crawford  Classics and Religious Studies
Chairman of the Board of Trustees, W. F. Albright Institute of Archaeological Research
John Creswell  Educational Psychology
Fulbright Specialist Award 2007-2012, Council for the International Exchange of Scholars, Fulbright Commission

Carina Curto  Mathematics
Career Enhancement Fellowship for Junior Faculty, Woodrow Wilson National Foundation

Kwame Dawes  English
Fellow, John Simon Guggenheim Memorial Foundation

Jitender S. Deogun  Computer Science and Engineering
Best Conference Paper, IEEE International Conference on Communications, Ottowa, Canada

Matthew J. Ellicott  Animal Science
President, National Senior College Coaches Association

Ronald K. Faller  Civil Engineering/
Midwest Roadside Safety/
Nebraska Transportation Center
2011 Practice-Ready Paper Award, Transportation Research Board Design and Construction Group
2012 Best Paper Award, Transportation Research Board Committee AFB20 - Roadside Safety Design

Richard Ferguson  Agronomy and Horticulture
Fellow, American Society of Agronomy

Jordan Green  Special Education and Communication Disorders
Fellow, American Speech-Language-Hearing Association

Vickie Greve  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Jennifer Hansen  Northeast Research and Extension Center
Communicator Award - Published Photo, National Association of Extension 4-H Agents

Susan Hansen  Northeast Research and Extension Center
Outstanding Poster Session Award, National Epsilon Sigma Phi

Ronald Hanson  Agricultural Economics
Murray Brown National Leadership Award, North American Colleges and Teachers of Agriculture

Jill Heemstra  Northeast Research and Extension Center
Outstanding Community of Practice, National eXtension Initiative
Blue Ribbon Award, Educational Aids Competition (electronic delivery), American Society of Agricultural and Biological Engineers
John Hibbing  Political Science
Fellow, American Association for the Advancement of Science

Tiffany Hogan  Special Education and Communication Disorders
Early Career Contributions in Research Award, American Speech-Language-Hearing Association

Mary Holland  Southeast Research and Extension Center
Distinguished Service Award, National Extension Association of Family and Consumer Sciences

Roger Hoy  Biological Systems Engineering
Evelyn E. Rosentreter Standards Award, American Society of Agricultural and Biological Engineers

Thomas Hunt  Northeast Research and Extension Center
2011 Integrated Pest Management Team Award, European Corn Borer IPM Team, Entomological Foundation

Suat Irmak  Biological Systems Engineering
2011 Educational Aids Blue Ribbon Award, American Society of Agricultural and Biological Engineers
2011 Superior Paper Award, American Society of Agricultural and Biological Engineers

Srikanth Iyengar  Mathematics
Fellow, Simons Foundation

Margaret D. Jacobs  History
Fellow, American Council of Learned Societies

Michael James  Textiles, Clothing and Design
Luminaries Award for Lifetime Achievement, Fuller Craft Museum, Brockton, Massachusetts

Shripat Kamble  Entomology
National Recognition Award in Urban Entomology, Entomological Foundation

Terry J. Klopfenstein  Animal Science
Industry Leadership Award, Cattle Feeders Hall of Fame
American Feed Industry Association’s New Frontiers in Animal Nutrition Award, Federation of Animal Science Societies

Stevan Knezevic  Northeast Research and Extension Center
Excellence in Web-Based Weed Control Tool, American Society of Agronomy

Jody Koenig Kellas  Communication Studies
2011 Distinguished Article in Family Communication, Family Communication Division of the National Communication Association
Karen Kunc  Art and Art History
Juror’s Award (Juror: Professor Barbara Tetenbaum), Un-Speak-Able, Book Art Exhibition, The Arts Center Corvallis, Oregon

Karla Lechtenberg  Midwest Roadside Safety
2012 Best Paper Award, Transportation Research Board Committee AFB20

Duane Lienemann  Southeast Research and Extension Center
2011 Distinguished Service Award, National Association of County Agricultural Agents

Fred Luthans  Management
2011 Citations of Excellence Award, Emerald Publishing

Gary Lynne  Agricultural Economics
Fellow, Institutional and Behavioral Economics Section of the Agricultural and Applied Economics Association

Drew J. Lyon  Agronomy and Horticulture
Agronomic Extension Education Award, American Society of Agronomy

Stephen C. Mason  Agronomy and Horticulture
Distinguished Service Award, American Society of Agronomy

Martin Massengale  Center for Grassland Studies
One of the Top 100 Educators for 2011, Leading Scientists of the World, and Outstanding Intellectuals of the 21st Century; the International Biographical Center
Fellow, American Biographical Institute
Order of International Ambassadors, American Biographical Institute

Mario Mongiardini  Midwest Roadside Safety
2012 Best Paper Award, Transportation Research Board Committee AFB20 - Roadside Safety Design

Glenn Nierman  School of Music
Executive Board Member, International Society for Music Education

Sarah Polacek  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Lisa Poppe  Southeast Research and Extension Center
Excellence in 4-H Programming Award, National Association of County Agricultural Agents

Thomas O. Powers  Plant Pathology
Fellow, Society of Nematologists
Wei Qiao  Electrical Engineering

Petronela Radu  Mathematics
Fulbright Scholar, Fulbright Foundation

Rick J. Rasby  Animal Science
2011 Extension Award, American Society of Animal Science

Paul Read  Agronomy and Horticulture
Service to International Society for Horticultural Science Symposium Award, International Society for Horticultural Science

Eddy M. Rojas  Durham School of Architectural Engineering and Construction
2011 Thomas Fitch Rowland Prize, American Society of Civil Engineers

Kari A. Ronning  English
Seal of Approval, Modern Language Association of America, Committee on Scholarly Editions

Julia E. Schleck  English/Medieval and Renaissance Studies
Fellow, Folger Shakespeare Library
Franklin Research Award, American Philosophical Society

Mathias Schubert  Electrical Engineering
Fellow, American Physical Society
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Lee Sherry  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Norman Small  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Ravi Sohi  Marketing
Louis W. Stern Award, American Marketing Association

Matthew L. Spangler  Animal Science
Member of 2011 Class of Top 10 Industry Leaders Under the Age of 40, The Cattle Business Weekly
Richard Stowell  Biological Systems Engineering
Educational Materials Award, Council for Agricultural Science and Technology
Blue Ribbon Award, American Society of Agricultural and Biological Engineers
2011 Outstanding Community of Practice, USDA-National Institute of Food and Agriculture

Susan Swearer  Educational Psychology
Invited Presenter, 2011 Federal Partners in Bullying Prevention Summit, White House and U.S. Department of Education

Maher Tadros  Civil Engineering
Ty Lin Award, American Society of Civil Engineers

Jonathan Templin  Psychology
Significant Contribution to Educational Measurement and Research Methodology Award, American Educational Research Association - Division D

Eric Thompson  Economics
Phillip Sanders Best Research Paper in Economic Education Award, National Association of Economic Educators

Cho Wing S. To  Mechanical & Materials Engineering
Fellow, American Society of Mechanical Engineers

Christopher Y. Tuan  Civil Engineering
Honorary Fellow, Australian Institute of High Energetic Materials, Gladstone, Australia

Carlos Urrea Florez  Panhandle Research and Extension Center
Distinguished Achievement Award, The Bean Improvement Cooperative

Brandy VanDeWalle  Southeast Research and Extension Center
Outstanding Educational Aids Competition, American Society of Agricultural and Biological Engineers

David Varner  Southeast Research and Extension Center
Search for Excellence: Remote Sensing and Precision Agriculture Award, National Association of County Agricultural Agents

Ruth Vonderohe  Northeast Research and Extension Center
Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Lily M. Wang  Durham School of Architectural Engineering and Construction
Ralph G. Nevins Physiology and Human Environment Award, American Society of Heating, Refrigerating and Air Conditioning Engineers
Curtis L. Weller  Biological Systems Engineering/ Food Science and Technology
Jefferson Science Fellow, National Academies-U.S. State Department-U.S. Agency for International Development

Tessa Wright  Special Education and Communication Disorders
Outstanding Dissertation of the Year, Council of Exceptional Children, Division of Visual Impairments

Yan Xia  Child, Youth and Family Studies
Inducted into Phi Beta Delta Honor Society

Gary Zoubek  Southeast Research and Extension Center
Blue Ribbon Award, American Society of Agricultural and Biological Engineers
Superior Paper Award, American Society of Agricultural and Biological Engineers
2011 Communication Award, National Association of County Agricultural Agents
# Glossary of Federal Agency Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>DHS</td>
<td>Department of Homeland Security</td>
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<tr>
<td>DNDO</td>
<td>Domestic Nuclear Detection Office</td>
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<tr>
<td>DHHS</td>
<td>Department of Health and Human Services</td>
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<tr>
<td>ACF</td>
<td>Administration for Children and Families</td>
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<tr>
<td>DOC</td>
<td>Department of Commerce</td>
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<tr>
<td>ITA</td>
<td>International Trade Administration</td>
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<tr>
<td>NIST</td>
<td>National Institute of Standards and Technology</td>
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<tr>
<td>NOAA</td>
<td>National Oceanic &amp; Atmospheric Administration</td>
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<tr>
<td>DoD</td>
<td>Department of Defense</td>
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<tr>
<td>AFOSR</td>
<td>Air Force Office of Scientific Research</td>
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<tr>
<td>AMR</td>
<td>Army Medical Research</td>
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<tr>
<td>ARO</td>
<td>Army Research Office</td>
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<tr>
<td>DTRA</td>
<td>Defense Threat Reduction Agency</td>
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<tr>
<td>MDA</td>
<td>Missile Defense Agency</td>
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<tr>
<td>MURI</td>
<td>Multidisciplinary University Research initiative</td>
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<tr>
<td>NGIA</td>
<td>National Geospatial Intelligence Agency</td>
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<tr>
<td>ONR</td>
<td>Office of Naval Research</td>
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<tr>
<td>USAMRAA</td>
<td>United States Army Medical Research Acquisition Activity</td>
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<tr>
<td>DOE</td>
<td>Department of Energy</td>
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<tr>
<td>NREL</td>
<td>National Renewable Energy Laboratory</td>
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<td>DOI</td>
<td>Department of Interior</td>
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<td>BR</td>
<td>Bureau of Reclamation</td>
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<td>GS</td>
<td>Geological Survey</td>
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<td>DOJ</td>
<td>Department of Justice</td>
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<td>DOT</td>
<td>Department of Transportation</td>
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<tr>
<td>FRA</td>
<td>Federal Railroad Administration</td>
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<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
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<td>RITA</td>
<td>Research and Innovative Technology Administration</td>
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<tr>
<td>ED</td>
<td>Department of Education</td>
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<tr>
<td>GAANN</td>
<td>Graduate Assistance in Areas of National Need</td>
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<tr>
<td>IES</td>
<td>Institute of Education Sciences</td>
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<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
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<tr>
<td>HUD</td>
<td>Department of Housing and Urban Development</td>
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<tr>
<td>NAS</td>
<td>National Academy of Sciences</td>
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<tr>
<td>TRB</td>
<td>Transportation Research Board</td>
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<tr>
<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
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<tr>
<td>NEA</td>
<td>National Endowment for the Arts</td>
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<tr>
<td>NEH</td>
<td>National Endowment for the Humanities</td>
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<td>Agency</td>
<td>Description</td>
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<td>NIH</td>
<td>National Institutes of Health</td>
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<tr>
<td>DFCI</td>
<td>Dana-Farber Cancer Institute</td>
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<tr>
<td>FIC</td>
<td>Fogarty International Center</td>
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<tr>
<td>NCI</td>
<td>National Cancer Institute</td>
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<tr>
<td>NCRR</td>
<td>National Center for Research Resources</td>
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<td>NEI</td>
<td>National Eye Institute</td>
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<tr>
<td>NHLBI</td>
<td>National Heart, Lung and Blood Institute</td>
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<tr>
<td>NIA</td>
<td>National Institute on Aging</td>
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<td>NIAAA</td>
<td>National Institute on Alcohol Abuse and Alcoholism</td>
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<tr>
<td>NIAID</td>
<td>National Institute on Allergy &amp; Infectious Diseases</td>
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<tr>
<td>NIBIB</td>
<td>National Institute of Biomedical Imaging and Bioengineering</td>
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<tr>
<td>NICHD</td>
<td>National Institute of Child Health and Human Development</td>
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<tr>
<td>NIDCD</td>
<td>National Institute on Deafness &amp; Communication Disorders</td>
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<tr>
<td>NIDDK</td>
<td>National Institute of Diabetes, Digestive &amp; Kidney Disease</td>
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<tr>
<td>NIDA</td>
<td>National Institute on Drug Abuse</td>
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<td>NIEHS</td>
<td>National Institute of Environmental Health Sciences</td>
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<td>NIGMS</td>
<td>National Institute on General Medical Sciences</td>
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<td>NIMH</td>
<td>National Institute of Mental Health</td>
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<tr>
<td>NINDS</td>
<td>National Institute of Neurological Disorders and Stroke</td>
</tr>
<tr>
<td>NLM</td>
<td>National Library of Medicine</td>
</tr>
<tr>
<td>NSF</td>
<td>National Science Foundation</td>
</tr>
<tr>
<td>EPSCoR</td>
<td>Experimental Program to Stimulate Competitive Research</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
</tr>
<tr>
<td>AFRRI</td>
<td>Agriculture and Food Research Initiative</td>
</tr>
<tr>
<td>APHIS</td>
<td>Animal and Plant Health Inspection Service</td>
</tr>
<tr>
<td>ARS</td>
<td>Agricultural Research Service</td>
</tr>
<tr>
<td>CSREES</td>
<td>Cooperative State Research, Education &amp; Extension Service</td>
</tr>
<tr>
<td>FCIC</td>
<td>Federal Crop Insurance Corporation</td>
</tr>
<tr>
<td>FS</td>
<td>Forestry Service</td>
</tr>
<tr>
<td>NASS</td>
<td>National Agricultural Statistics Service</td>
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<tr>
<td>NIFA</td>
<td>National Institute for Food and Agriculture</td>
</tr>
<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
</tr>
<tr>
<td>NRICGP</td>
<td>National Research Initiative Competitive Grant Program</td>
</tr>
<tr>
<td>RD</td>
<td>Rural Development</td>
</tr>
<tr>
<td>RMA</td>
<td>Risk Management Agency</td>
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Every effort has been made to verify the accuracy and completeness of submissions. Faculty, department chairs and heads and the deans were invited to submit entries online regarding published books, national and international recognitions, and creative works in fine and performing arts and architecture. Information on major sponsored program awards was gathered by the Office of Sponsored Programs. Reports on startups and license agreements were produced by NUtech Ventures.

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