2013

Major Sponsored Programs and Faculty Awards for Research and Creative Activity: July 1, 2012 – June 30, 2013

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July 1, 2012 – June 30, 2013
Major Sponsored Programs
and Faculty Awards
for Research and Creative Activity
Office of Research and Economic Development
University of Nebraska–Lincoln

Research and Creative Activity
3 Awards of $3 million or more
24 Awards of $1 million to $2,999,999
35 Awards of $200,000 to $999,999
76 American Recovery and Reinvestment Act Awards
81 Early Career Awards
83 Arts and Humanities Awards of $50,000 or more
89 Arts and Humanities Awards of $5,000 to $49,999
91 License Agreements
98 Creative Activity
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112 Glossary

On the Cover: The University of Nebraska–Lincoln's new Center for Brain, Biology and Behavior is poised to be a leader in exploring how brain functioning affects human behavior. The center’s multidisciplinary focus, state-of-the-art equipment and a unique partnership between UNL research and athletics expand our research capacity in a range of disciplines, including growing expertise in concussion research. The cover illustration shows fiber tracks of the brain, an example of information the center can capture through magnetic resonance imaging and other functional imaging software. (Illustration/design by Joel Brehm/Rob Cope; diffusion tensor image courtesy Siemens Press Pictures)
This twelfth 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, 2012-June 30, 2013. It lists the funding sources, projects and investigators on major grants and sponsored program awards received during the year; published books and scholarship; fellowships and other recognitions; intellectual property licenses; and performances and exhibitions in the fine and performing arts.

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 $253 million in fiscal year 2012 represent a new record for UNL and, along with an impressive list of publications and awards, reflect our faculty’s achievements.

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

I invite you to read about our faculty’s accomplishments in this booklet and envision the power of UNL’s innovative and collaborative research, scholarship and creative activity to solve problems and create opportunities for our state, our nation and our world.

Thank you for your interest in and support for research, scholarship and creative activity at UNL, a growing Big Ten research university!

Prem S. Paul
Vice Chancellor for Research and Economic Development
AWARDS OF $3 MILLION OR MORE

Active awards, July 1, 2012-June 30, 2013
* Indicates new in 2012-2013

Allen, Craig  Natural Resources
IGERT: Resilience and Adaptive Governance in Stressed Watersheds
$3,116,173  NSF
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.

Becker, Donald  Biochemistry
Redox Biology Center
$4,336,262  NIH-NIGMS
9/1/12 – 7/31/17

Donald Becker, professor of biochemistry in the Institute of Agriculture and Natural Resources, is the director of the Redox Biology Center. Established in 2002 with a grant from the National Institutes of Health as a Center of Biomedical Research Excellence, the center received a competitive renewal grant 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.
Buchholz, Wallace  
**Chemical and Biomolecular Engineering**  
Therapeutic Countermeasures against the Botulinum Neurotoxin in Support of USAMRIID Botulinum Therapeutic Program  
$3,875,001  
DoD-DTRA  
8/16/10 – 3/31/15

Wallace Buchholz is the director 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.

Cotton, Dan  
eXtension  
eXtension Building Cooperative Extension’s 21st Century Network  
$6,626,640  
USDA-NIFA  
9/1/11 – 8/31/16

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  
**Psychology**  
Sexual Revictimization: Emotional and Psychosocial Mechanisms  
$3,413,219  
7/15/10 – 6/30/15  
Hoffman, Lesa  

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.

Duppong Hurley, Kristin  
**Special Education and Communication Disorders**  
* Parent Connectors: An Efficacy Study of Peer-Support for Parents of Middle-School Youth with Emotional Disturbance  
$3,206,013  
7/1/13 – 6/30/17  
Epstein, Michael  
Torkelson-Trout, Alexandra  

With support from a $3.2 million grant from the U.S. Department of Education’s Institute of Education Sciences, Kristin Duppong Hurley, research associate professor of special education and communication disorders, and colleagues are evaluating a unique new program that uses parent-to-parent support to encourage families to get connected to services to help their children be successful in school. The four-year grant enables UNL researchers to evaluate the Parent Connectors Program, originally developed by researchers at the University of South Florida with U.S. Department of Education funding. This intervention program encourages parents of middle school-aged children with emotional or behavioral disorders to get involved in their children’s education and help them access available mental health and school services. UNL’s team is evaluating the program’s effectiveness through a randomized control trial involving about 250 families of Nebraska middle school students in the Lincoln and metro Omaha areas who have Individualized Education Programs for emotional or behavioral needs.
UNL’s planned Center for Nanohybrid Functional Materials 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 Patrick Dussault, Charles Bessey Professor of 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.
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.

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

ANDRILL: Investigating Antarctica’s Role in Cenozoic Global Environmental Change

$12,978,160  NSF
6/1/05 – 7/31/14
Levy, Richard  Earth and Atmospheric Sciences

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

Hein, Gary  Doctor of Plant Health Program

* A Predictive Model to Increase Adoption of IPM of a Mite-Virus Disease Complex in Wheat

$3,375,000  USDA-AFRI
1/1/13 – 12/31/18
Bradshaw, Jeffrey  Panhandle Research and Extension Center
Golick, Douglas  Entomology
Lyon, Drew  Panhandle Research and Extension Center
Namuth Covert, Deana  Agronomy and Horticulture
Wegulo, Stephen  Plant Pathology
Zygielbaum, Arthur  School of Natural Resources

The USDA's Agriculture and Food Research Initiative has awarded $3.375 million to a team led by Gary Hein, professor of entomology and director of UNL's Doctor of Plant Health Program, to develop a forecasting model that can help wheat growers predict the risk for mite-transmitted virus disease and make more effective management decisions. Beneficiaries of this 5-year project include wheat growers in the Great Plains from Montana to Texas, who produce over 1 billion bushels of wheat annually. In addition, the project provides opportunities and resources for students and teachers (graduate, undergraduate, G4-12 science teachers and their students) who can use information about management of this wheat-mite-virus complex to demonstrate the principles of biology, ecology and integrated pest management.
Hogan, Tiffany  
**Special Education and Communication Disorders**

Language Bases of Skilled Reading Comprehension  
$4,344,886  
ED-IES through The Ohio State University  
7/1/10 – 6/30/15  

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

Nelson, J. Ron  
**Special Education and Communication Disorders**

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.

Johnson, Scott  
**Biological Process Development Facility**

Process Research, Development and Manufacturing of 5P12 RANTES  
$3,806,494  
3/1/10 – 12/31/13  
Van Cott, Kevin  
**Chemical and Biomolecular Engineering**

Mintaka Foundation for Medical Research is supporting the BPDF’s development of a process to produce a cream containing 5P12-RANTES, a protein widely considered to be one of the most promising candidates for use as a topical HIV prevention agent.
Lewis, Jim  Mathematics/Center for Science, Mathematics and Computer Education

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.

$9,235,407  NSF
1/1/09 – 12/31/13

Edwards, Carolyn  Psychology/Child, Youth and Family Studies
Heaton, Ruth  Teaching, Learning and Teacher Education/Center for Science, Mathematics and Computer Education
Jacobson, Barbara  Lincoln Public Schools
McGowan, Thomas  Teaching, Learning and Teacher Education
Papick, Ira  Mathematics/Center for Science, Mathematics and Computer Education
Stroup, Walter  Statistics

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.

**Lodl, Kathleen**  
Extension  
Child Care and Youth Training and Technical Assistance Project  
$7,045,455  
USDA-NIFA  
7/1/10 – 8/31/14  
Durden, Tonia  
Child, Youth and Family Studies

With support from the U.S. Department of Agriculture’s National Institute of Food and Agriculture, UNL Extension is working with counterparts at Penn State University to develop and deliver content and provide programming for a nationwide educational program to help the children of military families succeed as they enter the school system. The three-year project, led by Kathleen Lodl, associate dean of UNL Extension, aims to develop and deliver early childhood professional development in 13 states, focusing on children through age 12 from military families who live off base. The goals of the program are to improve the quality of existing home and center-based child care and school-age/afterschool programs and to increase the number of military-connected children with access to services by increasing the number of practitioners. The Child and Youth TTAP will provide training and technical assistance to increase the knowledge and skills of child care providers and youth program staff. Content will be delivered to early childhood educators both face-to-face and online.
AWARDS OF $3 MILLION OR MORE

Lu, Yongfeng  Electrical Engineering
Multi-Energy Processing for Novel Coating Technologies  DoD-ONR
$4,138,000  4/10/09 – 4/18/14

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

Lubben, Bradley  Agricultural Economics
North Central Risk Management Education Center  USDA-NIFA
$3,506,736  9/1/12 – 8/31/15

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

Moxley, Rodney  Veterinary Medicine and Biomedical Sciences
Shiga-Toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach  USDA-AFRI
$24,812,267  1/1/12 – 12/31/13

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

**Paul, Prem**  
Research and Economic Development  
Nebraska Center for Energy Sciences Research  
Nebraska Public Power District  
$5,000,000  
11/24/09 – 3/31/16

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

**Pope, Kevin**  
Natural Resources  
Angler Behavior in Response to Management Actions on Nebraska Reservoirs  
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.
The U.S. Department of Transportation has awarded $3.1 million to a team led by Laurence Rilett, Keith W. Klaasmeyer Chair in Engineering and Technology in UNL’s civil engineering department and director of the Nebraska Transportation Center (NTC), to conduct research related to 1) visualization and modeling on non-linear material behavior that is critical for new roadside safety devices; and 2) identifying promising safety and risk mitigation tools. As part of this research, funds will support state-of-the-art ITS infrastructure (laboratory and test beds) and visualization capabilities in the NTC space in the Whittier Research Center on the UNL campus. The goal is to develop advanced technologies that can be economically adapted to make the nation’s multi-modal transportation system safer.

Region 7 University Transportation Center
$6,897,600
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. The center’s focus is “improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system.” MATC 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.
Rothermel, Gregg  Computer Science and Engineering

Safeguarding End-User Military Software

$3,975,935  DoD-AFOSR
9/1/10 – 8/31/14

Cohen, Myra  Computer Science and Engineering
Dwyer, Matthew  Computer Science and Engineering
Elbaum, Sebastian  Computer Science and Engineering
Sarma, Anita  Computer Science and Engineering
Srisa-An, Witawas  Computer Science and Engineering

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

Sellmyer, David  Physics and Astronomy/Nebraska Center for Materials and Nanoscience

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

$5,864,300  DoD-ARO
9/24/10 – 9/23/13

Cheung, Chin Li  Chemistry
Liou, Sy-Hwang  Physics and Astronomy
Shield, Jeffrey  Mechanical & Materials Engineering
Skomski, Ralph  Physics and Astronomy
Zeng, Xiao Cheng  Chemistry/Physics and Astronomy

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

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

$4,260,001  DoD-ARO
9/25/09 – 9/24/13
Dussault, Patrick  Chemistry
Lai, Rebecca  Chemistry
Liou, Sy-Hwang  Physics and Astronomy
Skomski, Ralph  Physics and Astronomy

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/Nebraska Center for Research on Children, Youth, Families and Schools
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
Bovaird, James  Educational Psychology/Nebraska Center for Research on Children, Youth, Families and Schools
Glover, Todd  Nebraska Center for Research on Children, Youth, Families and Schools
Kunz, Gina  Nebraska Center for Research on Children, Youth, Families and Schools
Nugent, Gwen  Nebraska Center for Research on Children, Youth, Families and Schools
Steckelberg, Allen  Teaching, Learning and Teacher Education
Trainin, Guy  Teaching, Learning and Teacher Education

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

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

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

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

Materials Research Science & Engineering Center: Quantum Spin

$7,976,180 NSF
9/1/08 – 8/31/14
Gruverman, Alexei Physics and Astronomy

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

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

Harkamal Walia, professor of agronomy and horticulture, leads a three-year project supported by a more than $2 million grant from the National Science Foundation to study salinity stress in rice. As agriculture is gradually pushed to marginal lands, and the freshwater supply fluctuates due to erratic weather patterns, drought and salinity continue to challenge the ability to meet the food needs of an increasing population. A key strategy to address this grand challenge is to develop crops that are more resilient to saline and drought environments. Rice is arguably the most important crop for global food security and is also the most salt-sensitive of all major cereals. Walia and colleagues are studying phenotypic diversity in rice and underlying genetic variations for salinity adaptive responses. This work will ultimately help rice breeders develop salt-tolerant rice cultivars.
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 – 8/31/14

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.  

**Great Plains National Security Education Consortium (GP-NSEC)**

$3,210,000  
9/23/09 – 9/22/14

Adenwalla, Shireen  
Physics and Astronomy

LeSueur, James  
History

McMahon, Patrice  
Political Science

Paul, Prem  
Research and Economic Development

Wedeman, Andrew  
Political Science

Wood, Simon  
Classics and Religious Studies

The **Great Plains National Security Education Consortium (GP-NSEC)** is an Intelligence Community (IC) Center of Academic Excellence, located at UNL, in partnership with the University of Nebraska at Omaha, Creighton University and Bellevue University. By forming a partnership among four institutions that reach a diverse mix of students and aligning strong IC-relevant programs designed to meet differing academic and professional needs, GP-NSEC establishes a whole that is greater than the sum of its individual parts. The goal of GP-NSEC is to help prepare and diversify the next-generation IC workforce by providing rich academic, research, cultural immersion, and outreach activities focused on national security-related topics to talented students from a variety of backgrounds.
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
$4,650,860 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.
Yohe, John

Agronomy and Horticulture/International Sorghum and Millet Collaborative Research Support Program

International Sorghum/Millet Collaborative Research Support Program (INTSORMIL)

$15,300,000
9/30/06 – 9/29/12

Heinrichs, Elvis
Entomology/INTSORMIL

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

$4,215,409
9/21/07 – 10/31/12

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, 2012-June 30, 2013
* Indicates new in 2012-2013

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
Lee, Donald
Regassa, Teshome
Waters, Brian
$1,261,597  USDA through University of California, Davis
Agronomy and Horticulture
Agronomy and Horticulture
Agronomy and Horticulture

Barker, Bradley  4-H Youth Development
Scale-UP: National Robotics in 4-H:
Workforce Skills for the 21st Century
$2,498,908  NSF
Adamchuk, Viacheslav
Nugent, Gwen
Biological Systems Engineering
Nebraska Center for Research on
Children, Youth, Families and Schools

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
Mechanistic Studies of Functional Switching
in the PutA Flavoprotein

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
Moriyama, Etsuko
Statistics
Biological Sciences/
Center for Plant Science Innovation
Bevins, Rick  Psychology
Pharmacological Interventions to Diminish Nicotine-Associated Responding
$1,437,004  NIH-NIDA

Bloom, Kenneth  Physics and Astronomy
Transatlantic Networking
$2,070,000  DOE-Fermi National Laboratory

U.S. CMS Operations at the LHC
$1,320,613  NSF through Princeton University
Dominguez, Aaron  Physics and Astronomy
Swanson, David  Computer Science and Engineering

Searching for and Discovering New Physics at the Large Hadron Collider, the Tevatron, and in Cosmic Ray
$1,960,000  NSF
Claes, Daniel  Physics and Astronomy
Dominguez, Aaron  Physics and Astronomy
Kravchenko, Ilya  Physics and Astronomy
Snow, Gregory  Physics and Astronomy

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

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

Bulling, Denise  Public Policy Center
Nebraska Youth Suicide Prevention and Early Intervention
$1,500,000  DHHS-SAMSHA through Nebraska Department of Health and Human Services

Cahoon, Edgar  Biochemistry/Center for Plant Science Innovation
Center for Metabolic Channeling for Enhanced Biofuel Systems
$1,412,772  DOE through Donald Danforth Plant Science Center

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

Cassman, Kenneth  Agronomy and Horticulture
Global Yield Gap and Water Productivity Atlas
$2,034,324  Bill & Melinda Gates Foundation Agronomy and Horticulture
Grassini, Patricio
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<td>Prenatal Smoking and the Substrates of Disruptive Behavior in Early Life</td>
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<td>Bulbar Motor Deterioration in ALS</td>
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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  

Glewen, 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

Kilic, 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  
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  

Josiah, Scott  Nebraska State Forest Service  
Cooperative Forestry Program  
$1,165,139  USDA-FS

10/1/11 – 9/30/16
Koszewski, Wanda  Nutrition and Health Sciences  Supplemental Nutrition Assistance Program (SNAP-ED)  $1,434,538  USDA-FNS through Nebraska Department of Health and Human Services  Boeckner, Linda  Nutrition and Health Sciences  Lodl, Kathleen  Extension

Lee, Jaekwon  Biochemistry  Mechanistic Insights into Cellular Metal Detoxification  $1,408,563  USDA-FNS through Nebraska Department of Health and Human Services

Lewis, Elizabeth  Teaching, Learning and Teacher Education  UNL Science Scholars Program  $1,194,387  NSF  Bonnstetter, Ron  Teaching, Learning and Teacher Education  Claes, Daniel  Physics and Astronomy  Gosselin, David  Natural Resources  Heng-Moss, Tiffany  Entomology  Swidler, Scott  Teaching, Learning and Teacher Education

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

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

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

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

McCUTCHEON, ALLAN  Survey Research and Methodology/Gallup Research Center  Reducing Error in Computer Survey Data Collection  $2,967,347  NSF  BELL, ROBERT  Psychology/Gallup Research Center  OLSON, KRISTIN  Sociology/Gallup Research Center  SMYTH, JOLENE  Sociology/Gallup Research Center  SOH, LEEN-KIAT  Computer Science and Engineering
Mendoza-Gorham, Joan  
Lincoln Upward Bound  
$1,312,500  
Upward Bound Math/Science Program  
$1,312,500  

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

Oyler, George  
Consortium for Commercialization of Algae Biofuels and Biotechnology  
$1,672,123  
DOE through University of California, San Diego  
Cerutti, Heriberto  
Biological Sciences/Center for Plant Science Innovation  
Nickerson, Kenneth  
Biological Sciences  
Van Etten, James  
Plant Pathology  
Weeks, Donald  
Biochemistry  

Pickard, Gary  
Veterinary Medicine and Biomedical Sciences  
Homeostatic Regulation of Peripheral Oscillators via Autonomic Circuitry  
$1,765,147  
NIH-NINDS  
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  
$2,082,071  
ED  

Rutenbeck, Kathy  
Student Affairs  
Upward Bound-Northeast Nebraska  
$1,449,278  
ED  

Scott, Stephen  
Computer Science and Engineering  
An Extensible Semantic Bridge between Biodiversity and Genomics  
$1,371,121  
NSF  
Henninger, Scott  
Computer Science and Engineering  
Jameson, Mary Liz  
University of Nebraska State Museum  
Moriyama, Etsuko  
Biological Sciences/Center for Plant Science Innovation  
Sooh, Leen-Kiat  
Computer Science and Engineering  

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

$1 MILLION — $2,999,999
Shapiro, Charles  
Northeast Research and Extension Center 
Improving Organic Farming Systems and Assessing Their Environmental Impacts across Agro-Ecoregions 
$1,419,710  USDA-CSREES 
Bernards, Mark  Agronomy and Horticulture 
Brandle, James  Natural Resources 
Ferguson, Richard  Agronomy and Horticulture 
Francis, Charles  Agronomy and Horticulture 
Hergert, Gary  Panhandle Research and Extension Center 
Knezevic, Stevan  Northeast Research and Extension Center 
Schlegel, Vicki  Food Science and Technology 
Quinn, John  Natural Resources 
Wortmann, Charles  Agronomy and Horticulture 
Wright, Robert  Entomology 

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 
Ihlo, Tanya  Nebraska Center for Research on Children, Youth, Families and Schools 
Knoche, Lisa  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 
Alahmad, Mahmoud  Durham School of Architectural Engineering and Construction 
Lau, Siu Kit  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 
Shen, Zhigang  Durham School of Architectural Engineering and Construction 
Stansbury, John  Civil Engineering 
Zhang, Tian  Civil Engineering 

$1 MILLION — $2,999,999
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<td>Spreitzer, Robert</td>
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<td>Role of the Rubisco Small Subunit</td>
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<td>Starace, Anthony</td>
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<td>Dynamics of Few-Body Atomic Processes</td>
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<td>Steadman, James</td>
<td>Plant Pathology</td>
<td>* Genetic Approaches to Reducing Fungal and Oomycete Soilborne Problems of Common Bean in Eastern and Southern Africa</td>
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<td>Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents</td>
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<td>Data Connections: Developing a Coherent Picture of Mathematics Teaching and Learning</td>
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<td>Cyberinfrastructure-Enabled Computational Nanoscience for Energy Technologies</td>
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<td>Swanson, David</td>
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Umstadter, Donald  Physics and Astronomy  
Propagation and Interactions of Ultrahigh Power Light: Relativistic Nonlinear Optics  
$1,199,891  DoD-AFOSR  
Banerjee, Sudeep  Physics and Astronomy  
Kalmykov, Serguei  Physics and Astronomy  
Shadwick, Bradley  Physics and Astronomy  

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

Banerjee, Sudeep  Physics and Astronomy  

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

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

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

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

Whitbeck, Les  Sociology  
Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents  
$1,404,987  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  
$1,597,595  NIH-NIGMS  

$1 MILLION — $2,999,999
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<td>Biological Sciences/Nebraska Center for Virology</td>
<td>Neuropathogenesis and Neuroinvasiveness of Subtype C Human Immunodeficiency Virus-1</td>
<td>$1,715,746</td>
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<td>Programs in HIV &amp; AIDS Assoc Diseases/Malignancies</td>
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<td>Research Training in Comparative Viral Pathogenesis</td>
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<td>Vaccination against Mucosal HIV Clade C Transmission</td>
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<td>$2,486,316</td>
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<td>Biotin Deficiency Impairs Silencing of Repeat Regions and Retrotransposons</td>
<td>$1,224,019</td>
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Awards of $200,000 - $999,999  
Active awards, July 1, 2012-June 30, 2013  
* Indicates new in 2012-2013

**Adamec, Jiri**  
Biochemistry  
* Genetic & Genomic Approaches to Understanding Long-Distance Transport and Carbon Partitioning in Plants  
$233,280  
NSF through University of Missouri

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

**Albrecht, Julie**  
Nutrition and Health Sciences  
Food Safety for Diverse Families with Young Children  
$599,503  
USDA-NIFA

**Alexander, Dennis**  
Electrical Engineering  
* Fundamental Studies of Femtosecond Pump Probe Techniques for Killing and Assessment of Damage to Optical Components  
$330,000  
DOD-AFRL  
Ianno, Natale  
Electrical Engineering

**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  NASA through Rutgers University  $247,874

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

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

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

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

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

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

Balschweid, Mark  Agricultural Leadership, Education and Communication  
*Soybean Market Journal

Harms, Kurtis  Agricultural Leadership, Education and Communication

Schulte, Brandon  Agricultural Leadership, Education and Communication

Wilkerson, Jeff  Agricultural Leadership, Education and Communication

Barker, Bradley  4-H Youth Development

4-H Robotics: Engineering for Today and Tomorrow  
USDA-CSREES-National 4-H Headquarters

Barletta, Raul  Veterinary Medicine and Biomedical Sciences

Design of Multi-Target D-Ala-D-Ala Ligase Ligands  
NIH-NIAID through Southern Research Institute

Bartelt-Hunt, Shannon  Civil Engineering

Evaluating Air Emissions and Fuel Efficiency of Solid Waste Collection Vehicles  
Environmental Research & Education Foundation

Jones, Elizabeth  Civil Engineering

Fate and Bioavailability of Steroids in Aquatic Sediment  
NSF

Snow, Daniel  Natural Resources

Basolo, Alexandra  Biological Sciences

The Consistency of Behavioral Plasticity Across Different Selective Contexts  
NSF

Basset, Gilles  Agronomy and Horticulture/Biochemistry/Center for Plant Science Innovation

Phylloquinone Biosynthesis in Plants: Enzyme Discovery and Pathway Flux Control  
NSF

Batelaan, Herman  Physics and Astronomy

Coherent Electron Control  
NSF

Baumert, Joseph  Food Science and Technology

Comparison of Gnotobiotic and Conventional Mice for Predicting the Allergenic Potential Proteins Introduced into Genetically Engineered Plants  
EPA

Goodman, Richard  Food Science and Technology

Peterson, Daniel  Food Science and Technology
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<td>Coordination of Functions by Proline Metabolic Proteins</td>
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<td>First-Principles Theory of Thermal Effects in Spin Transport</td>
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<td>Microbiome Analysis of ConAgra Products</td>
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<td>Carnegie-Knight Initiative on the Future of Journalism Education</td>
<td>$250,000 Carnegie Corporation of New York</td>
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<td>Rehabilitation Engineering Research</td>
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<td>* The AmeriFlux Network Management Project</td>
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<td>SGP-Carbon Project</td>
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<td>Improving Training in Rural Mental Health Care through the Innovative Use of Technology and the Application of Collaborative Care Models</td>
<td>$455,062 USDA-CSREES</td>
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<td>Any Data, Anytime, Anywhere</td>
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$200,000 — $999,999
Blum, Paul  Biological Sciences
   Cell Line Development, Early Stage Production and Establishment of a Research Cell Bank
   $213,486  NovaDigm Therapeutics Inc.

   Uranium Mobilization by Extremely Thermoacidophilic Archaea
   $513,000  DoD-DTRA through North Carolina State University

   REU Site: Bioenergy Systems
   $274,987  NSF
   Cerutti, Heriberto  Biological Sciences/Center for Plant Science Innovation

   Biohydrogenesis in the Thermotogales
   $525,000  DOE through North Carolina State University

Bobaru, Florin  Mechanical & Materials Engineering
   Predictive Models for Dynamic Brittle Fracture and Damage at High-Velocity Impact in Multilayered Targets
   $257,020  DoD-ARO

Bockelman, Brian  Computer Science and Engineering
   * CC-NIE Integration: Bringing Distributed High Throughput Computing to the Network with Lark
   $573,344  NSF

Brand, Jennifer  Chemical and Biomolecular Engineering/Nebraska Center for Materials and Nanoscience
   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

Brewer, Gary  Entomology
   * Biopesticide Management of Pasture Flies in the Great Plains via a Push-Pull Strategy
   $200,000  USDA-NIFA
   Boxler, David  West Central Research and Extension Center

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

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

Bulling, Denise  Public Policy Center
   Developing Nebraska’s Homeland Security Planning Capacity
   $300,000  DHS through Nebraska Military Department-NEMA
   Dekraai, Mark  Psychology/Public Policy Center
   Speck, Kathryn  Public Policy Center
Burgin, Amy  Natural Resources
Conversion of Farm Fields to Wetlands: How Do Created Wetlands Affect Global Warming Potential
$454,545  USDA-NIFA

The Effects of Alum and Fish Restoration on Water Quality in the Fremont Lake, NE
$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
$609,780  Nebraska Department of Roads

Cahoon, Edgar  Biochemistry/
Center for Plant Science Innovation
Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis
$686,815  NSF
Stone, Julie  Biochemistry

Center for Enhanced Camelina Oil (CECO)
$555,698  DOE through Donald Danforth Plant Science Center

Development of Bio-Based Lubricants in a Dedicated Industrial Oilseed Crop
$500,000  USDA-NIFA
Clemente, Thomas  Agronomy and Horticulture/
Center for Biotechnology/
Center for Plant Science Innovation

Probing the Metabolic and Physiological Significance of Sphingolipid Long-Chain Base Desaturation in Plants
$550,500  NSF

Biochemical Genomics: Quizzing the Chemical Factories of Oilseeds
$979,028  NSF through Washington State University

BioCassava Plus
$358,442  Bill & Melinda Gates Foundation through Donald Danforth Plant Science Center

Cantrell, Randolph  Center for Applied Rural Innovation
Marketing Rural Communities to Attract and Retain Workers
$498,558  USDA-NRICGP
Burkhart-Kriesel, Cheryl  Panhandle Research and Extension Center
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<td>Ultrafast Imaging of Electronic Motion in Atoms and Molecules</td>
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<td>Boron Coatings for Scalable Solid-State Neuron Detectors</td>
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<td>RI: Small: Towards Practical Tractability in Constraint Processing</td>
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<td>Ci, Song</td>
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<td>IHCS: ARMS: A Novel Adaptive Configurable Multi-Cell Battery System for Power-Aware Electronics</td>
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<td>Sharif-Kashani, Hamid</td>
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<td>Testing Replacement of Fishmeal and Fish Oil in Seriola Rivoliana (Kona Kampachi) Diet with Soy-Based Protein and Oil</td>
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<td>Engineering Hydrocarbon Biosynthesis and Storage Together with Increased Photosynthetic Efficiency into the Saccharinae</td>
<td>DOE through University of Illinois at Urbana-Champaign</td>
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<td>Necessary Resources to Aid in the Translation of Genomics Information into Applied Technologies</td>
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Cohen, Myra  Computer Science and Engineering  
SHF: Medium: Regression Testing Techniques for Real-World Software Systems  
$324,883  
NSF

Cotton, Dan  eXtension  
* eXtension Military Families Learning Network  
$897,500  
USDA-NIFA

Cramer, Joel  Nutrition and Health Sciences  
* A Single Site, Double-Blind, Randomized, Placebo-Controlled, Crossover Trial to Evaluate the Safety and Potential Effects of the Dietary Supplement Anatabine on Delayed Onset Muscle Soreness in the Forearm Flexors  
$377,456  
Rock Creek Pharmaceuticals Inc.  
Haush, Terry  Nutrition and Health Sciences

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

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

Detweiler, Carrick  Computer Science and Engineering  
$390,000  
RI: Small: Adaptive Sampling with Robots for Marine Observations  
$249,971  
NSF

DiMagno, Stephen  Chemistry  
New Approaches to Catalyst Screening & Development  
$435,000  
NSF

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  
NSF through University of Kansas Center for Research  
Bloom, Kenneth  Physics and Astronomy
Dowben, Peter  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
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
$838,922  NIH-NIAID

Ducharme, Stephen  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Ferroelectric-Enhanced Organic Electronics
$225,000  NSF
Cheung, Chin Li  Chemistry
Gruverman, Alexei  Physics and Astronomy
Huang, Jinsong  Mechanical & Materials Engineering

Dussault, Patrick  Chemistry
New Reactions of Organic Peroxides
$420,000  NSF

Dweikat, Ismail  Agronomy and Horticulture
* Improvement of Millet Hybrid, Kenaf & Tropical Maize
$220,000  Sola Agri Inc.
Characterization of Nitrogen Use Efficiency in Sweet Sorghum
$390,000  DOE
Clemente, Thomas  Center for Biotechnology/Agronomy and Horticulture/Center for Plant Science Innovation
Weeks, Donald  Biochemistry

Dzenis, Yuris  Mechanical & Materials Engineering
* Combined Raman/SEM and Raman/FTIR System for High-Resolution Multispectral Analysis of Advanced Materials
$450,128  DOD-AFOSR-DURIP
Advanced Single-Polymer Nanofiber-Reinforced Composite: Towards Next Generation Ultralight Superstrong/Tough Structural Material
$595,285  DoD-AFOSR
MURI: Multiscale Design and Manufacturing of Hybrid DWCNT-Polymer Fibers
$695,077  DoD through Northwestern University

$200,000 – $999,999
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<td>Elbaum, Sebastian</td>
<td>Computer Science and Engineering</td>
<td>* SHF: Small: Solving the Search for Relevant Code in Large Repositories with Lightweight Specifications</td>
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<td>Randomized Clinical Trial of the Boys Town In-Home Program</td>
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<td>Leadership Training in Emotional Disturbance Disorders</td>
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<td>Fabrikant, Ilya</td>
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<td>Electron-Molecule Collisions in Different Environments</td>
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Faller, Ronald  Midwest Roadside Safety Facility
* Dynamic Evaluation of Cable Guide Rail with Strong and Standard J-Bolts under MASH
$257,478  Nebraska Department of Roads

Bielenberg, Robert  Midwest Roadside Safety Facility
Lechtenberg, Karla  Midwest Roadside Safety Facility
Reid, John  Mechanical & Materials Engineering
Stolle, Cody  Midwest Roadside Safety Facility

Adaptation of the SAFER Barrier for Roadside and Median Applications
$990,000  Nebraska Department of Roads
Reid, John  Mechanical & Materials Engineering

Bielenberg, Robert  Midwest Roadside Safety Facility
Lechtenberg, Karla  Midwest Roadside Safety Facility
Reid, John  Mechanical & Materials Engineering
Stolle, Cody  Midwest Roadside Safety Facility

Enhancement of Research Infrastructure at the Midwest Roadside Safety Facility
$346,000  Nebraska Department of Roads

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 for Medieval North America
$469,398  NSF
Hu, Qi (Steve)  Natural Resources
Oglesby, Robert  Earth and Atmospheric Sciences / Natural Resources
Rowe, Clinton  Earth and Atmospheric Sciences

Ferguson, Richard  Agronomy and Horticulture
* Interactions of Water and Nitrogen Supply for Irrigated Corn across Field Landscapes
$321,530  John Deere
Irmak, Suat  Biological Systems Engineering
Shaver, Timothy  West Central Research and Extension Center
van Donk, Simon  West Central Research and Extension Center

* Evaluation of Flue Gas Desulfurization Gypsum (FGDG) as a Soil Amendment for Irrigated Crop Production
$256,292  Public Power Generation Agency
Luck, Joe  Biological Systems Engineering
McCallister, Dennis  Agronomy and Horticulture

Fernando, Samodha  Animal Science
* Dietary Intervention and Microbial Community Analysis toward Methane Mitigation
$749,941  USDA-AFRI
Erickson, Galen  Animal Science
Jenkins, Karla  Panhandle Research and Extension Center
Klopfenstein, Terry  Animal Science
Luebbe, Matthew  Panhandle Research and Extension Center
Rasby, Richard  Animal Science
Flores, Rolando  
Food Science and Technology  
Midwest Advanced Food Manufacturing Alliance  
$319,775  
USDA-CSREES

Fomenko, Dmitri  
Biochemistry  
Methionine Sulfoxide Reduction, Selenium and Aging  
$248,679  
NIH-NIA through Harvard Med School-Brigham & Women’s

Fontaine, Joseph  
Natural Resources  
Assessing the Effects of Habitat Incentive Programs and Public Access Programs on Pheasant Population Dynamics and Hunter Harvest  
$405,382  
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

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

Franti, Thomas  
Biological Systems Engineering  
Heartland Regional Water Coordination Initiative  
$571,988  
USDA-CSREES through Iowa State University
Wortmann, Charles  
Agronomy and Horticulture

Gardner, Scott  
Biological Sciences/University of Nebraska State Museum  
Mongolia Vertebrate Parasite Project  
$627,491  
NSF
Enabling Access to Priority Taxa for Biodiversity Studies in the Manter Laboratory of Parasitology  
$546,597  
NSF
Jimenez-Ruiz, Francisco  
University of Nebraska State Museum

Gaussoin, Roch  
Agronomy and Horticulture  
Evaluation of FRAC Group C Fungicides and Compounds Designed to Amplify Physiological Benefits on Mitochondrial and Whole Leaf Respiration  
$204,252  
Syngenta
Schlegel, Vicki  
Food Science and Technology

Gay, Timothy  
Physics and Astronomy  
* Polarized Electron Physics  
$635,000  
NSF
MRI: Development of a Rubidium Spin Filter as a Source of Polarized Electrons  
$300,000  
NSF
Batelaan, Herman  
Physics and Astronomy
Uiterwaal, Cornelis  
Physics and Astronomy
Giannakas, Konstantin  
Center For Agricultural and Food Industrial Organization-  
Policy Research Group (CAFIO-PRG)  
$766,166  
USDA-NIFA  
Anderson, John  
Economics  
Burbach, Mark  
Natural Resources  
Calow, Peter  
Research and Economic Development  
Fulginiti, Lilyan  
Agricultural Economics  
Hayes, Michael  
Natural Resources  
Lubben, Bradley  
Agricultural Economics  
Lynne, Gary  
Agricultural Economics  
Perrin, Richard  
Agricultural Economics  
Schoengold, Karina  
Agricultural Economics  
Thompson, Eric  
Bureau of Business Research  
Yiannaka, Amalia  
Agricultural Economics

Glover, Todd  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
State-Wide Response to Intervention  
Consortium for Training & Evaluation  
$458,330  
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

Goodman, Richard  
Food Science and Technology  
In Vitro IgE Testing of a Biotech Soybean Event LEPI 2800  
$225,755  
Pioneer Hi-Bred  
Food Allergen Database  
Various Industries

Goosby, Bridget  
Sociology  
Intergenerational Transmission of Race Disparities in Health  
$546,345  
NIH-NICHD

Gosselin, David  
Natural Resources  
Global Climate Change Education:  
Research Experiences, Modeling and Data  
$349,973  
NASA  
Bonnstetter, Ron  
Teaching, Learning and Teacher Education  
Low, Russanne  
Natural Resources  
Oglesby, Robert  
Earth and Atmospheric Sciences/  
Natural Resources  
Online Master’s Degree in Applied Science Education  
$540,345  
Toyota USA Foundation  
Bonnstetter, Ronald  
Teaching, Learning and Teacher Education  
Strand, Billie  
Extended Education and Outreach
Graef, George  Agronomy and Horticulture
Quality Traits Regional Tests
United Soybean Board/Smith/Bucklin
$236,490

Soybean Breeding and Genetic Research for Nebraska
$215,261  Nebraska Soybean Board
Specht, James  Agronomy and Horticulture

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

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

Gruverman, Alexei  Physics and Astronomy
Nanoscale Resistive Switching Behavior of Ferroelectric and Multiferroic Tunnel Junctions
$750,000  DOE
Tsymbal, Evgeny  Physics and Astronomy
Nanoscale Studies of Pyroelectric and Thermoelectric Phenomena
$600,000  DOE
Ducharme, Stephen  Physics and Astronomy

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

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
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<td>Molecular Evolution of Genes Expressed in <em>D. melanogaster</em> Sperm Storage Structures</td>
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<td>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</td>
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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
Brewer, Gary  Entomology
Lagrimini, Mark  Agronomy and Horticulture
Steadman, James  Plant Pathology

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

Hergert, Gary  Panhandle Research and Extension Center
Economic Implications of Reduced Ground Water Allocations in the Nebraska Panhandle and Educational Programming to Improve Management with Less Water
$ 207,676  North Platte NRD
Burgener, Paul  Panhandle Research and Extension Center
Lyon, Drew  Panhandle Research and Extension Center
Martin, Derrel  Biological Systems Engineering
Pavlista, Alexander  Panhandle Research and Extension Center
Santra, Dipak  Panhandle Research and Extension Center
Supalla, Raymond  Agricultural Economics

Hibbing, John  Political Science
DHB: Identifying the Biological Underpinnings of Political Temperaments
$587,068  NSF
Dodd, Michael  Psychology
Espy, Kimberly Andrews  Psychology
Smith, Kevin  Political Science
Wiebe, Sandra  Psychology

Higley, Leon  Natural Resources
Establishing Blow Fly Development and Sampling Procedures to Estimate Postmortem Intervals
$483,323  DOJ-National Institute of Justice

Hofmann, Tino  Electrical Engineering
Ellipsometric Materials Characterization of Electronic Thin Film Heterostructures
$217,868  DOC-NIST
Schubert, Mathias  Electrical Engineering
Hogan, Tiffany  Special Education and Communication Disorders
Working Memory and Word Learning in Children with Typical Development and Language Impairment
$586,879  NIH-NIDCD through Arizona State University

Holmes, Mary Anne  Earth and Atmospheric Sciences
Building a Community of Women Geoscience Leaders
$228,774  NSF

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
Feng, Song  Natural Resources
Oglesby, Robert  Earth and Atmospheric Sciences

Huang, Jinsong  Mechanical & Materials Engineering
* Room-Temperature Operation Single-Photon Detectors Based on Nanoparticle Super-Gated Organic Field Effect Transistors
$300,000  NSF

Extremely Sensitive Solid-State Ultraviolet Photodetector by Fabricated Low-Cost Solution Process
$628,183  DoD-ONR
Tailoring the Energy Levels of Donor and Acceptor in Organic Photovoltaics for Increased Photovoltage with Ferroelectric Dipole Layer
$416,000  NSF
Ducharme, Stephen  Physics and Astronomy
Highly Sensitive, Low Cost Organic Photodetector-Based Photomultiplication
$300,000  DoD-DTRA

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<td>A Roadway Wind/Solar Hybrid Power Generation and Distribution System:</td>
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<td>Pilot Project: A Multidisciplinary Exploratory Study of Alpine Cairns, Baranof</td>
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<td>* Impact of Rotational Cover Crops on Soil Quality Parameters, Soil</td>
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<td>Water Holding Capacity, Soil-Water Retention Curves, and Field-Scale</td>
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<td>* Impact of Tillage Practices on Corn and Soybean Transpiration, Nutrient</td>
<td>Eisenhauer, Dean</td>
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Iyengar, Srikanth  Mathematics
Commutative Algebra: Homological and Homotopical Aspects
$435,785  NSF
Derived Categories of Complete Intersections and Hochschild Cohomology
$210,528  NSF

Jiang, Hong  Computer Science and Engineering
CSR: Small: SANE:
Semantic-Aware Namespace in Exascale File Systems
$249,053  NSF
Liu, Xue  Computer Science and Engineering
Turbo Button: A Semantically Smart Flash Memory Layer for Internet-Scale Storage Systems
$471,631  NSF
CSR: Small: ProActive:
A RAID Protection Activator for High Availability
$474,739  NSF

Johnson, Scott  Biological Process Development Facility
STTR: Process Research, Development and Stability Testing of cv-PDG-NLS.
$763,023  DHHS-NIH through Restoration Genetics Inc
Van Cott, Kevin  Chemical and Biomolecular Engineering
Process Research and Development of a Streptococcus pneumoniae Whole Cell Vaccine (SPWVC)
$578,920  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

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

Kilic, Ayse  Natural Resources/Civil Engineering  CPNRD Mapping Evapotranspiration with High Resolution Satellite Data  $325,789  Central Platte NRD

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

Knops, Johannes  Biological Sciences  LTER: Biodiversity, Disturbance & Ecosystem Functioning at the Prairie-Forest Border  $200,280  NSF through University of Minnesota

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

Koelsch, Richard  Biological Systems Engineering/ Extension  Nebraska EIPM-CS Coordination Program  $669,915  USDA-CSREES

Shulski, Martha  Natural Resources  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

Hayes, Michael  Natural Resources

Baxendale, Fred  Entomology

Bernards, Mark  Agronomy and Horticulture

Bradshaw, Jeffrey  Panhandle Research and Extension Center

Gaussoin, Roch  Agronomy and Horticulture

Hygnstrom, Scott  Natural Resources

Jackson, Tamra  Plant Pathology

Kamble, Shripat  Entomology

Ogg, Clyde  Agronomy and Horticulture

Reicher, Zac  Agronomy and Horticulture

Streich, Anne  Agronomy and Horticulture

Timmerman, Amy  Plant Pathology

Wright, Robert  Entomology

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<td>Koszewski, Wanda</td>
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<td>Li, Xu</td>
<td>Civil Engineering</td>
<td>Bioaccumulation of Antibiotic Resistant Salmonella in Produce after Irrigation Using Recycled Waters</td>
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<td>Crop-Wild Gene Flow in Sorghum and Relative Fitness of the Shattercane x Sorghum F2 Population</td>
<td>$300,000</td>
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<td>Liou, Sy-Hwang</td>
<td>Physics and Astronomy</td>
<td>High Sensitivity Magnetoresistive Sensors for Both DC and EMI Magnetic Field Mapping</td>
<td>$650,000</td>
<td>DoD-Strategic Environmental Research Development Program</td>
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<td>Second Generation Biofuels: Carbon Sequestration and Life Cycle Analysis</td>
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<td>Lodl, Kathleen</td>
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<td>* Click2SciencePD Prototype Phase</td>
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<td>Lorenz, Aaron</td>
<td>Agronomy and Horticulture</td>
<td>* Uncovering the Genetic Basis of Tolerance to Goss’s Wilt in North American Maize</td>
<td>$293,431</td>
<td>Dow AgroSciences Plant Pathology</td>
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Lu, Ying  Computer Science and Engineering  
CSR: Small: Energy Management  
for Heterogeneous MapReduce Data Centers  
$432,932  NSF  
Swanson, David  Computer Science and Engineering  

Lu, Yongfeng  Electrical Engineering  
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  NSF  
Black, Paul  Biochemistry  
Chandra, Namas  Mechanical & Materials Engineering  
Ducharme, Stephen  Physics and Astronomy  
Pannier, Angela  Biological Systems Engineering  
Zhou, You  Center for Biotechnology  

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

Laser-Assisted Chemical Vapor Deposition of Carbon Nanotubes  
$275,000  Panasonic Boston Laboratory  
Synthesis of Crystalline Carbon Nitride  
by Simultaneous Vibrational and Electronic Excitations  
$255,771  NSF  

Mackenzie, Sally  Biological Sciences/  
Agronomy and Horticulture/  
Center for Plant Science Innovation  
* Understanding MSH1 Developmental Reprogramming  
$925,482  Syngenta  
Elucidation of Mito-Nuclear Interplay in Arabidopsis  
$689,961  DOE  
Wang, Dong  Statistics  

GEPR: Intersection of the Plant Epigenome and  
Bioenergetics in Phenotypy  
$599,998  NSF  
Fromm, Michael  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
McCurdy, Merilee  
**Educational Psychology**
Training School Psychologists in Response-to-Intervention Implementation and System Change

$799,981  
ED

Daly, Edward  
**Nebraska Center for Research on Children, Youth, Families and Schools**

Ihlo, Tanya  
**Nebraska Center for Research on Children, Youth, Families and Schools**

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

**Mitra, Amit**  
**Plant Pathology**
* Development of Transgenic Beans for Broad-Spectrum Resistance against Fungal Diseases

$250,000  
USDA-NIFA

Steadman, James  
**Plant Pathology**

Urrea Flores, Carlos  
**Panhandle Research and Extension Center**

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

Moriyama, Etsuko  
**Center for Plant Science Innovation**
Large-Scale Simultaneous Multiple Alignment & Phylogeny Estimation

$266,830  
NSF

Mower, Jeffrey  
**Agronomy/Horticulture**

Tracing Processes of Genome Evolution using Plantaginaceae

$594,190  
NSF

The Geraniaceae Genomes Project: Accelerated and Coordinated Evolution across the Three Plant Genomes

$720,444  
NSF through University of Texas at Austin

Nastasi, Michael  
**Nebraska Center for Energy Sciences Research**

* Radiation Tolerance and Mechanical Properties of Advanced Ceramic/Metal Composites

$979,978  
DOE
Negahban, Mehrdad  Mechanical & Materials Engineering
   Polymer Parts with Tailored Microstructure Distributions Optimized for an Application
   $837,503  DoD-MDA
Tan, Li  Mechanical & Materials Engineering

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

Nelson, Carl  Mechanical & Materials Engineering
   * REU Site: Undergraduate Research Opportunities in Biomedical Devices at the University of Nebraska–Lincoln
   $303,265  NSF
Bashford, Gregory  Biological Systems Engineering

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

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
   $209,723  ED
Hopkins, Megan  Educational Psychology
Shell, Duane  Educational Psychology

Osorio, Fernando  Veterinary Medicine and Biomedical Sciences
   Immunologic Consequences of PRRSV Diversity
   $394,271  USDA-NIFA through Kansas State University

Pannier, Angela  Biological Systems Engineering
   Microarray Analysis of Gene Expression Profiles in Cells Transfected with Nonviral Gene Delivery Vectors
   $307,809  American Heart Association

Pattnaik, Asit  Veterinary Medicine and Biomedical Sciences
   Porcine Reproductive and Respiratory Syndrome Virus: Modulation of Innate and Acquired Immune Response
   $484,245  USDA-NIFA
Osorio, Fernando  Veterinary Medicine and Biomedical Sciences
Paul, Prem  Research and Economic Development  
Nebraska Innovation Center (Whittier) to Renovate and Improve the Whittier School for Use as the Nebraska Innovation Center  
$656,600  HUD

Pegg, Mark  Natural Resources  
Platte River Catfish Population Dynamics  
$530,321  Nebraska Game and Parks Commission

Missouri River Sportfish Ecology and Management  
$401,210  Nebraska Game and Parks Commission

Sturgeon Management in the Platte River  
$801,000  Nebraska Game and Parks Commission

Perez, Lance  Electrical Engineering  
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

Pope, Kevin  Natural Resources  
* NCFWRU: Population Assessments of Temperate Basses in Nebraska Reservoirs  
$212,683  Nebraska Game and Parks Commission

Chizinski, Christopher  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  
$686,300  Nebraska Game and Parks Commission

Brown, Mary  Natural Resources

Fontaine, Joseph  Natural Resources

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

* SBES: Medium: Investigating the Role of Distrust in Unauthorized Online Activities
Using an Integrated Sociotechnical Approach

$490,758  NSF
Hayes, Michael  Natural Resources
Samal, Ashok  Computer Science and Engineering
Soh, Leen-Kiat  Computer Science and Engineering
Tomkins, Alan  Law/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

* Cognitive Prediction-Enabled Online Intelligent Fault Diagnosis and Prognosis for Wind Energy Systems

$359,852  NSF

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

$214,754  NSF
Rack, Frank  Earth and Atmospherics Sciences/ Antarctic Geological Drilling Program  
* SIMPLE: Sub-Ice Investigation of Marine and Planetary-Analog Ecosystems  
$338,494  NASA through University of Texas at Austin  
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  
Rajca, Andrzej  Chemistry  
REU Site: Research Experiences for Undergraduates in Chemical Assembly at the University of Nebraska  
$270,000  NSF  
Griep, Mark  Chemistry  
Stains, Marilyne  Chemistry  
Stable High-Spin Polyradicals & Chiral Pi-Conjugated Systems  
$508,191  NSF  
Rajurkar, Kamlakar  Industrial and Management Systems Engineering  
Theoretical and Experimental Study of Debris Removal & Tool Wear in Micro-EDM  
$250,000  NSF  
Ramamurthy, Byravamurthy  Computer Science and Engineering  
Mobility First: A Trustworthy Mobility-Centric Architecture for the Future Internet  
$337,476  NSF  
Dynamic Optimized Advance Scheduling of Bandwidth Demands  
$449,976  DOE  
Ramer-Tait, Amanda  Food Science and Technology  
* Impact of Escherichia coli Colonization on Susceptibility to Inflammatory Insults  
$217,379  Crohn’s and Colitis Foundation of America  
Ratcliffe, Brett  Entomology/ University of Nebraska State Museum  
Faunistic Survey of Dynastinae of Mexico, Guatemala, & Belize  
$481,493  NSF
Rebarber, Richard  
Mathematics  
Nebraska Math Scholars  
$599,996  
Curto, Carina  
Mathematics  
$200,000 — $999,999  
Hartke, Stephen  
Mathematics  
$200,000 — $999,999  
Hunter, Amber  
Student Affairs  
$200,000 — $999,999  
Woodward, Gordon  
Mathematics  

REU Site: Nebraska REU in Applied Math  
$324,492  
Tenhumberg, Brigitte  
Biological Sciences  

Reddy, N.R. Jayagopala  
Veterinary Medicine and Biomedical Sciences  
$308,000  

Reid, John  
Mechanical & Materials Engineering  
Wisconsin DOT Roadside Safety Research Program FY 2012  
$606,572  
Bielenberg, Robert  
Midwest Roadside Safety Facility  
Faller, Ronald  
Midwest Roadside Safety Facility  
Lechtenberg, Karla  
Midwest Roadside Safety Facility  
Sicking, Dean  
Civil Engineering/ Midwest Roadside Safety Facility  

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

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

Midwest States Regional Pooled Fund Program  
$650,000  
Sicking, Dean  
Civil Engineering/ Midwest Roadside Safety Facility  
Faller, Ronald  
Midwest Roadside Safety Facility  
Bielenberg, Robert  
Midwest Roadside Safety Facility  

Richardson, Amanda  
Sociology  
* Behavioral Risk Factor Surveillance Survey 2012  
$605,859  


$200,000 — $999,999
Rilett, Laurence  Civil Engineering/Nebraska Transportation Center
* Enhance Awareness of Transportation and Transportation Careers - Fast Forward
$200,000  Department of Transportation-FHWA
Kunz, Gina  Nebraska Center for Research on Children, Youth, Families and Schools
Welch, Greg  Nebraska Center for Research on Children, Youth, Families and Schools

$300,000  Nebraska Transportation Center Seed Funding Nebraska Department of Roads

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

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

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

Sarma, Anita  Computer Science and Engineering
HCC: 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  
**Public Policy Center/Psychology**  
* Improving Insider Threat Reporting  
$392,274  
DoD through Northrop Grumman Corporation

Bulling, Denise  
**Public Policy Center**  
Post-Secondary Institutions Safety Threat Assessment  
Technical Assistance Center  
$769,537  
DHS through Nebraska Military Department-NEMA

Yardley, Owen  
**UNL Police**

Schacht, Walter  
**Agronomy and Horticulture**  
* Demonstrating Grazing Land Resilience to Drought in the Central and Northern Great Plains  
$363,120  
USDA-NRCS through South Dakota State University

Knutson, Cody  
**Natural Resources**

Stackton, Matthew  
**West Central Research and Extension Center**

Volesky, Jerry  
**West Central Research and Extension Center**

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

Seth, Sharad  
**Computer Science and Engineering**  
HECURA: A New Semantic-Aware Metadata Organization for Improved File-System Performance and Functionality in High-End Computing  
$344,552  
NSF

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

Sharif-Kashani, Hamid  
**Computer and Electronics Engineering**  
$749,924  
DOT-FRA

Hempel, Michael  
**Computer and Electronics Engineering**
Shearman, Robert  Agronomy and Horticulture
Buffalograss Breeding, Evaluation and Management for Golf Course
$330,000  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-IES
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
Siegfried, Blair  
Utilization of RNAi to Validate Putative Cry Protein Receptors in the Western Corn Rootworm, *Diabrotica virgifera virgifera*  
$211,229  
Dow AgroSciences  
Assessing the Risk of European Corn Borer Adaptation to Transgenic Bt Maize  
$400,000  
USDA-NIFA  

Smith, Stacey  
* Evolution and Diversification of Red Flowers: Testing the Macroevolutionary Causes of Rarity  
$359,999  
NSF  

Smyth, Jolene  
Using Survey Methodology Research to Assist with Design Improvements and/or the Redesign of Surveys Related to Science, Engineering and Agriculture  
$200,000  
USDA-NASS  
Olson, Kristin  
Sociology/Gallup Research Center  

Snow, Gregory  
GAANN Fellowships for Physics at UNL  
$400,704  
ED  
Adenwalla, Shireen  
Batelaan, Herman  
Claes, Daniel  
Dominguez, Aaron  
Gay, Timothy  
Uiterwaal, Cornelis  

Soh, Leen-Kiat  
Integrating Computational and Creative Thinking (IC2Think)  
$250,000  
NSF  
Ingraham, Elizabeth  
Ramsay, Stephen  
Shell, Duane  

CPATH CDP: Renaissance Computing: Concept Development and Planning  
$217,970  
NSF  
Meyer, George  
Moore, Brian  
Moriyama, Etsuko  
Ramsay, Stephen  
Samal, Ashok  
Scott, Stephen  
Shell, Duane  
Thomas, William  

iLOG: Embedding & Validating Empirical Usage Intelligence in Learning Objects  
$409,705  
NSF  
Nugent, Gwen  
Samal, Ashok  

$200,000 – $999,999
Soundararajan, Madhavan  Biochemistry  
The Hunt for Green Every April: Factors Affecting Fitness in Switchgrass  
$289,424  USDA-ARS

Spangler, Matthew  Animal Science  
National Program for Genetic Improvement of Feed Efficiency in Beef Cattle  
$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

Stains, Marilyne  Chemistry  
* WIDER: EAGER Evidence-Based Instructional Practices in Action: Enhancing Exemplary Teaching at the University of Nebraska–Lincoln  
$299,703  NSF
Ducharme, Stephen  Physics and Astronomy  
Lee, Kevin  Center for Science, Mathematics and Computer Education  
Morris, T. Jack  Biological Sciences

Starace, Anthony  Physics and Astronomy  
Strong Field & Ultrafast Atomic and Molecular Processes  
$279,000  NSF

Staswick, Paul  Agronomy and Horticulture  
Deciphering Novel Signaling Roles for Amino Acid Conjugates of Jasmonic Acid  
$249,969  NSF

Steadman, James  Plant Pathology  
A Search for Improvement & Resistance in Common Bean through Multi-Site Screening & Pathogen Characterization  
$261,794  USDA-ARS

Stockton, Matthew  West Central Research and Extension Center  
Whole-Farm Economic Biological Stochastic Simulation Model of Small to Medium Cow-calf Firms with Research, Teaching and Extension Modules  
$499,740  USDA-NRICGP

Storz, Jay  Biological Sciences  
The Mechanistic Basis of Parallel Evolution: Functional Analysis of Hemoglobin Polymorphism in Andean Ducks  
$378,104  NSF
Moriyama, Hideaki  Biological Sciences/Center for Biotechnology
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<td>Food Science and Technology</td>
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<td>* Modeling of Interaction of Microwaves</td>
<td>with Food and Packaging (Shielded)-Phase II</td>
<td>ConAgra</td>
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<td>Improving the Safety of Prepared, But Not Ready-To-Eat Microwavable Foods through Heat Transfer and Pathogen Destruction Modeling</td>
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<td>NSF through University of Wisconsin-Madison</td>
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<td>Takacs, James</td>
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<td>Catalytic Asymmetric Hydroboration: Uncapping the Potential with Two-Point Binding Substrates</td>
<td>NIH-NIGMS</td>
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<td>molecularly Intercalated Nanoflakes: A Supramolecular Alloy for Strong Energy Absorption</td>
<td>NSF</td>
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<td>Self-Organized Nanolayers for Organic Thin-Film Transistors</td>
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$200,000 — $999,999
Taylor, Stephen  Food Science and Technology
Effects of Food Processing on Food Allergens - Assessment and Improvement of Detection Methods
$500,000  USDA-NIFA
Baumert, Joseph  Food Science and Technology
Hutkins, Robert  Food Science and Technology
Keshwani, Deepak  Biological Systems Engineering
Subbiah, Jeyamkondan  Biological Systems Engineering/
Food Science and Technology
Primary and Secondary Prevention of Peanut and Tree Nut Allergy
$275,000  USDA-ARS
Baumert, Joseph  Food Science and Technology
Determination of Minimal Elicitation Dose for Almond in Almond-Allergic Individuals
$261,000  Almond Board of California

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

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

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

Tsymbal, Evgeny  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
$215,000  NSF through University of Wisconsin

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

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

Umstadter, Donald  Physics and Astronomy
$442,915  DoD-Offutt Air Force Base-STRATCOM through NSRI
Banerjee, Sudeep  Physics and Astronomy
Chen, Shouyuan  Physics and Astronomy

Van Cott, Kevin  Chemical and Biomolecular Engineering
Structural Characterization of Recombinant Glycoproteins
$331,923  Inspiration Biopharmaceuticals

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

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

$200,000 — $999,999
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

Variyam, 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

Wagner, Demet  
Management  
$283,879  
NSF

Walia, Harkamal  
Agronomy and Horticulture  
Early Seed Development under Stressful Environments  
$557,708  
NSF
Wang, Dong  
Statistics

Walter, Jens  
Food Science and Technology  
Application of a Novel Symbiotic 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
$429,637  NASA

Waters, Brian  Agronomy and Horticulture
* Exploring Iron & Copper Cross-Talk in Iron Deficient Arabidopsis Thaliana
$391,077  NSF

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

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

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
* Intracellular Defenses against Foreign DNA: Insights from Poxvirus-Infected Cells
$340,339  NIH-NIAID

BAF: an Intrinsic Host Defense Responsive to Foreign DNA
$270,000  NIH-NIAID

Wiener, Richard  Psychology
Objectification, Affective Forecasting, and Sexual Harassment
$300,000  NSF
Gervais, Sarah  Psychology
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
$506,955  NSF

Wood, Charles  Biological Sciences/Nebraska Center for Virolgy
Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center
$314,643  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, Merchandising and Fashion Design
Resistance of Sulfur Dyed Fabrics to Oxidative Bleaching & Acidic Tendering: Improvement & Application
$300,618  Procter & Gamble

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

Yu, Bin  Biological Sciences/Center for Plant Science Innovation
Understanding DAWDLE Function in miRNA and siRNA Biogenesis
$499,504  NSF
<table>
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<tr>
<th>Name</th>
<th>Department</th>
<th>Project Title</th>
<th>Funding Agency</th>
<th>Amount</th>
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<td>Zempleni, Janos</td>
<td>Nutrition and Health Sciences</td>
<td>Biotin Sensing and Chromatin Remodeling by Holocarboxylase Synthetase</td>
<td>NIH-NIDDK</td>
<td>$800,742</td>
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<td>Zera, Anthony</td>
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<td>Nutritional Physiology of Life History Allocation Trade-Offs</td>
<td>NSF</td>
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<td>Zhang, Tian</td>
<td>Civil Engineering</td>
<td>Influence of Soil Particle Size Fractions and Environmental Conditions on Fate and Transport of Hormones in Soils</td>
<td>NSF</td>
<td>$300,000</td>
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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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Title</th>
<th>Funding</th>
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<tr>
<td>Avalos, George</td>
<td>Mathematics</td>
<td>Analysis, Computation and Control of Coupled Partial Differential Equation Systems</td>
<td>$182,898 NSF</td>
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<td>Barletta, Raul</td>
<td>Veterinary Medicine and Biomedical Sciences</td>
<td>Isolation and Verification of Mycobacterium tuberculosis Mutant Strains</td>
<td>$122,532 NIH-NIAID through Texas A&amp;M University</td>
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<td>Benson, Andrew</td>
<td>Food Science and Technology</td>
<td>Genetic Control over the Gut Microbiome Composition</td>
<td>$997,732 NIH-NIDDK</td>
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<td>Moriyama, Etsuko</td>
<td>Biological Sciences/Center for Plant Science Innovation</td>
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<td>Bevins, Rick</td>
<td>Psychology</td>
<td>Acquired Appetitive Properties of Nicotine</td>
<td>$533,413 NIH-NIDA</td>
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<td>Black, Paul</td>
<td>Biochemistry</td>
<td>Fatty Acid Transport in Eukaryotes</td>
<td>$627,878 NIH-NIGMS</td>
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<td>DiRusso, Concetta</td>
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<td>Blum, Paul</td>
<td>Biological Sciences</td>
<td>Metabolic Engineering Studies of Extreme Thermoacidophily</td>
<td>$260,406 NIH through North Carolina State University</td>
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<td>Center on Children, Families and the Law</td>
<td>Management Information System</td>
<td>$81,314 Nebraska Management Information System</td>
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<td>Physics and Astronomy</td>
<td>Ultrafast Electron Diffraction from Aligned Molecules</td>
<td>$600,000 DOE</td>
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<td>Chandra, Namas</td>
<td>Engineering</td>
<td>Factors that Facilitate or Inhibit Enrollment of Domestic Engineering PhD Students: A Mixed Methods Study</td>
<td>$149,851 NSF</td>
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<td>Weissinger, Ellen</td>
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<td>Smith, Michelle Howell</td>
<td>Graduate Studies</td>
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Curto, Carina  Mathematics  
Stimulus Representation and Spontaneous Activity in Recurrent Networks  
$109,635  NSF  

Dominguez, Aaron  Physics and Astronomy  
MRI-R2: Development of a Pixel Detector for the Upgraded CMS Experiment  
$263,430  NSF through University of Kansas Center for Research  
Bloom, Kenneth  Physics and Astronomy  
Gay, Timothy  Physics and Astronomy  
Polarized Electron Physics  
$610,000  NSF  

Grosskopf, Kevin  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  
Bloom, Kenneth  Durham School of Architectural Engineering and Construction  
Gay, Timothy  Durham School of Architectural Engineering and Construction  

Hancock, Connie  Panhandle Research and Extension Center  
Nebraska Broadband Planning  
$2,472,652  Nebraska Public Service Commission  
Norton, Terri  Durham School of Architectural Engineering and Construction  
Shi, Jonathan  Durham School of Architectural Engineering and Construction  

Hanson, Paul  Natural Resources  
REU Site: Dune Undergraduate Geomorphology and Geochronology Project in Wisconsin  
$45,331  NSF  

Harris, Steven  Plant Pathology/Center for Plant Science Innovation  
Evolutionary Genetics of Morphogenetic Regulatory Systems in Fungi  
$392,796  NSF  

Harshman, Lawrence  Biological Sciences  
Nebraska Research Network in Functional Genomics INBRE  
$242,092  NIH through UNMC  

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

Jorgensen, Stacia  Sociology  
Communities Putting Prevention to Work  
$134,806  Douglas County Health Department  
McQuillan, Julia  Sociology
Li, Yusong  
Civil Engineering  
Fate and Transport of Metal-Based Nanoparticles in the Subsurface  
$122,572  
NSF through Tufts University

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

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

Paul, Prem  
Research and Economic Development  
Nebraska Center for Virology Facility Expansion  
$8,000,000  
NIH-NCRR
Wood, Charles  
Biological Sciences/Nebraska Center for Virology

Chandra, Namas  
Mechanical & Materials Engineering  
Lu, Yongfeng  
Electrical Engineering  
Umstadter, Donald  
Physics and Astronomy  
Wedige, Alan  
Facilities Management

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

Rack, Frank  
Earth and Atmospheric Sciences/Antarctic Geological Drilling Program  
Response to Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) Project: Drilling Support Overview and Requirements Request  
$3,097,964  
NSF through Montana State University/Northern Illinois University/University of California, Santa Cruz

ANDRILL Coulman High Project – Investigating Antarctica’s Role in Cenozoic Global Environmental Change Phase 1 (Site Surveys)  
$2,684,370  
NSF
Fischbein, Steven  
Antarctic Geological Drilling Program
Harwood, David  
Earth and Atmospheric Sciences
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

Sellmyer, David  Physics and Astronomy/Nebraska Center for Materials and Nanoscience
MRI-R2: Acquisition of FEG TEM/STEM for Materials and Nanotechnology Research and Education
$1,300,000  NSF
Cheung, Chin Li  Chemistry
Robertson, Brian  Mechanical & Materials Engineering
Schubert, Eva  Electrical Engineering
Shield, Jeffrey  Mechanical & Materials Engineering

High Energy Permanent Magnets for Hybrid Vehicles and Alternative Uses
$674,998  DOE through University of Delaware
Shield, Jeffrey  Mechanical & Materials Engineering
Skomski, Ralph  Physics and Astronomy

Shank, Nancy  Public Policy Center
Health Information Technology Extension Program (HIT EP) Local Workforce Development Coordination
$285,861  CIMRO of Nebraska

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

Shield, Jeffrey  Mechanical & Materials Engineering
REU Site: Undergraduate Research Opportunities in Nanomaterials and Nanoscience at the University of Nebraska–Lincoln
$360,000  NSF
Enders, Susan  Mechanical & Materials Engineering
Subramanian, Anuradha  Chemical and Biomolecular Engineering
Design and Evaluation of Ultrasound Stimulation-Aided Bioreactor Configurations
$533,941  NIH-NCRR

Turner, Joseph  Mechanical & Materials Engineering

Tan, Li  Mechanical & Materials Engineering
Free-Standing All-Nanoparticle Thin Fibers: A Novel Building Block for Organic Photovoltaic Applications
$300,002  NSF

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

Tsymbal, Evgeny  Physics and Astronomy
FRG: Switchable Two-Dimensional Materials at Oxide Hetero-Interfaces
$210,000  NSF through University of Wisconsin-Madison

Whitbeck, Les  Sociology
Novel Approaches to Understanding Mental Disorder, Substance Abuse and HIV-Risk Among Homeless Women
$400,715  NIH-NICHD

Wood, Charles  Biological Sciences/Nebraska Center for Virology
Immunofocusing for Kaposi’s Sarcoma-Associated Herpesvirus Neutralizing Epitopes
$990,796  NIH-NCI
$998,839  NIH-NCRR

Vaccination Against Mucosal HIV Clade C Transmission
$251,363  NIH-DFCI
$398,981  NIH-NCRR

Zhang, Shunpu  Statistics
A Computational Genotyping System for Improved Influenza Surveillance
$203,488  NIH through UNO

Zhang, Luwen  Biological Sciences/Nebraska Center for Virology
Modulation of Apoptosis by IRF-4 in EBV Transformation
$545,682  NIH-NCI
Early Career Awards
Active awards, July 1, 2012-June 30, 2013
* Indicates new in 2012-2013

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

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

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

Enders, Axel
Physics and Astronomy
Self-Assembled Magnetic Nanostructures
$411,850  NSF

Frank, Tracy
Earth and Atmospheric Sciences
Exploring the Geologic Record of Major Climate Transitions: Causes, Consequences, & Impacts on the Evolution of Earth Systems
$583,816  NSF

Gu, Linxia
Mechanical & Materials Engineering
* CAREER: Bridging Cellular-Level Changes to Vascular Tissue Response to Reveal Basic Mechanisms of Restenosis
$406,248  NSF
Hebets, Eileen
Biological Sciences
Evolution and Function of Complex Signaling in Wolf Spider Genus Schizocosa
$692,351  NSF

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

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

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

Pannier, Angela
Biological Sciences
* CAREER: Nanostructured Thin Films for Substrate-Mediated Gene Delivery
$419,051  NSF

Qiao, Wei
Electrical Engineering
CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration
$399,999  NSF

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

Vuran, Mehmet
Computer Science and Engineering
CAREER: Bringing Wireless Sensor Networks Underground
$418,760  NSF
Arts and Humanities Awards
$50,000 or more
Active awards, July 1, 2012-June 30, 2013
* Indicates new in 2012-2013

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.

Barney, Brett
University Libraries/Center for Digital Research in the Humanities
* Diachronic Markup and Presentation Practices for Text Editions in Digital Research Environments
$165,005  NEH
01/01/14 – 12/31/15

With support from the National Endowment for the Humanities, Brett Barney, research associate professor with University Libraries, in collaboration with scholars in Germany, is investigating ways to improve editing processes for digital scholarship, drawing on the experiences of existing author-focused digital projects to encode English- and German-language literature. The project involves testing practices for encoding texts to record not only the textual content but also the ways texts develop over time and across multiple drafts. The goals are to establish standards for this markup and to develop software components to provide user access to the encoded information. These outcomes will have broad applications in the area of digital scholarly editing.
With support of a grant from the National Endowment for the Humanities, Stephen Behrendt, George Holmes Professor of English, has developed a five-week summer seminar for college teachers to help participants reassess the historical influences upon modern conceptions of “British Romanticism.” The seminar’s goal is to reconceptualize and redefine issues of literary judgment, canonical status and varieties of audience response involved in British Romantic literary production.

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.

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

* Walt Whitman as an Author before Leaves of Grass
$330,000
NEH
08/01/13 – 07/31/16

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

* Walt Whitman and Post-Reconstruction America
$156,470
National Historical Publications and Records Commission
08/01/14 – 07/31/15
Barney, Brett
University Libraries/Center for Digital Research in the Humanities

The Walt Whitman Archive is collecting, editing, and publishing a full decade of Whitman’s correspondence, from 1877-1887, including all letters to and from Walt Whitman, and making them freely available online. A $156,000 award from the National Historical Publications Commission is funding this project, under the direction of Kenneth Price. The work involves editing anew materials previously treated by other editors in print, as well as gathering and presenting many additional materials never before treated. The proposed project builds on the existing infrastructure developed by the Whitman Archive over the past sixteen years. Students of American history will be able to see how the life and work of the nation’s most famous and innovative poet was interwoven with the social, cultural and political events of this troubled decade.

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

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

Seefeldt, William
History/Center for Digital Research in the Humanities
William Cody Research Project
Buffalo Bill Historical Center
$131,374
7/1/09 – 8/31/12

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

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.
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.

Walter also is leading UNL Libraries’ “Major Railroad Archival Collections” project. Funded by a three-year, $208,500 grant from the Andrew W. Mellon Foundation in cooperation with the Council of Library and Information Resources, the initiative will make the archival collections from four major railroads (Union Pacific, Charles J. Kennedy, Chicago Burlington and Quincy Lines West, and Val Kuska Burlington Northern) available through a single Web portal. The project’s goal is to enhance knowledge of railroad history and make it easier for historians and railroad aficionados to link multiple information sources that show how major railroad lines influenced the growth of U.S. cities and towns during the 19th century.

The National Endowment for the Humanities also is supporting 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
Pytlík 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.
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution/Department</th>
<th>Grant Amount</th>
<th>Funding Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Busch, Nancy</td>
<td>University Libraries</td>
<td>$5,580</td>
<td>Various Sources</td>
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<td>Ducey, Carolyn</td>
<td>Textiles, Merchandising and Fashion Design/International Quilt Study Center</td>
<td>$25,000</td>
<td>Institute of Museum and Library Services</td>
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<td>Elias Rowley, Kristen</td>
<td>University of Nebraska Press</td>
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<td>Teaching, Learning and Teacher Education/Lied Center for Performing Arts</td>
<td>$15,000</td>
<td>Mid-America Arts Alliance</td>
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<td>Jacobs, Margaret</td>
<td>History</td>
<td>$5,000</td>
<td>Nebraska Humanities Council</td>
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<tr>
<td>Richmond, John</td>
<td>Glenn Korff School of Music</td>
<td>$9,500</td>
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<td>Seefeldt, William</td>
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<tr>
<td>Shear, Donna</td>
<td>University of Nebraska Press</td>
<td>$30,100</td>
<td>University of Georgia</td>
</tr>
</tbody>
</table>

**Arts and Humanities Awards**
**$5,000-$49,999**
Active awards, July 1, 2012–June 30, 2013
* Indicates new in 2012-2013
Wahlqvist, Petra  
Lied Center for Performing Arts
* Residency with STREB
$20,000  NEA

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

Arts Across Nebraska Introduces Nebraskans of All Ages to Modern Dance, Leaving a Lasting Legacy Throughout the State
$20,000  NEA

Arts across Nebraska Extension
$23,000  Nebraska Arts Council

Yoon, Hye Yung  
Glenn Korff School of Music
Music for Hope Concert Series
$5,000  Woods Charitable Fund
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 licensing agreements with our industry partners between July 1, 2012, and June 30, 2013. (UNL faculty and staff are indicated in red. Other co-inventors are students, postdocs or collaborators at other institutions.)

2012-2013 LICENSE AGREEMENTS

**David Allen**, Engineering; **Yong Rak Kim**, Civil Engineering; Roberto F. Soares, Flavio Souza  
*Technology*: Computational Model for Predicting Asphaltic Pavement Life (2 licenses)

**Gary Anderson**, Veterinary and Biomedical Sciences  
*Technology*: BRSV Hybridoma Cell Line 8G12 Secreting Monoclonal Antibodies

**David J. Andrews, John Rajewski, Ismail M. Dweikat**, Agronomy and Horticulture; Linda Pavlish  
*Technology*: Nebraska Bioenergy Millet Hybrid (NBMH) aka “MooMillet”

**P. Stephen Baenziger**, Agronomy and Horticulture  
*Technology*: Alliance Hard Red Winter Wheat  
*Technology*: Millennium Hard Red Winter Wheat
P. Stephen Baenziger, Mitchell Montgomery, Carol Speth, Greg Dorn, Agronomy and Horticulture

**Technology:** Barley Experimental Lines: NB99875, NB07410, NB07411, NB07412, NB08428, NB09427, NB09433, NB09434, NB09437, NB99845 (=P-845), NB98919 (=P-919)

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P. Stephen Baenziger, Greg Dorn, Mitchell Montgomery, Agronomy and Horticulture

**Technology:** P-954, P-721, P-713, P-919 Winter Barley

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P. Stephen Baenziger, Greg Dorn, Mitchell Montgomery, Richard Little, Agronomy and Horticulture; Jerry Bohlmann

**Technology:** Hard Red Winter Wheat Cultivar NI04421 “Robidoux”

---

Christopher Alan Bruening, George Gogos, Mechanical & Materials Engineering; Brian Neilson

**Technology:** Vaporizer

---

Christopher Alan Bruening, George Gogos, Mechanical & Materials Engineering

**Technology:** Ignition Chamber

---

Neal M. Bryan, Richard A. Lombardo, Laurie Bellows, Graduate Studies; Steven E. Swartzer, Center for Teaching and Study of Applied Ethics; Sara Conrad, Research Compliance Services

**Technology:** Online Course in the Responsible Conduct of Research

---

Kenneth G. Cassman, James E. Specht, Agronomy and Horticulture; Albert Weiss, School of Natural Resources; Tri D. Setiyono, Achim Dobermann

**Technology:** SoySim - A Simulation Model for Soybean Growth and Yield

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Ian J. Cottingham, Kevin Farrell, Ashok Samal, Computer Science and Engineering; Alan Tomkins, Juan Paulo Ramirez, Public Policy Center; Brian Andrew Knapp

**Technology:** Proactive Police Patrol Information (P3i)

---

Ismail M. Dweikat, Agronomy and Horticulture

**Technology:** Kenaf and Tropical Maize
Ismail M. Dweikat, John Rajewski, Agronomy and Horticulture
Technology: Development of Seedless Sweet Sorghum Hybrid - 26127A x male #2

Shane M. Farritor, Mechanical & Materials Engineering
Technology: System for Imaging and Measuring Rail Deflection

Shane M. Farritor, Mechanical & Materials Engineering; Jack Mondry
Technology: Shape Memory Alloy Actuated Grasper for Minimally Invasive Surgical Robots

Shane M. Farritor, Mechanical & Materials Engineering; Thomas Frederick, Eric Markvicka
Technology: Unipolar Cautery Device with Suction/Irrigation for a Surgical Robot
Technology: Insertable Miniature in Vivo Surgical Robot with Embedded Control

Shane M. Farritor, Mechanical & Materials Engineering; Thomas Frederick, Eric Markvicka; Dmitry Oleynikov, UNMC
Technology: Insertion of a Surgical Robot into an Insufflated Body Cavity

Shane M. Farritor, Mechanical & Materials Engineering; Joe Bartels, Thomas Frederick, Eric Markvicka, Jack Mondry
Technology: Miniature In Vivo Surgical Robot for Single-Incision Surgery

Shane M. Farritor, Mechanical & Materials Engineering; Thomas Frederick, Joe Bartels
Technology: Bipolar Robotic End-Effector with Integrated Dissection Capabilities (Ligasure)

Shane M. Farritor, Mechanical & Materials Engineering; Tyler Wortman, Ryan L. McCormick, Eric Markvicka; Dmitry Oleynikov, UNMC
Technology: Robotic Surgical Devices, Systems and Related Methods

George L. Graef, Leslie Korte, Agronomy and Horticulture; Dennis White, Travis L. Wegner
Technology: Soybean Variety U03-300134
Technology: Soybean Variety U07-135601R
George L. Graef, Agronomy and Horticulture
Technology: U03-825124 Roundup Ready Soybean Variety

George L. Graef, Leslie Korte, Agronomy and Horticulture; Dennis White
Technology: NE3001 Soybean Variety
Technology: Soybean Germplasm

George L. Graef, Leslie Korte, Agronomy and Horticulture; Dennis White, Leandro Alberto Castenada Rivera
Technology: NEX2403K2R Round Up Ready Soybean Variety

George L. Graef, Leslie Korte, James E. Specht, Agronomy and Horticulture; Dennis White, Travis L. Wegner
Technology: Soybean Varieties

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

E. Charles Healey, Special Education and Communications Disorders
Technology: Cognitive, Affective, Linguistic, Motor and Social Assessment (CALMS)

Alan Kolok, Biology; Heiko Schoenfuss
Technology: Mini-mobile Environmental Monitoring Unit

Bryan Leavitt, School of Natural Resources
Technology: CDAP-2 CALMIT Data Acquisition Program-2

Haorong Li, Siu Kit Lau, Yanshun Yu, Durham School of Architectural Engineering and Construction; Tian Zhang, Civil Engineering-PKI-Omaha
Haorong Li, Yanshun Yu, Durham School of Architectural Engineering and Construction; Daihong Yu
Technology: A Low-cost, Scalable, Negative-pressure Gas Collection System
Technology: A Scalable, High-performance, Active-pressure Gas Collection System

Haorong Li, Yanshun Yu, Yong Kwon Cho, Durham School of Architectural Engineering and Construction; Daihong Yu

Haorong Li, Durham School of Architectural Engineering and Construction; Daihong Yu
Technology: A Rapid Two-stage Waste Bio-degradation System for Producing Sustainable Bio-heat, -gas, and -fertilizers

Aaron Lorenz, Agronomy and Horticulture; Tamra Jackson-Ziems, Plant Pathology
Technology: Molecular Markers for Screening for Tolerance to Goss’s Wilt

Sally Mackenzie, Agronomy and Horticulture; Roberto de la Rosa Santamaria
Technology: An Inducible Cytoplasmic Male Sterility and Fertility Restoration System for Hybrid Seed Production in Crops (2 licenses)

Carl A. Nelson, Mechanical & Materials Engineering; Jeffrey Midday, Alan Goyzueta; Dmitry Oleynikov, UNMC
Technology: Natural Orifice Material Delivery System for Surgery

Shadi Othman, Huihui Xu, Karin Wartella, Biological Systems Engineering; Vahid Khalilzad-Sharghi, Ian Bargar
Technology: Smart Bioreactor (2 licenses)

Ravi F. Saraf, Chemical and Biomolecular Engineering; Seung-Woo Lee
Technology: Pressure-sensitive Electrochemical Device
Timothy Savage, Peter W. Stewart, Shane Kimbrough, Joel Brehm, Research Information Systems; Samantha Warriner, Charles Cihacek, Brett Baumert, Norman O. Braaten

**Technology:** NUgrant

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**Blair Siegfried,** Entomology

**Technology:** European Corn Borer Displaying Resistance to CRY1AB Bt Toxin

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**Blair Siegfried,** Entomology; Andre Crespo

**Technology:** A Cry1Ab Resistant Strain of the European Corn Borer, Ostrinia nubilalis (Lepidoptera: Crambidae)

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**Anuradha Subramanian,** Chemical and Biomolecular Engineering; **Joseph A. Turner,** Mechanical & Materials Engineering

**Technology:** Ultrasonic Bioreactor

---

**Joseph A. Turner,** Mechanical & Materials Engineering; Christopher M. Kube

**Technology:** Method to Determine Residual Stress in Polycrystalline Materials

---

**Harshavardhan Thippareddi,** Food Science and Technology; **Jayamkondan Subbiah,** Biological Systems Engineering; Govindarajan Suresh Babu

**Technology:** MicroTrack: An Environmental Monitoring Software for the Food Industry

---

**Mehmet C. Vuran,** Computer Science and Engineering; Xin Dong, David J. Anthony

**Technology:** Antenna for Wireless Underground Communication (2 licenses)

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

**Technology:** Hybrid-Maize: A Simulation Model for Corn Growth and Yield
Yiqi Yang, Narendra Reddy, Textiles, Merchandising and Fashion Design

Technology: Cellulosic Fiber Bundles from Cornhusk: Methods of Fiber Bundle Production and the Resulting High Quality Fiber Products for Textiles and Other Applications

Technology: High Quality and Long Natural Cellulose Fibers from Rice Straw and the Method of Producing the Fibers

Technology: Long Natural Cellulose Fibers from Switchgrass for Industrial Applications

Technology: Long Natural Cellulose Fibers from Sorghum Stalk and Leaves for Industrial Applications

Janos Zempleni, Nutrition and Health Sciences

Technology: Polyclonal Antibodies to Biotinylated Histones H3 and H4
CREATIVE ACTIVITY
Faculty who created, performed or produced creative works in fine and performing arts and architecture, nationally or internationally, July 1, 2012-June 30, 2013
Submitted by faculty, chairs/heads or deans

John R. Bailey  Glenn Korff School of Music
Performer, flute, lecture/recital, “Teaching and Performing the Widor Suite.” National Flute Association Convention, New Orleans, LA.
Guest conductor and soloist, flute ensemble. New Jersey Flute Society Flute Choir Day, Drew University, Madison, NJ.

Diane Barger  Glenn Korff School of Music
Performer, clarinet. Featured soloist and member of the American Clarinet Professors Clarinet Choir at the International Clarinet Association’s ClarinetFest®, Assisi, Italy.
Performer, clarinet. Featured guest artist at the University of Alabama-Birmingham Clarinet Symposium, Birmingham, AL.

Ian Borden  Johnny Carson School of Theatre and Film/ Medieval and Renaissance Studies
Performer and fight director, The River and the Mountain. Stage production performed at multiple locations in Washington, DC, and Baltimore, MD.
Performer and fight director, The Three Musketeers. Stage production at Black Hills Playhouse, Custer State Park, SD.
Performer, As You Like It. Stage production at South Dakota Shakespeare Festival, Vermillion, SD.
Fight director, The Three Musketeers. Stage production at Iowa State University, Ames, IA.

Paul Haar  Glenn Korff School of Music
Performer, saxophone. Featured artist with the Amazonia Jazz Band at Festival Internacional De Musica Do Para. Teatro da Paz, Behlem, Para, Brazil.

Karen Kunc  Art and Art History
Artist. Print exhibit at the 8th Biennale Internationale de’Estampe Contemporaine. Lasnier Exhibition Center, Trois-Rivieres, Quebec, Canada.
Artist. Print exhibit at the 2nd Printmaking Masters Series. Hangzhou Art Exposition, World Trade Center, Hangzhou, Zhejiang Province, China.
The Moran Woodwind Quintet
John Bailey, flute; William McMullen, oboe; Diane Barger, clarinet; Alan Mattingly, horn; Jeffrey McCray, bassoon
Performers, concert tour. The University of North Texas, Texas Christian University, Baylor University, Southeastern Oklahoma State University.

Eric Richards
Composer, ABIDE. Commissioned for the Mid-Atlantic Collegiate Jazz Orchestra and performed at St. Peter’s Church, New York, NY.

Glenn Korff School of Music
Conductor and composer, JOSHUA. Written for the Mid-Atlantic Collegiate Jazz Orchestra and performed at St. Peter’s Church, New York, NY.

Conductor, Amazing Grace. Arranged for the Mid-Atlantic Collegiate Jazz Orchestra and performed at St. Peter’s Church, New York, NY.

Conductor, Freedom Jazz Dance. Arranged for Belwin Premier Jazz Publications, Los Angeles, CA. Published by Belwin/Alfred Publications.


Composer, Gosto Importa! Performed by the UNL Jazz Orchestra at the Elmhurst College Jazz Festival, Elmhurst, IL.

Composer, The Lord’s Prayer. Performed on national concert tour by the Concordia University Chamber Singers.

Composer, C-H-E Groove. Commissioned by the Conjunto High-Energy Big Band, Tokyo, Japan.

Paul Steger
Director, Comedy of Errors. Stage production at Houston Shakespeare Festival, Houston, TX.

Fight director, Hamlet. Stage production at Houston Shakespeare Festival, Houston, TX.

Sandy L. Veneziano
Art director, Nebraska. Film produced by Paramount Pictures, opening nationwide in 2013.

James Goeke
Ronnie Green
Paul Jasa
Roberto Lenton
Derrel Martin
Ron Yoder
Natural Resources
Agronomy and Horticulture
Animal Science/IANR
Biological Systems Engineering
Biological Systems Engineering
Biological Systems Engineering
Daugherty Water for Food Institute

Creators, Lake McConaughy Water Interpretive Project. Interactive multi-media exhibit, various locations.
Faculty who wrote or edited books published July 1, 2012-June 30, 2013

Submitted by faculty, chairs/heads or deans

Marco Abel
English
Editor, with Michael Wedel, Chris Wahl and Jesko Jockenhövel. *Im Angesicht des Fernsehens: Der Filmemacher Dominik Graf* (*In the Face of Television: The Filmmaker Dominik Graf*). Munich, Germany: text + kritik.

Susan Belasco
English

Charlyne Berens
Journalism and Mass Communications
Author. *One House*. Lincoln, NE: University of Nebraska Press.

David R. Beukelman
Special Education and Communication Disorders

Alan Bond
Biological Sciences
Author, with Judy Diamond, University of Nebraska State Museum. *Concealing Coloration in Animals*. Cambridge, MA: Harvard University Press.

Brian H. Bornstein
Psychology

Eve Brank
Psychology

Anthony J. Bushard
Glenn Korff School of Music

Janet F. Carlson
BUROS

Joy Castro
English
Author. *Island of Bones*. Lincoln, NE: University of Nebraska Press.
Author. *Family Trouble*. Lincoln, NE: University of Nebraska Press.
Elaine Chan  Teaching, Learning and Teacher Education

Kwame Dawes  English
Author. Duppy Conqueror. Port Townsend, WA: Copper Canyon Press.

John DeFrain  Child, Youth and Family Studies
Author, with Gail Brand, Maureen Burson, Jeanette Friesen, Mary Nelson and Cindy Strasheim, all Southeast Research and Extension Center; Ann Fenton and LaDonna Werth, both Northeast Research and Extension Center; Janet Hanna, Dianne Swanson, Kathleen Lodl and Beth Birnстиhl, all Cooperative Extension. Getting Connected, Staying Connected: Loving Each Other Day by Day. Bloomington, IN: iUniverse.

Robert C. Denicola  Law

Judy Diamond  University of Nebraska State Museum
Author, with Tom Floyd, University Television; Martin Powell; Angie Fox, University of Nebraska State Museum; Ann Downer-Hazell; Charles Wood, Nebraska Center for Virology. World of Viruses. Lincoln, NE: University of Nebraska Press.

Wheeler Winston Dixon  English

Michael D. Dodd  Psychology

Dennis M. Ferraro  Natural Resources

Thomas G. Franti  Biological Systems Engineering

Tanya Gachovska  Electrical Engineering

Sarah J. Gervais  Psychology


William Grange, Johnny Carson School of Theatre and Film Author. *A Primer in Theatre History.* Lanham, MD: University Press of America.

David S. Hage, Chemistry Author, with James D. Carr, Chemistry. *Chimica Analitica e Analisi Quantitativa (Analytical Chemistry and Quantitative Analysis).* Padua, Italy: Piccin.


Ron Hull, University Television Author. *Backstage Stories from My Life in Public Television.* Lincoln, NE: University of Nebraska Press.


Jay Jenkins, Panhandle Research and Extension Center Author, with Jenny Nixon, Connie Hancock and Cheryl Burkhart-Kriesel, all Panhandle Research and Extension Center; and Glenn Muske. *Marketing AgriTourism Online.* Lincoln, NE: UNL EdMedia.


Paul A. Johnsgard


Author. *Nebraska Wetlands: Their Wildlife and Ecology*. Lincoln, NE: Conservation and Survey Division, Institute of Natural Resources, University of Nebraska-Lincoln.


Author, with Mary Bomberger Brown, Natural Resources. *Birds of the Central Platte River Valley and Adjacent Counties*. Lincoln, NE: University of Nebraska Digital Commons.


Marianne Kunkel
Editor, with James Engelhardt. *The Prairie Schooner Book Prize Tenth Anniversary Reader*. Lincoln, NE: University of Nebraska Press.

Stephen E. Lahey


Glenn Ledder

Brian D. Lepard


J. David Logan
Suping Lu University Libraries

Editor. 腥风血雨话金陵 (Bloody Days in Nanjing). Nanjing, China: Nanjing Publishing House.

Colleen E. Medill Law

J. Ron Nelson Special Education and Communication Disorders

Tom Osborne Athletics
Author. On Solid Ground. Lincoln, NE: University of Nebraska Press.

Jon E. Pedersen Education and Human Sciences/Teaching, Learning and Teacher Education


Editor, with Kevin D Finson. Visual Data and Their Use in Science Education. Charlotte, NC: Information Age Publishing.

Kenneth M. Price English

Yi Qian Computer and Electronics Engineering
Editor, with Rose Q. Hu. Heterogeneous Cellular Networks. United Kingdom: John Wiley & Sons Ltd.

George E. Rejda Finance

Steven W. Ress Water Center
Guy J. Reynolds  
Boston, MA: Bedford/St. Martins.

Kari A. Ronning  
Editor. *Song of the Lark* (Willa Cather scholarly edition), Lincoln, NE: University of Nebraska Press.

Corey B. Rumann  

Gregory E. Rutledge  

Brandon Ruud  
Editor. *Encounters*, Lincoln, NE: University of Nebraska Press.

William J. Seiler  

Ralph Skomski  

Shari J. Stenberg  

Jeffrey R. Stevens  

Jordan Stump  
Translator, with Lutz Bassmann. *We Monks and Soldiers*, Lincoln, NE: University of Nebraska Press.

Evgeny Y. Tsymbal  

Roland Vegso  

Roger Welsch  Anthropology
Author. Embracing Fry Bread. Lincoln, NE: University of Nebraska Press.

Kenneth Winkle  History

David Wishart  Geography
Author. Last Days of the Rainbelt. Lincoln, NE: University of Nebraska Press.

Sandra Zellmer  Law

Janos Zempleni  Nutrition and Health Sciences

Tian C. Zhang  Civil Engineering
RECOGNITIONS AND HONORS
Faculty who have been elected to honor academies or who received national or international honors or awards, July 1, 2012-June 30, 2013
Submitted by faculty, chairs/heads or deans

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

James Van Etten  Plant Pathology
National Academy of Sciences

James Alfano  Plant Pathology
Fellow, American Association for the Advancement of Science

Luchezar Avramov  Mathematics
Fellow, American Mathematical Society

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

Mary Bomberger Brown  Natural Resources
Fellow, American Ornithologists Union

Les Carlson  Marketing
Lamb, Hair, McDaniel Best Paper Award - Marketing Education Track, Society of Marketing Advances Conference

Kenneth G. Cassman  Agronomy and Horticulture
Presidential Award, Crop Science Society of America

Raymond Chollet  Biochemistry/Center for Plant Science Innovation
Fellow, American Society of Plant Biologists

Kwame Dawes  English
Jerome J. Shestack Prize, American Poetry Review

David DiLillo  Psychology
Fellow, American Psychological Association

Anne Duncan  Classics and Religious Studies
Solmsen Fellowship, Institute for Research in the Humanities, University of Wisconsin-Madison

Tonia Durden  Child, Youth and Family Studies
Early Achievement Award, National Family Life and Human Development Specialists

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

Dana Fritz  Art and Art History
2013 Imagemaker Award, The Society for Photographic Education
Lauren Gatti  Teaching, Learning and Teacher Education/English
Outstanding Dissertation Award, American Educational Research Association

Jim Gentry  Marketing
Carmen Award, Macromarketing Association
Best Doctoral Paper, Collegiate Retailing Association Conference

Loren J. Giesler  Plant Pathology
National Multi-State Research Award for 2012, Association of Public and Land-grant Universities

James A. Gosey  Animal Science
Animal Science Graduate of Distinction Award, Oklahoma State University

Priscilla Grew  Earth and Atmospheric Sciences/University of Nebraska State Museum
National Associate, National Research Council of the National Academies

Frauke Hachtmann  Advertising
Best Article Award, Journal of Advertising Education

Delwyn L. Harnisch  Teaching, Learning and Teacher Education/Educational Psychology
Distinguished Membership, National Society of Collegiate Scholars

Stephen G. Hartke  Mathematics
Fulbright Scholar, U.S. Department of State Fulbright Program

John Hibbing  Political Science
Fellow, John Simon Guggenheim Foundation

Suat Irmak  Biological Systems Engineering
2013 Educational Blue Ribbon Award, American Society of Agricultural and Biological Engineers
2013 Honorable Paper Award, Irrigation and Drainage Council of the American Society of Civil Engineers-Environmental and Water Resources Institute

Paul A. Johnsgard  Biological Sciences
Ralph W. Schreiber Conservation Award, American Ornithologists Union

Terry J. Klopfenstein  Animal Science
American Feed Industry Association New Frontiers in Animal Nutrition Award, Federation of Animal Science Societies
Industry Leadership Award, Cattle Feeders Hall of Fame
Karen Kunc  Art and Art History
Fulbright Specialist Project Grant, U.S. Department of State
Fulbright Program
Best of Show, Canadian Bookbinders & Book Arts Guild, Art of the Book Exhibition

Yvonne Lai  Mathematics
Janet Duffin Award, British Society for Research into Learning Mathematics

Brian Larkins  Agronomy and Horticulture/
Associate Vice Chancellor for Life Sciences
Charter Fellow, National Academy of Inventors
Stephen Hales Prize, American Society of Plant Biologists

W. James Lewis  Mathematics/Center for Science,
Mathematics and Computer Education
Fellow, American Mathematical Society

Ming Li  Psychology
Fellow, Division 6, American Psychological Association

Sally Mackenzie  Biological Sciences/
Agronomy and Horticulture/
Center for Plant Science Innovation
Fellow, American Society of Plant Biologists

Derrel L. Martin  Biological Systems Engineering
Heermann Sprinkler Irrigation Award, American Society of Agricultural and Biological Engineers

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

Carl Nelson  Mechanical & Materials Engineering
Da Vinci Innovation Award (for ICARE system, Recreation and Leisure division), National Multiple Sclerosis Society

Carrie Lee Patterson  Johnny Carson School of Theatre and Film
Howard Frank Mosher Short Fiction Prize, Hunger Mountain Journal of the Arts

Prem S. Paul  Research and Economic Development
Charter Fellow, National Academy of Inventors

Amy L. Peterson  Southeast Research and Extension Center
President, National Extension Association of Family and Consumer Sciences

Gary Pickard  School of Veterinary Medicine and Biomedical Sciences
Visiting Research Professorship, Hong Kong University
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Recognitions</th>
</tr>
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<tbody>
<tr>
<td>Yi Qian</td>
<td>Computer and Electronics Engineering</td>
<td>2012 Best Paper Award, Institute of Electrical and Electronics Engineers</td>
</tr>
<tr>
<td>Petronela Radu</td>
<td>Mathematics</td>
<td>Fulbright Scholar, Council for International Exchange of Scholars</td>
</tr>
<tr>
<td>Steven N. Rodie</td>
<td>Agronomy and Horticulture</td>
<td>Fellow, American Society of Landscape Architects</td>
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<td>Gregory E. Rutledge</td>
<td>English/Institute for Ethnic Studies</td>
<td>Fulbright, U.S. Department of State Fulbright Program</td>
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<td>Philip Sapirstein</td>
<td>Art and Art History/Center for Digital Research in the Humanities</td>
<td>Fulbright Post-doctoral Award, United States-Israel Educational Foundation, Post-doctoral Fellowship, Sonia and Marco Nadler Institute of Archaeology of Tel Aviv University</td>
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<td>Mario Scalora</td>
<td>Public Policy Center/Psychology</td>
<td>Fellow, American Psychological Association</td>
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<td>Distinguished Achievement Award, Association of Threat Assessment Professionals</td>
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<tr>
<td>Julia Schleck</td>
<td>English/Medieval and Renaissance Studies</td>
<td>Fellow, Folger Shakespeare Library</td>
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<td>Marc Schniederjans</td>
<td>Management</td>
<td>President, Decisions Sciences Institute</td>
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<td>David J. Sellmyer</td>
<td>Physics and Astronomy</td>
<td>Distinguished Achievement Award, Iketani Science and Technology Foundation, Nagasaki, Japan</td>
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<td>Hamid Sharif</td>
<td>Computer and Electronics Engineering</td>
<td>Fulbright Scholar, Council for International Exchange of Scholars</td>
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<td>L. Dennis Smith</td>
<td>Biological Sciences</td>
<td>Fellow, American Association for the Advancement of Science</td>
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<td>Ravi Sohi</td>
<td>Marketing</td>
<td>2012 Stern Award, American Marketing Association Foundation</td>
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<td>Alison G. Stewart</td>
<td>Art and Art History</td>
<td>Senior Researcher/Lecturer Fulbright Grant, Fulbright Commission</td>
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<td>Colleen Syron</td>
<td>Lied Center for Performing Arts/Art and Art History</td>
<td>Best National Magazine Advertising (Series), Marine Marketers of America</td>
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</table>
John D. Turner  Classics and Religious Studies
“Gnosticism, Platonism and the Late Ancient World,” essays in honor of the work of John D. Turner, Charles J. Mach University of Classics and Religious Studies, Brill, the Netherlands

James Van Etten  Plant Pathology
Charter Fellow, National Academy of Inventors

Judy Walker  Mathematics
Fellow, American Mathematical Society

Roger Wiegand  Mathematics
Fellow, American Mathematical Society

Sylvia Wiegand  Mathematics
Fellow, American Mathematical Society

Tadeusz A. Wysocki  Computer and Electronics Engineering
Professor of the Republic of Poland, conferred by Bronislaw Komorowski, President of Poland

Tian C. Zhang  Civil Engineering
Fellow, American Society of Civil Engineering
Elected Member, European Academy of Sciences and Arts
Diplomate of Water Resources Engineer, American Academy of Water Resources Engineers
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</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>
</tr>
<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>CDC</td>
<td>Centers for Disease Control</td>
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<tr>
<td>SAMSHA</td>
<td>Substance Abuse and Mental Health Services Administration</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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<td>AFOSR</td>
<td>Air Force Office of Scientific Research</td>
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<tr>
<td>AFRL</td>
<td>Air Force Research Laboratory</td>
</tr>
<tr>
<td>AMR</td>
<td>Army Medical Research</td>
</tr>
<tr>
<td>ARO</td>
<td>Army Research Office</td>
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<tr>
<td>DRMRP</td>
<td>Defense Deployment Related Medical Research Program</td>
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<tr>
<td>DTRA</td>
<td>Defense Threat Reduction Agency</td>
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<tr>
<td>DURIP</td>
<td>Defense University Research Instrumentation Program</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>
</tr>
<tr>
<td>NGIA</td>
<td>National Geospatial Intelligence Agency</td>
</tr>
<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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<td>DOE</td>
<td>Department of Energy</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>Department of Labor</td>
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<td>Department of Transportation</td>
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<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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<td>ED</td>
<td>Department of Education</td>
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<td>GAANN</td>
<td>Graduate Assistance in Areas of National Need</td>
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<td>IES</td>
<td>Institute of Education Sciences</td>
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EPA Environmental Protection Agency
HUD Department of Housing and Urban Development
NAS National Academy of Sciences
TRB Transportation Research Board
NASA National Aeronautics and Space Administration
NEA National Endowment for the Arts
NEH National Endowment for the Humanities
NIH National Institutes of Health
DFCI Dana-Farber Cancer Institute
FIC Fogarty International Center
NCI National Cancer Institute
NCRR National Center for Research Resources
NEI National Eye Institute
NHLBI National Heart, Lung and Blood Institute
NIA National Institute on Aging
NIAAA National Institute on Alcohol Abuse and Alcoholism
NIAID National Institute on Allergy & Infectious Diseases
NIBIB National Institute of Biomedical Imaging and Bioengineering
NICHD National Institute of Child Health and Human Development
NIDA National Institute on Drug Abuse
NIDCD National Institute on Deafness & Communication Disorders
NIDDK National Institute of Diabetes, Digestive & Kidney Disease
NIEHS National Institute of Environmental Health Sciences
NIGMS National Institute on General Medical Sciences
NIMH National Institute of Mental Health
NINDS National Institute of Neurological Disorders and Stroke
NLM National Library of Medicine
NSA National Security Agency
NSF National Science Foundation
EPSCoR Experimental Program to Stimulate Competitive Research
USAID United States Agency for International Development
USDA  United States Department of Agriculture
AFRI  Agriculture and Food Research Initiative
APHIS Animal and Plant Health Inspection Service
ARS  Agricultural Research Service
CSREES  Cooperative State Research, Education & Extension Service
FCIC  Federal Crop Insurance Corporation
FNS  Food and Nutrition Service
FS  Forestry Service
NASS  National Agricultural Statistics Service
NIFA  National Institute for Food and Agriculture
NRCS  Natural Resources Conservation Service
NRI CGP  National Research Initiative
                   Competitive Grant Program
RD  Rural Development
RMA  Risk Management Agency