Research and Creative Activity

July 1, 2013 – June 30, 2014

Major Sponsored Programs
and Faculty Awards
for Research and Creative Activity

Office of Research and Economic Development | University of Nebraska–Lincoln

On the Cover: The cover photo shows the target chamber of the University of Nebraska–Lincoln's Diocles Laser. The burst of light results from laser light interacting with nitrogen gas, which produces an electron beam. Using this powerful, compact laser, UNL Extreme Light Laboratory scientists discovered a way to vastly shrink the space needed to produce synchrotron X-rays, expanding the potential uses for these high-quality X-rays. This major breakthrough and the opening of a collaborative laser lab that houses a new specialty laser called Archimedes are advancing UNL's capabilities in laser science, a longtime research strength.

Vice Chancellor Prem Paul and Chancellor Harvey Perlman

This "Major Sponsored Programs and Faculty Awards for Research and Creative Activity" booklet highlights the successes of the University of Nebraska–Lincoln faculty during the fiscal year July 1, 2013-June 30, 2014. It lists the funding sources, projects and investigators on major grants and sponsored program awards received during the year; published books and scholarship; fellowships and other recognitions; intellectual property licenses; and performances and exhibitions in the fine and performing arts.

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

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

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

Prem S. Paul
Vice Chancellor for Research
and Economic Development

Awards of $3 Million or More

Active awards, July 1, 2013-June 30, 2014
*** Indicates new in 2013-2014**

Allen, Craig — Natural Resources

IGERT: Resilience and Adaptive Governance in Stressed Watersheds

$3,116,173 — NSF
8/15/09 – 7/31/15

Fritz, Sherilyn — Earth and Atmospheric Sciences
Samal, Ashok — Computer Science and Engineering
Tyre, Richard — Natural Resources
Tomkins, Alan — Law/Public Policy Center

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

Becker, Donald — Biochemistry

Redox Biology Center

$4,305,466 — NIH-NIGMS
9/1/12 – 7/31/17

Donald Becker, professor of biochemistry in the Institute of Agriculture and Natural Resources, is the director of the Redox Biology Center. Established in 2002 with a grant from the National Institutes of Health as a Center of Biomedical Research Excellence, the center received a competitive renewal grant to support it through 2017. The center's researchers investigate how cells maintain a reduction-oxidation balance, a process called redox homeostasis, and study links between redox homeostasis and diseases such as cancer, cardiovascular disease, Alzheimer's disease and cataracts. The center's research will provide important advances in the understanding of redox regulation, comprising aspects of cellular aging and controlled cell death.

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

The Biological Process Development Facility provides clients with process research and early manufacture of new therapeutic molecules for clinical testing. Supported in part by funding from the Department of Defense, the BPDF also develops vaccines against biological warfare agents, as well as products that can be used as therapeutic countermeasures to treat people who have been exposed to biological agents.

Dickey, Elbert **eXtension**

eXtension Building Cooperative Extension's 21st Century Network

$6,626,640 USDA-NIFA

9/1/11 – 8/31/16

National eXtension Project

$21,470,000 Association of Public and Land-Grant Universities

10/1/04 – 12/31/15

The eXtension Initiative is an Internet-based Cooperative Extension Service education and information system. UNL leads this multi-year project, which partners with the University of Kentucky, North Carolina State University and Virginia Tech University. This collaborative effort of the nation's 107 land-grant universities and the U.S. Department of Agriculture's Cooperative State Research, Education and Extension Service develops content and technology for the eXtension project. eXtension is a virtual educational environment that provides science-based, objective information. Users may take advantage of learning opportunities and interact with the expertise available from the land-grant university system by visiting www.extension.org.

DiLillo, David **Psychology**

Sexual Revictimization: Emotional and Psychosocial Mechanisms
$3,229,123 NIH-NICHD
7/15/10 – 6/30/15
Hoffman, Lesa Psychology

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

Dominguez, Aaron **Physics and Astronomy**

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

UNL physicist Aaron Dominguez leads a collaboration involving eight universities to upgrade the Compact Muon Solenoid particle detector, a key component of the world's largest physics experiment. With a five-year, nearly $11.5 million grant from the National Science Foundation, the team is working to increase the effectiveness of a vital component of the Large Hadron Collider at CERN laboratory in Switzerland, the supercollider that made discovery of the Higgs boson possible. The UNL team was part of the multi-institutional collaboration that built the original CMS experiment, one of two large particle detector experiments at the Large Hadron Collider. With this new NSF grant, they now lead a large research partnership to upgrade the detector in stages through 2019. Their collaborators are at the University of Kansas, University of Illinois at Chicago, Rutgers University, Cornell University, SUNY Buffalo, Purdue University Calumet, Notre Dame University and Northeastern University.

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 — ED-IES

7/1/13 – 6/30/17

Epstein, Michael — Special Education and Communication Disorders

Torkelson-Trout, Alexandra — Special Education and Communication Disorders

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.

Dussault, Patrick **Chemistry**

Building Infrastructure in Nanohybrid Materials and Algal Biology Research

$11,100,982 NSF-EPSCoR

10/01/10 – 09/30/15

Bailey, Cheryl	Biochemistry
Black, Paul	Biochemistry
Cahoon, Edgar	Biochemistry/ Center for Plant Science Innovation/
Cerutti, Heriberto	Biological Sciences/ Center for Plant Science Innovation
Clemente, Thomas	Agronomy and Horticulture/ Center for Plant Science Innovation
DiRusso, Concetta	Biochemistry/ Nutrition and Health Sciences
Hage, David	Chemistry
Han, Ming	Electrical Engineering
Hudgins, Jerry	Electrical Engineering
Ianno, Natale	Electrical Engineering
Lai, Rebecca	Chemistry
Lu, Yongfeng	Electrical Engineering
Morris, T. Jack	Biological Sciences
Schubert, Eva	Electrical Engineering
Schubert, Mathias	Electrical Engineering
Spreitzer, Robert	Biochemistry
Takacs, James	Chemistry
Van Etten, James	Plant Pathology
Weeks, Donald	Biochemistry

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

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

The funding award is the major part of a five-year, $20 million Nebraska EPSCoR grant involving faculty from five universities: UNL, UNMC, UNK, Creighton and Doane College.

Ells, Mark **Center on Children, Families, and the Law**

Midwest Child Welfare
Technical Assistance Implementation Center

$8,695,638 DHHS-ACF

9/1/08 – 9/29/14

Graef, Michelle Center on Children, Families, and the Law

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.

Espy, Kimberly Andrews **Psychology**

Executive Function Development in Preschool Children

$3,258,301 NIH-NIMH

8/26/09 – 3/31/15

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

Carlo, Gustavo Psychology

Schutte, Anne Psychology

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

Harwood, David **Earth and Atmospheric Sciences**

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

$12,978,160 NSF

6/1/05 – 12/31/14

Levy, Richard Earth and Atmospheric Sciences

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

Hein, Gary **Doctor of Plant Health Program**

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

$3,375,000 USDA-AFRI

1/1/13 – 12/31/18

Bradshaw, Jeffrey Panhandle Research and Extension Center

Golick, Douglas Entomology

Lyon, Drew Panhandle Research and Extension Center

Namuth Covert, Deana Agronomy and Horticulture

Wegulo, Stephen Plant Pathology

Zygielbaum, Arthur School of Natural Resources

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

Hogan, Tiffany — **Special Education and Communication Disorders**

Language Bases of Skilled Reading Comprehension

$4,344,886 — ED-IES through MGH Institute of Health Professionals

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

$4,052,415 — Mintaka Foundation for Medical Research

3/1/10 – 3/31/19

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**

* NebraskaMATH: Strengthening the OPS-UNL Partnership
$5,455,811 — The Sherwood Foundation®/Lozier Foundation
5/1/13 – 8/31/16
Heaton, Ruth — Teaching, Learning and Teacher Education/ Center for Science, Mathematics and Computer Education
Smith, Wendy — Center for Science, Mathematics and Computer Education

A grant from The Sherwood Foundation® and the Lozier Foundation supports a three-year partnership between Omaha Public Schools and UNL's Center for Science, Mathematics and Computer Education to fund the NebraskaMATH Omaha Public Schools Teacher Leader Academy. The program gives a community of OPS mathematics teachers from grades K-12 access to continuing education and graduate coursework centered on math education. The goals of the OPS initiative are to strengthen mathematics learning in Omaha classrooms, narrow student achievement gaps between different populations and conduct research that continues to inform school improvement efforts.

Nebraska NOYCE: NSF Mathematics Teaching and Master Teaching Fellows Program
$3,000,000 — NSF
9/1/10 – 8/31/16
Fowler, David — Teaching, Learning and Teacher Education
Kauffman, Douglas — Educational Psychology
Papick, Ira — Mathematics/Center for Science, Mathematics and Computer Education
Smith, Wendy — Center for Science, Mathematics and Computer Education
Swidler, Stephen — Teaching, Learning and Teacher Education

A six-year, $3 million grant from the National Science Foundation, awarded through NSF's Robert Noyce Teacher Scholarship program, aims to encourage talented science, technology, engineering and mathematics majors and professionals to become K-12 mathematics and science teachers in "high-need" classrooms. The math program covers tuition, fees and a stipend for 16 students who are pursuing master's degrees from the Department of Teaching, Learning and Teacher Education and certification to teach math for grades 7-12. Fellowship recipients also receive a supplementary stipend from UNL while they teach for four years in a high-need school district. The grant also provides professional development and stipends for 24 strong, master's-degree-holding, K-12 teachers who commit to teaching in a high-need district for five years. The selected "master teaching fellows" take courses that will give them the skills they need to improve math education in their schools and school districts. The program builds on previous successful efforts to enhance mathematics teaching and learning in Nebraska schools, including the Math in the Middle Institute and NebraskaMATH.

NebraskaMATH

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

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

Lodl, Kathleen — Extension

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

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

Lu, Yongfeng **Electrical Engineering**

Multi-Energy Processing for Novel Coating Technologies

$4,138,000 DoD-ONR

4/10/09 – 9/30/14

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

Lubben, Bradley **Agricultural Economics**

North Central Risk Management Education Center

$3,446,401 USDA-NIFA

9/1/12 – 8/31/15

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

Moxley, Rodney **Veterinary Medicine and Biomedical Sciences**

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

$24,812,267 USDA-AFRI

1/1/12 – 12/31/14

Thippareddi, Harshavardhan Food Science and Technology

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

Paul, Prem **Research and Economic Development**

Nebraska Center for Energy Sciences Research

$5,000,000 Nebraska Public Power District

11/24/09 – 3/31/16

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

Pope, Kevin **Natural Resources**

Angler Behavior in Response to Management Actions on Nebraska Reservoirs

$3,147,776 Nebraska Game and Parks Commission

1/1/09 – 12/31/13

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

Rilett, Laurence **Civil Engineering/ Nebraska Transportation Center**

Transportation Infrastructure - Visualizations & ITS Laboratory

$3,171,651 DOT-FHWA through Nebraska Department of Roads

6/5/12 – 6/30/15

Faller, Ronald Civil Engineering/ Midwest Roadside Safety Facility

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

Region 7 University Transportation Center

$6,897,600 DOT-RITA

1/1/12 – 1/31/16

The U.S. Department of Transportation's Research and Innovative Technology Administration has designated UNL's Mid-America Transportation Center (MATC) as a regional university transportation center. MATC is a consortium with UNL as the lead institution with regional partners Kansas State University, University of Kansas, University of Missouri-Rolla and Lincoln University of Missouri. The Nebraska Department of Roads and the Kansas and Missouri Departments of Transportation also are key partners. The center's focus is "improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system." MATC focuses on safety research related to rural transportation. Key safety research areas include traffic control, animal crashes, safer at-grade railway crossings and work zones, and the development of more effective and economical roadside crash barriers. The university transportation center program supports transportation research, education and technology transfer that promote scientific innovations in a variety of transportation modes and disciplines. Region 7 serves Iowa, Kansas, Missouri and Nebraska. It is one of 10 regional university transportation centers in the nation.

Rothermel, Gregg **Computer Science and Engineering**

Safeguarding End-User Military Software

$3,975,935 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 – 3/23/16

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 – 6/30/15

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

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

Shulski, Martha — **Natural Resources**

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 informs planning and preparedness activities for natural hazards. To improve how climate information is used for drought planning, the center coordinates activities to engage the preparedness community to better integrate climate monitoring and analysis for mitigation and reduction of drought impacts.

Stowell, Richard — **Biological Systems Engineering**

National Facilitation of Extension Programming in Climate Change Mitigation and Adaptation for Animal Agriculture

$4,295,536 — USDA-NIFA

4/1/11 – 3/31/16

Heemstra, Jill — Northeast Research and Extension Center

Koelsch, Richard — Biological Systems Engineering/Extension

University of Nebraska–Lincoln Extension has been awarded $4.1 million from the National Institute of Food and Agriculture for a five-year project addressing climate change and animal agriculture issues, led by UNL Extension engineer Richard Stowell. Five other land-grant universities are partnering in the project that will be facilitated through the Livestock and Poultry Environmental Learning Center. The overall goal of the proposed project is for Extension, working with partner organizations, to effectively inform and influence livestock and poultry producers and consumers of animal products in all regions of the U.S. to move animal production toward practices that are environmentally sound, climatically compatible and economically viable.

Torkelson-Trout, Alexandra — **Special Education and Communication Disorders**

Promoting Transition Outcomes in Youth with LD and EBD:
An Efficacy and Replication Study
of the On the Way Home Aftercare Intervention

$3,487,223 — ED-IES

7/1/12 – 6/30/16

Duppong Hurley, Kristin — Special Education and Communication Disorders

Epstein, Michael — Special Education and Communication Disorders

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

Tsymbal, Evgeny — **Physics and Astronomy/Nebraska Center for Materials and Nanoscience**

Center for NanoFerroic Devices

$7,125,000 — DOC-NIST through Semiconductor Research Corp.-Nanoelectronics Research Corp.

4/1/13 – 12/31/17

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

Materials Research Science & Engineering Center:
Quantum Spin

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

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

Weissinger, Ellen — Academic Affairs

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

$3,801,443 NSF
9/1/08 – 8/31/14
Holmes, Mary Anne Earth and Atmospheric Sciences
McQuillan, Julia Sociology
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 DoD-NGIA
9/23/09 – 9/22/14

Adenwalla, Shireen	Physics and Astronomy
LeSueur, James	History
McMahon, Patrice	Political Science
Paul, Prem	Research and Economic Development
Wedeman, Andrew	Political Science
Wood, Simon	Classics and Religious Studies

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

Wood, Charles

Biological Sciences/
Nebraska Center for Virology

Nebraska Center for Virology

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

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

Kaposi's Sarcoma & Human Herpesvirus in Africa

$5,194,724 NIH-NCI
7/16/10 – 4/30/15

Since the onset of the AIDS epidemic, Kaposi's sarcoma has become the most frequently diagnosed pediatric cancer in sub-Saharan Africa. It is associated with Human Herpesvirus 8 (HHV-8) and Kaposi's Sarcoma Herpesvirus. The project seeks to understand how these viruses are transmitted to children by studying children in Lusaka, Zambia. The goal is to establish the rates of transmission and to identify virologic, immunologic and ethnographic risk factors that predispose children to HHV-8 infection. It is anticipated that the information could be used to develop intervention strategies.

Awards of $1 Million to $2,999,999

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

* Indicates new in 2013-2014

Alexander, Dennis — **Electrical Engineering**

Fundamental Studies of Femtosecond Pump Probe Techniques for Killing and Assessment of Damage to Optical Components

$1,111,104 — DOD-AFRL

Ianno, Natale — Electrical Engineering

Alfano, James — **Plant Pathology/ Center for Plant Science Innovation**

Suppression of Innate Immunity by ADP Ribosyltransferase Type III Effectors

$1,797,433 — NIH-NIAID

Baenziger, P. Stephen — **Agronomy and Horticulture**

Improving Barley and Wheat Germplasm for Changing Environments

$1,261,597 — USDA through University of California, Davis

Lee, Donald — Agronomy and Horticulture

Regassa, Teshome — Agronomy and Horticulture

Waters, Brian — Agronomy and Horticulture

Balkir, Sina — **Electrical Engineering**

* Ultra-Low-Power Long-Duration Programmable Remote Radiation Monitoring Sensor Electronics

$1,385,150 — DOD-DTRA

Bauer, Mark — Electrical Engineering

Hoffman, Michael — Electrical Engineering

Barker, Bradley — **4-H Youth Development**

Scale-UP: National Robotics in 4-H: Workforce Skills for the 21st Century

$2,498,908 — NSF

Adamchuk, Viacheslav — Biological Systems Engineering

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

Becker, Donald — **Biochemistry**

Role of Proline in Redox Homeostasis and Apoptosis

$1,089,521 — NIH-NIGMS

Mechanistic Studies of Functional Switching in the PutA Flavoprotein

$1,888,980 — NIH-NIGMS

Bellows, Laurie — **Graduate Studies**

McNair Scholars Project and the University of Nebraska–Lincoln

$1,088,494 — ED

Benson, Andrew — **Food Science and Technology**

Composition of the GI Microbiota and Predisposition to Enterohemorrhagic *Escherichia coli* (EHEC) Colonization as Complex Polygenic Traits in Beef Cattle

$2,354,004	USDA-NIFA
Kachman, Stephen	Statistics
Moriyama, Etsuko	Biological Sciences/ Center for Plant Science Innovation

Bevins, Rick — **Psychology**

Pharmacological Interventions to Diminish Nicotine-Associated Responding

$1,437,004	NIH-NIDA

Bloom, Kenneth — **Physics and Astronomy**

* Experimental Particle Physics at the Energy and Cosmic Frontiers

$2,055,000	NSF
Claes, Daniel	Physics and Astronomy
Dominguez, Aaron	Physics and Astronomy
Kravchenko, Ilya	Physics and Astronomy
Snow, Gregory	Physics and Astronomy

Transatlantic Networking

$2,197,300	DOE-Fermi National Laboratory

U.S. CMS Operations at the LHC

$2,626,621	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

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

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

Cassman, Kenneth — **Agronomy and Horticulture**

* Global Yield Gap and Water Productivity Atlas

$1,255,923 — Bill & Melinda Gates Foundation
Grassini, Patricio — Agronomy and Horticulture
Yang, Haishun — Agronomy and Horticulture

Global Yield Gap and Water Productivity Atlas

$2,034,324 — Bill & Melinda Gates Foundation
Grassini, Patricio — Agronomy and Horticulture

Chen, Bing — **Computer and Electronics Engineering**

SPIRIT^2.0 Silicon Prairie Initiative for Robotics in IT

$2,999,963 — NSF

Ciobanu, Daniel — **Animal Science**

Translational Genomics for Improving Sow Reproductive Longevity

$1,166,650 — USDA-AFRI
Kachman, Stephen — Statistics
Riethoven, Jean-Jack — Biotechnology
Spangler, Matthew — Animal Science

Diamond, Judy — **University of Nebraska State Museum**

Biology of Human: Understanding Ourselves through the Lens of Current Biomedical Research

$1,392,181 — NIH-NCRR
Angeletti, Anisa — Biological Sciences
Bailey, Cheryl — Biochemistry
McQuillan, Julia — Sociology
Wood, Charles — Biological Sciences/ Nebraska Center for Virology

Dickey, Elbert — **eXtension**

Supporting Military Families and Youth Partnership

$2,500,000 — USDA-NIFA

eXtension Military Families Learning Network

$2,240,454 — USDA-NIFA

DiMagno, Stephen — **Chemistry**

Synthesis of Radiofluorinated PET Imaging Agents

$1,176,467 — NIH-NIBIB

DiRusso, Concetta — **Biochemistry/ Nutrition and Health Sciences**

High Throughput Screens for Fatty Acid Uptake Inhibitors

$1,259,580 — NIH-NIDDK
Black, Paul — Biochemistry

Doll, Elizabeth — **Educational Psychology**

NU Data: Using Data and Technology to Foster Achievement

$1,496,461 — ED

Horn, Christy — Educational Psychology

Shope, Ronald — Educational Psychology

Eccarius, Malinda — **Special Education and Communication Disorders**

Mountain Prairie Upgrade Partnership-Itinerant

$1,199,400 — ED

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

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

Engen-Wedin, Nancy — **Teaching, Learning and Teacher Education**

Indigenous Roots Teacher Education Program

$1,091,185 — ED

McGowan, Thomas — Teaching, Learning and Teacher Education

Espy, Kimberly Andrews — **Psychology**

Prenatal Smoking and the Substrates of Disruptive Behavior in Early Life

$2,320,241 — NIH-NIDA

Garza, John — Psychology

Faller, Ronald — **Civil Engineering/ Midwest Roadside Safety Facility**

Roadside Safety Research

$1,177,040 — Industry Client

Reid, John — Mechanical & Materials Engineering

Farritor, Shane — **Mechanical & Materials Engineering**

Supporting Surgical Options in Space

$1,350,000 — NASA through UNMC

Goddard, Stephen — Computer Science and Engineering

Nelson, Carl — Mechanical & Materials Engineering

Perez, Lance — Electrical Engineering

Feng, Ruqiang — **Mechanical & Materials Engineering**

Effect of Protective Devices on Brain Trauma Mechanics under Idealized Shock Wave Loading

$2,678,119 — DoD-ARO

Gu, Linxia — Mechanical & Materials Engineering

Lim, Jung Yul — Mechanical & Materials Engineering

Negahban, Mehrdad — Mechanical & Materials Engineering

Nelson, Carl — Mechanical & Materials Engineering

Turner, Joseph — Mechanical & Materials Engineering

Fischer, Jean — **Nutrition and Health Sciences**

Supplemental Nutrition Assistance Program (SNAP-ED)

$1,620,688 — USDA-FNS through Nebraska Department of Health and Human Services

Carr, Timothy — Nutrition and Health Sciences

Lodl, Kathleen — Extension

Fontaine, Joseph — **Natural Resources**

* Use and Satisfaction of Public Hunting Opportunities

$1,240,600 — DOI-GS through Nebraska Game and Parks Commission

Martin, Dustin — Natural Resources

Frankl, Nicole — **Nebraska Local Technical Assistance Program**

* Nebraska Rural Transit NU Development and Support

$2,090,048 — DOT-FHWA through Nebraska Department of Roads

Bivin, William — Nebraska Local Technical Assistance Program

Green, Jordan — **Special Education and Communication Disorders**

Bulbar Motor Deterioration in ALS

$2,294,633 — NIH-NIDCD

Gruverman, Alexei — **Physics and Astronomy**

Nanoscale Resistive Switching Behavior of Ferroelectric and Multiferroic Tunnel Junctions

$1,251,143 — DOE

Tsymbal, Evgeny — Physics and Astronomy

Guo, Jiantao — **Chemistry**

* Improve the Safety of an Efficacious Live-Attenuated HIV-1 Vaccine through Unnatural Amino Acid-Mediated Suppression of Blank Codon

$1,919,552 — NIH-NIAID

Niu, Wei — Chemistry

Li, Qingsheng — Biological Sciences

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

Huang, Jinsong — **Mechanical & Materials Engineering**

* High-efficiency Low-cost Nanocomposite for Radiation Detection Enabled by Charge Triggered Secondary Charge Injection

$1,050,000 — DOD-DTRA

Hudgins, Jerry — **Electrical Engineering**

A Roadway Wind/Solar Hybrid Power Generation and Distribution System: Towards Energy-Plus Roadways

$1,118,179	DOT-FHWA
Jones, Elizabeth	Civil Engineering
Qiao, Wei	Electrical Engineering
Rilett, Laurence	Civil Engineering/ Nebraska Transportation Center
Sharma, Anuj	Civil Engineering

Hygnstrom, Scott — **Natural Resources**

Development of Spatially Explicit Models of Wildlife Diseases

$1,220,184	USDA-APHIS

Irmak, Suat — **Biological Systems Engineering**

Measurement of Growing Season Actual Crop Evapotranspiration and Crop Coefficients, and Dormant Season Evaporative Losses for Key Vegetation Surfaces in the Central Platte Natural Resources District

$1,066,416	Central Platte NRD
Kilic, Ayse	Biological Systems Engineering
Martin, Derrel	Biological Systems Engineering
van Donk, Simon	Biological Systems Engineering
Verma, Shashi	Natural Resources

Jackson, David — **Agricultural Research Division**

Identification and Release of Brown Midrib (BMR) Sorghum Varieties to Producers in Central America and Haiti

$1,100,000	USAID

Johnson, Scott — **Biological Process Development Facility**

USAMRAA CGMP Production Contract #1

$2,164,301	DoD-AMR
Van Cott, Kevin	Chemical and Biomolecular Engineering

Josiah, Scott — **Nebraska State Forest Service**

Cooperative Forestry Program

$1,734,765	USDA-FS
10/1/11 – 9/30/16	

Lee, Jaekwon — **Biochemistry**

Mechanistic Insights into Cellular Metal Detoxification

$1,408,563	NIH-NIEHS

Lewis, Elizabeth — **Teaching, Learning and Teacher Education**

UNL Science Scholars Program

$1,194,387	NSF
Bonnstetter, Ron	Teaching, Learning and Teacher Education
Claes, Daniel	Physics and Astronomy
Gosselin, David	Natural Resources
Heng-Moss, Tiffany	Entomology
Swidler, Stephen	Teaching, Learning and Teacher Education

Li, Ming — **Psychology**

Serotonin, Maternal Behavior and Postpartum Depression
$1,497,476 — NIH-NIMH

Behavioral Mechanisms of Antipsychotic Action
$1,424,409 — NIH-NIMH

Li, Qingsheng — **Biological Sciences**

The Early Events Determining SIV Rectal Transmission
$1,357,811 — NIH-NIDDK

Lodl, Kathleen — **Extension**

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

Lou, Marjorie — **Veterinary Medicine and Biomedical Sciences**

Protein-Thiol Mixed Disulfide in Cataractogenesis
$2,083,886 — NIH-NEI

Mackenzie, Sally — **Agronomy and Horticulture/ Biological Sciences/ Center for Plant Science Innovation**

* Epigenetic Breeding in Crops
$2,996,073 — Bill & Melinda Gates Foundation

Marley, Tom — **Mathematics**

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

McCutcheon, Allan — **Survey Research and Methodology/ Gallup Research Center**

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

Mendoza-Gorham, Joan — **Student Affairs**

Lincoln Upward Bound
$1,298,771 — ED

Upward Bound Math/Science Program
$1,257,584 — ED

Molfese, Victoria — **Child, Youth and Family Studies**

Development Implications of Early Childhood Sleep
$1,393,519 — NIH-NICHD through Indiana University
Molfese, Dennis — Psychology
Rudasill, Kathleen — Educational Psychology

Pegg, Mark — **Natural Resources**

Missouri River Sportfish Ecology and Management

$1,324,787 — Nebraska Game and Parks Commission

Hamel, Martin — Natural Resources

Perez, Lance — **Academic Affairs**

* WIDER: Adopting Research-Based Instructional Strategies for Enhancing STEM Education

$1,990,279 — NSF

Arthurs, Leilani — Earth and Atmospheric Studies

Couch, Brian — Biological Sciences

Golick, Douglas — Entomology

Heaton, Ruth — Teaching, Learning and Teacher Education

Lee, Kevin — Center for Science, Mathematics and Computer Education/Physics and Astronomy

Spiegel, Amy — Educational Psychology

Stains, Marilyne — Chemistry

Pickard, Gary — **Veterinary Medicine and Biomedical Sciences**

Homeostatic Regulation of Peripheral Oscillators via Autonomic Circuitry

$1,761,617 — NIH-NINDS

Sollars, Patricia — Veterinary Medicine and Biomedical Sciences

Pope, Kevin — **Natural Resources**

* Human Dimensions of Nebraska's Fisheries

$2,165,236 — Nebraska Game and Parks Commission

Chizinski, Christopher — Natural Resources

Reddy, N.R. Jayagopala — **Veterinary Medicine and Biomedical Sciences**

* Autoimmunity in the Mediation of Infectious Myocarditis

$1,370,344 — NIH-NHLBI

Elthon, Thomas — Biotechnology/Agronomy and Horticulture

Othman, Shadi — Biological Systems Engineering

Riethoven, Jean-Jack — Biotechnology

Steffen, David — Veterinary Medicine and Biomedical Sciences

Xu, Huihui — Biological Systems Engineering

Redepenning, Jody — **Chemistry**

Bioceramic Bones for Battlefield Traumas

$1,358,000 — DoD-AMR

Richardson, Amanda — **Sociology**

Behavioral Risk Factor Surveillance Survey 2012

$1,151,218 — DHHS-CDC through Nebraska Department of Health and Human Services

Robertson Jr., Vaughn — **Student Affairs**

UNL Educational Talent Search

$2,082,071 — ED

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

Studies of Artificially Structured Composite Magnets
$1,408,001 — DOE

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

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

Shen, Zhigang — **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
Stansbury, John — Civil Engineering
Zhang, Tian — Civil Engineering

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

Shulski, Martha — **Natural Resources**

* Regional Climate Services Support in the High Plains Region

$1,218,274 — DOC-NOAA

Simpson, Melanie — **Biochemistry**

Mechanisms of Hyaluronan Signaling and Turnover in Prostate Cancer

$1,503,626 — NIH-NCI

Harris, Edward — Biochemistry

Somerville, Greg — **Veterinary Medicine and Biomedical Sciences**

Citric Acid Cycle Regulation of Exopolysaccharide Synthesis in Staphylococci

$1,384,992 — NIH-NIAID

Powers, Robert — Chemistry

Spreitzer, Robert — **Biochemistry**

Role of the Rubisco Small Subunit

$1,496,500 — DOE

Starace, Anthony — **Physics and Astronomy**

Dynamics of Few-Body Atomic Processes

$2,180,804 — DOE

Steadman, James — **Plant Pathology**

Genetic Approaches to Reducing Fungal and Oomycete Soilborne Problems of Common Bean in Eastern and Southern Africa

$1,100,000 — USDA-NIFA

Urrea Florez, Carlos — Panhandle Research and Extension Center

Storz, Jay — **Biological Sciences**

Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents

$1,411,572 — NIH-NHLBI

Moriyama, Hideaki — Biological Sciences/ Center for Biotechnology

Stroup, Walter — **Statistics/Center for Science, Mathematics and Computer Education**

Data Connections: Developing a Coherent Picture of Mathematics Teaching and Learning

$1,213,475 — NSF

Green, Jennifer — Statistics/Center for Science, Mathematics and Computer Education

Smith, Wendy — Center for Science, Mathematics and Computer Education

Tsymbal, Evgeny — **Physics and Astronomy**

Cyberinfrastructure-Enabled Computational Nanoscience for Energy Technologies

$2,587,878 — NSF-EPSCoR

Swanson, David — Computer Science and Engineering

Umstadter, Donald — **Physics and Astronomy**

* Novel Narrowband, Tunable, Multi-MeVX-Ray Source

$2,896,428 — National Strategic Research Institute
Banerjee, Sudeep — Physics and Astronomy
Chen, Shouyuan — 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

Laser Produced Coherent X-Ray Sources

$1,395,000 — DOE
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

Walia, Harkamal — **Agronomy and Horticulture**

Physiological and Genetic Mechanisms Underlying Salt Tolerance in Rice across Developmental Stages

$2,035,509 — NSF
3/1/13 – 2/29/16
Lorenz, Aaron — Agronomy and Horticulture
Samal, Ashok — Computer Science and Engineering
Wang, Dong — Computer Science and 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
Peterson, Daniel — Food Science and Technology

Wardlow, Brian — **Natural Resources**

* The Quick Drought Response Index (QuickDRI): An Integrated Approach to Maximizing the Use of NASA Data Sets for Rapid Response Drought Monitoring

$1,150,701 — NASA
Fuchs, Brian — Natural Resources
Hayes, Michael — Natural Resources
Svoboda, Mark — Natural Resources
Tadesse, Tsegaye — Natural Resources

Weeks, Donald — **Biochemistry**

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

Whitbeck, Les — **Sociology**

Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents

$1,358,156 — NIH-NIAAA

Cheadle, Jacob — Sociology

Hoyt, Dan — Sociology

Wilson, Mark — **Biochemistry/ Nebraska Center for Redox Biology**

Redox Regulation of DJ-1 Function

$1,330,374 — NIH-NIGMS

Wood, Charles — **Biological Sciences/ Nebraska Center for Virology**

Neuropathogenesis and Neuroinvasiveness of Subtype C Human Immunodeficiency Virus-1

$1,712,314 — DHHS-NINDS

Programs in HIV & AIDS Assoc Diseases/Malignancies

$2,609,284 — NIH-FIC

Research Training in Comparative Viral Pathogenesis

$1,316,330 — NIH-NIAID

Vaccination against Mucosal HIV Clade C Transmission

$1,291,235 — NIH-DFCI

Yamamoto, Catherine — **Student Affairs**

Student Support Services Program

$2,470,445 — ED

Awards of $200,000 to $999,999

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

* Indicates new in 2013-2014

Adamec, Jiri — **Biochemistry**

Genetic & Genomic Approaches to Understanding Long-Distance Transport and Carbon Partitioning in Plants

$315,157 — NSF through University of Missouri

Adenwalla, Shireen — **Physics and Astronomy/ Center for Materials and Nanoscience**

Magnetoelectric Coupling in Ferroelectric/Ferromagnetic Heterostructures: Beyond Volume Effects

$395,020 — NSF

Ducharme, Stephen — Physics and Astronomy

Gruverman, Alexei — Physics and Astronomy

Albrecht, Julie — **Nutrition and Health Sciences**

Growing Healthy Kids through Healthy Communities

$947,093 — USDA-AFRI

Bergman, Gary — Southeast Research and Extension Center

Food Safety for Diverse Families with Young Children

$554,302 — USDA-NIFA

Alfano, James — **Plant Pathology**

* The *Pseudomonas Syringae* Type 3 Translocon and the Injection of Bacterial Effectors across the Plant Cell Wall and Plasma Membrane

$499,778 — USDA-NIFA

Allen, Craig — **Natural Resources**

NGPC Coordination, Mapping, Monitoring, Risk Assessment and Data Management of Wind Development in Nebraska

$295,770 — Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources

Nebraska Wetland Conditions Assessment: An Intensification Study in Support of the 2011 National Survey

$338,250 — Nebraska Game and Parks Commission

NCFWRU: Adaptive Management for Nebraska Legacy Program Goals

$200,000 — Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources

Missouri River Mitigation: Implementation of Amphibian Monitoring and Adaptive Management for Wetland Restoration Evaluation

$601,886 — DOI-GS

Anderson, John — **Economics**

Clayton Yeutter Center for International Trade Phase I: Trade Scholars Program

$500,000 — DOC-ITA

Anderson, Mark — **Earth and Atmospheric Sciences**

Development of Northern Hemisphere
Snow & Ice Climate Data Records

$247,874 — NASA through Rutgers University

Askren, Mark — **Information Services**

* CC-NIE Networking Infrastructure:
Accelerating Science for Nebraska

$491,871 — NSF

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

Atkin, Audrey — **Biological Sciences**

Mechanisms that Protect Transcripts
from Nonsense-Mediate mRNA Decay

$620,647 — NSF

Avalos, George — **Mathematics**

Analysis and Control of Evolutionary Plates and Elastic Structures

$292,773 — NSF

Toundykov, Daniel — Mathematics

Avramov, Luchezar — **Mathematics**

Cohomology over Commutative Rings:
Structure and Applications

$458,919 — NSF

Avramova, Zoya — **Biological Sciences**

Memory of a Drought:
Training Arabidopsis Plants to Withstand Dehydration Stress

$711,000 — NSF

Fromm, Michael — Center for Biotechnology/ Center for Plant Science Innovation
Riethoven, Jean-Jack — Center for Biotechnology

Azizinamini, Atorod — **Civil Engineering**

Comprehensive Evaluation of Fracture Critical Bridges

$286,348 — Nebraska Department of Roads

Baenziger, P. Stephen — **Agronomy and Horticulture**

Enhance Variety Development
of Scab Resistant Hard Winter Wheat Varieties in Nebraska

$272,910 — USDA-ARS

Wegulo, Stephen — Plant Pathology

Balschweid, Mark — **Agricultural Leadership, Education and Communication**

Soybean Market Journal

$200,000 — Nebraska Soybean Board

Harms, Kurtis — Agricultural Leadership, Education and Communication
Schulte, Brandon — Agricultural Leadership, Education and Communication
Wilkerson, Jeff — Agricultural Leadership, Education and Communication

Barker, Bradley — **4-H Youth Development**

4-H Robotics: Engineering for Today and Tomorrow

$647,162 — USDA-CSREES-National 4-H Headquarters

Barletta, Raul — **Veterinary Medicine and Biomedical Sciences**

* Genome Wide Analysis of *M. Paratuberculosis* Pathogenesis

$499,981 — USDA-NIFA

Bartelt-Hunt, Shannon — **Civil Engineering**

Evaluating Air Emissions and Fuel Efficiency of Solid Waste Collection Vehicles

$262,602 — Environmental Research & Education Foundation

Jones, Elizabeth — Civil Engineering

Fate and Bioavailability of Steroids in Aquatic Sediment

$227,981 — NSF

Snow, Daniel — Natural Resources

Basolo, Alexandra — **Biological Sciences**

The Consistency of Behavioral Plasticity Across Different Selective Contexts

$506,998 — NSF

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

Phylloquinone Biosynthesis in Plants: Enzyme Discovery and Pathway Flux Control

$440,356 — NSF

Batelaan, Herman — **Physics and Astronomy**

Coherent Electron Control

$390,000 — NSF

Baumert, Joseph — **Food Science and Technology**

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

$423,546 — EPA

Goodman, Richard — Food Science and Technology

Peterson, Daniel — Food Science and Technology

Becker, Donald — **Biochemistry**

REU Site: Training in Redox Biology

$278,500 — NSF

Stone, Julie — Biochemistry/Center for Plant Science Innovation

Belashchenko, Kirill — **Physics and Astronomy**

First-Principles Theory of Thermal Effects in Spin Transport

$225,000 — NSF

Benson, Andrew — **Food Science and Technology**

Microbiome Analysis of ConAgra Products

$325,000 — ConAgra

Berkowitz, David — **Chemistry**

New Approaches to Catalyst Screening & Development

$465,000 — NSF

DiMagno, Stephen — Chemistry

Beukelman, David — **Special Education and Communication Disorders**

Rehabilitation Engineering Research Center on Communication Enhancement
$392,328 — ED through Duke University Medical Center

Billesbach, David — **Biological Systems Engineering**

The AmeriFlux Network Management Project
$244,986 — DOE through University of California-Berkeley National Lab

SGP-Carbon Project
$327,981 — University of California-Berkeley National Lab

Bischoff, Richard — **Child, Youth and Family Studies**

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

Bloom, Kenneth — **Physics and Astronomy**

Any Data, Anytime, Anywhere
$710,336 — NSF
Dominguez, Aaron — Physics and Astronomy
Swanson, David — Computer Science and Engineering

Blum, Paul — **Biological Sciences**

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

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
$369,945 — DoD-ARO

Bockelman, Brian — **Computer Science and Engineering**

CC-NIE Integration: Bringing Distributed High Throughput Computing to the Network with Lark
$573,344 — NSF

Brewer, Gary — **Entomology**

Biopesticide Management of Pasture Flies in the Great Plains via a Push-Pull Strategy

$200,000 — USDA-NIFA

Boxler, David — West Central Research and Extension Center

Brisson, Jennifer — **Biological Sciences**

Contrasting Environmental and Genetic Controls of Alternative Phenotypes

$782,884 — NIH-NIEHS

Brown, Deborah — **Biological Sciences**

* Generation and Regulation of Anti-Viral CD4 T Cells with Cytolytic Potential

$351,312 — NIH-NIAID

Vaccine Strategies that Target Cytolic CD4 T Cells to the Lung

$398,919 — NIH-NIAID

Buchholz, Wallace — **Biological Process Development Facility**

* Manufacture of Recombinant Vaccine for Phase Clinical Trial and Toxicity Testing

$832,185 — National Strategic Research Institute

Johnson, Scott — Biological Process Development Facility

Bulling, Denise — **Public Policy Center**

Developing Nebraska's Homeland Security Planning Capacity

$300,000 — DHS through Nebraska Military Department-NEMA

Dekraai, Mark — Psychology/Public Policy Center

Speck, Kathryn — Public Policy Center

Burgin, Amy — **Natural Resources**

Conversion of Farm Fields to Wetlands: How Do Created Wetlands Affect Global Warming Potential

$454,545 — USDA-NIFA

The Effects of Alum and Fish Restoration on Water Quality in the Fremont Lake, NE

$264,148 — EPA through Nebraska Department of Environmental Quality

Pegg, Mark — Natural Resources

Pope, Kevin — Natural Resources

Thomas, Steven — Natural Resources

Coupled C, N and S Cycling in Coastal Plain Wetlands: How Will Climate Change and Salt Water Intrusion Alter Ecosystem Dynamics?

$239,555 — NSF

Cahoon, Edgar — **Biochemistry/ Center for Plant Science Innovation**

Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis
$686,815 — NSF
Stone, Julie — Biochemistry

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

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

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

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

Cantrell, Randolph — **Center for Applied Rural Innovation**

Marketing Rural Communities to Attract and Retain Workers
$498,558 — USDA-NRICGP
Burkhart-Kriesel, Cheryl — Panhandle Research and Extension Center

Cassman, Kenneth — **Agronomy and Horticulture**

CGIAR Fund Office ISPC Chair
$970,147 — World Bank Group-IBRD

Centurion, Martin — **Physics and Astronomy**

Ultrafast Imaging of Electronic Motion in Atoms and Molecules
$737,778 — DoD-AFOSR
Starace, Anthony — Physics and Astronomy

Ultrafast Electron Diffraction from Aligned Molecules
$750,000 — DOE

Cerutti, Heriberto — **Biological Sciences/ Center for Plant Science Innovation**

Histone H3 Phosphorylation and Gene Silencing in Chlamydomonas and Arabidopsis
$591,661 — NSF

Chambers, Jeffrey — **Center on Children, Family and the Law**

Nebraska Homeless Assistance Program - Homeless Management Information System Region VI and Balance of State
$202,221 — Nebraska Department of Health and Human Services

Choueiry, Berthe — **Computer Science and Engineering**

RI: Small: Towards Practical Tractability in Constraint Processing

$419,564 — NSF

Christensen, Alan — **Biological Sciences**

EAGER: Plant Mitochondrial Transformation

$300,000 — NSF

Ciobanu, Daniel — **Animal Science**

* Application of Genomics to Improving Swine Health and Welfare

$243,065 — University of Alberta, Canada

Claes, Daniel — **Physics and Astronomy**

* Strategies: Action at a Distance

$550,000 — NSF

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

Snow, Gregory — Physics and Astronomy

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

Clarke, Jennifer — **Food Science and Technology/Statistics**

* ATD: Statistical Ensembles for the Identification of Bacterial Genomes

$495,318 — NSF

Clarke, Bertrand — Statistics

Clemente, Thomas — **Agronomy and Horticulture/ Center for Plant Science Innovation/ Center for Biotechnology**

Testing Replacement of Fishmeal and Fish Oil in Seriola Rivoliana (Kona Kampachi) Diet with Soy-Based Protein and Oil

$386,969 — United Soybean Board/Smith/Bucklin

Engineering Hydrocarbon Biosynthesis and Storage Together with Increased Photosynthetic Efficiency into the Saccharinae

$551,971 — DOE through University of Illinois at Urbana-Champaign

Necessary Resources to Aid in the Translation of Genomics Information into Applied Technologies

$630,982 — NSF through University of Georgia

Cohen, Myra — **Computer Science and Engineering**

SHF: Medium: Regression Testing Techniques for Real-World Software Systems

$324,883 — NSF

Couch, Brian — **Biological Sciences**

* Impact of the Summer Institution on Faculty Teaching and Student Achievement

$393,068 — NSF through University of Colorado

Cramer, Joel — **Nutrition and Health Sciences**

* Effects of Conjugated Linoleic Acid on Physical Performance

$339,567	Stepan Specialty Products LLC
Bergstrom, Haley	Nutrition and Health Sciences
Cochrane, Kristen	Nutrition and Health Sciences
Housh, Terry	Nutrition and Health Sciences
Jenkins, Nathaniel	Nutrition and Health Sciences

A Single Site, Double-Blind, Randomized, Placebo-Controlled, Crossover Trial to Evaluate the Safety and Potential Effects of the Dietary Supplement Anatabine on Delayed Onset Muscle Soreness in the Forearm Flexors

$377,456	Rock Creek Pharmaceuticals Inc.
Housh, Terry	Nutrition and Health Sciences

Cress Nipper, Cynthia — **Special Education and Communication Disorders**

* STTR: Infant Assessment of Early Communication Risk Factors: The ECBS

$532,677	NIH-NIDCD through Brookes Publishing Company

Crockett, Lisa — **Psychology**

An Ecological Model of Latino Youth Development

$315,000	NSF
Buhs, Eric	Educational Psychology
Carranza, Miguel	Sociology/Institute for Ethnic Studies
De Guzman, Maria	Child, Youth and Family Studies

Cupp, Andrea — **Animal Science**

* Causes and Consequences of Androgen Excess on Oocyte Quality

$499,994	USDA-NIFA
Wood, Jennifer	Animal Science

De Ayala, Rafael — **Educational Psychology**

GAANN Fellowship Program for Educational Psychology

$528,608	ED
Ansorge, Charles	Educational Psychology
Bellows, Laurie	Graduate Studies
Bovaird, James	Educational Psychology
Geisinger, Kurt	Educational Psychology

Detweiler, Carrick — **Computer Science and Engineering**

* Co-Aerial-Ecologist: Robotic Water Sampling and Sensing in the Wild

$956,210	USDA-NIFA
Burgin, Amy	Natural Resources
Elbaum, Sebastian	Computer Science and Engineering
Waite, Matthew	Journalism and Mass Communications

CSR: Small: Adaptive and Autonomous Energy Management on a Sensor Network Using Aerial Robots

$390,000	NSF

RI: Small: Adaptive Sampling with Robots for Marine Observations

$249,971	NSF

DiRusso, Concetta — **Biochemistry**

* Activators of Lipid Accumulation in Algae

$550,000 — NSF

Adamec, Jiri — Biochemistry

Cerny, Ronald — Chemistry

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

$375,000 — 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
$893,269 — DoD-AFOSR

MURI: Multiscale Design and Manufacturing
of Hybrid DWCNT-Polymer Fibers
$815,077 — DoD through Northwestern University

Elbaum, Sebastian — **Computer Science and Engineering**

SHF: Small: Solving the Search for Relevant Code
in Large Repositories with Lightweight Specifications
$449,033 — NSF

T2T: A Framework for Amplifying Testing Resources
$491,688 — NSF
Dwyer, Matthew — Computer Science and Engineering

Enders, Axel — **Physics and Astronomy**

* UNO-NASA Space Grant Consortium:
Neutron Voltaics for Deep Space Missions
$546,569 — NASA through UNO
Dowben, Peter — Physics and Astronomy
Ianno, Natale — Electrical Engineering

Epstein, Michael — **Special Education and Communication and Disorders**

University of Nebraska's Post-Doctoral Program
in Emotional Disturbance
$643,776 — ED

Randomized Clinical Trial of the Boys Town In-Home Program
$621,989 — Father Flanagan's Boys' Home
Duppong Hurley, Kristin — Special Education and Communication and Disorders

Leadership Training in Emotional Disturbance Disorders
$601,733 — ED
Duppong Hurley, Kristin — Special Education and Communication and Disorders
Torkelson-Trout, Alexandra — Special Education and Communication and Disorders

Erickson, Galen — **Animal Science**

* Integrated Anaerobic Digestion with Algae
Bioenergy and Green Aquaculture
$250,000 — Nebraska Environmental Trust
Isom, Loren — Industrial Agricultural Products Center
Riley, Mark — Biological Systems Engineering
Schmidt, Amy — Animal Science/Biological Systems Engineering
Stowell, Richard — Biological Systems Engineering

Eskridge, Kent — **Statistics**

GAANN Fellowship Program for Statistics

$396,456	ED
Batman, Renee	Graduate Studies
Bellows, Laurie	Graduate Studies
Bilder, Christopher	Statistics
Blankenship, Erin	Statistics
Parkhurst, Anne	Statistics
Stroup, Walter	Statistics
Weissinger, Ellen	Educational Psychology
Zhang, Shunpu	Statistics

Fabrikant, Ilya — **Physics and Astronomy**

Electron-Molecule Collisions in Different Environments

$240,000	NSF

Faller, Ronald — **Midwest Roadside Safety Facility**

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

$213,677	DOT-FHWA through Nebraska Department of Roads
Bielenberg, Robert	Midwest Roadside Safety Facility
Reid, John	Mechanical & Materials Engineering

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

$293,248	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

Farritor, Shane — **Mechanical & Materials Engineering**

* Robotic Tele-Surgery Research

$686,808	DOD-Army-TATRC through UNMC
Hawks, Jeff	Mechanical & Materials Engineering
Nelson, Carl	Mechanical & Materials Engineering
Terry, Benjamin	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

$483,373 — 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

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

Forbes, Cory — **Natural Resources**

* Modeling Hydrologic Systems in Elementary Science

$327,537 — NSF

Franco Cruz, Rodrigo — **Veterinary Medicine and Biomedical Sciences**

Thiol Redox Signaling in Neuronal Cell Death

$214,500 — American Heart Association

Frankl, Nicole — **Nebraska LTAP**

* Nebraska Local Technical Assistance Program FY 2015

$834,038 — DOT-FHWA through Nebraska Department of Roads

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

Gaussoin, Roch — **Agronomy and Horticulture**

* Development of Quality Protein Popcorn as a Non-GMO Approach to Enhanced Nutritional Quality, Pop Volume and Flavor Profile

$694,200 — ConAgra
Holding, David — Agronomy and Horticulture
Rodriguez, Oscar — Agronomy and Horticulture
Rose, Devin — Food Science and Technology

* ConAgra Popcorn Breeding Maintenance

$475,166 — ConAgra
Hoegemeyer, Thomas — Agronomy and Horticulture
Holding, David — Agronomy and Horticulture
Lorenz, Aaron — Agronomy and Horticulture
McAndrew, Thomas — Agronomy and Horticulture

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

$211,900 — ConAgra
Lorenz, Aaron — 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 — **Agricultural Economics**

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
$499,917 — Nebraska Department of Education
Ihlo, Tanya — Nebraska Center for Research on Children, Youth, Families and Schools

Goddard, Stephen — **Computer Science and Engineering**

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

Goodman, Richard — **Food Science and Technology**

* *In vitro* Serum IgE Testing of a Stacked-Event Biotech Soybean Compared to Commercial Lines
$229,508 — Pioneer Hi-Bred

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

Food Allergen Database
$957,318 — 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
$267,201 — United Soybean Board/Smith/Bucklin

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

Griep, Mark — **Chemistry**

* Framing the Chemistry Curriculum
$749,285 — NSF

Grosskopf, Kevin — **Durham School of Architectural Engineering and Construction**

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

Gruverman, Alexei — **Physics and Astronomy**

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

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

Guo, Jiantao — **Chemistry**

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

Guretzky, John — **Agronomy and Horticulture**

Demonstrating Mob Grazing Impacts
in the Northern Great Plains on Grazingland Efficiency,
Botanical Composition, Soil Quality, and Ranch Economics
$330,256 — USDA-NRCS through South Dakota State University
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

Hage, David — **Chemistry**

* Instrumentation Development:
Label-Free and Rapid 3D-Nanostructure
Ultrathin-Layer Imaging Chromatography
$402,483 — NSF
Hofmann, Tino — Electrical Engineering

Chromatographic Automation of Immunoassays
$809,387 — NIH-NIGMS

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

Han, Ming — **Electrical Engineering**

Highly Sensitive and Multiplexed Fiber-Optic Ultrasonic Sensors
$305,658 — DoD

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

Harshman, Lawrence — **Biological Sciences**

Molecular Evolution of Genes Expressed in *D. melanogaster* Sperm Storage Structures

$302,713 — NSF

Moriyama, Etsuko — Biological Sciences/ Center for Plant Science Innovation

Genome Biology of Innate Immunity: Genetic Dissection of *Drosophila melanogaster* Responses to Bacillus Infection

$454,013 — DoD

Benson, Andrew — Food Science and Technology

Kachman, Stephen — Statistics

Hawks, Jeff — **Mechanical & Materials Engineering**

* MPRP Sauce Fluid Dynamic Study for Perfect Dispense System

$550,000 — ConAgra

Farritor, Shane — Mechanical & Materials Engineering

Zhang, Zhaoyan — Mechanical & Materials Engineering

Hayes, Michael — **Natural Resources**

* Drought Information Service in Support of the National Integrated Drought Information System NIDIS

$739,803 — DOC-NOAA

Bathke, Deborah — Earth and Atmospheric Sciences

Fuchs, Brian — Natural Resources

Knutson, Cody — Natural Resources

Svoboda, Mark — Natural Resources

Tadesse, Tsegaye — Natural Resources

* Improving U.S. Drought Monitoring: Integrating Soil Moisture Data and Developing a Drought Blends Portal

$240,000 — USDA

Fuchs, Brian — Natural Resources

Svoboda, Mark — Natural Resources

* NDMC Drought Information Services for Agriculture

$200,000 — USDA

Fuchs, Brian — Natural Resources

Svoboda, Mark — Natural Resources

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

Hermiller, Susan — **Mathematics**

* Topology and Geometry of Cayley Graphs for Groups

$251,096 — NSF

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

Holding, David — **Agronomy and Horticulture**

* A Novel Functional Genomics Platform for Dissecting Maize Kernel Maturation and Protein Quality

$412,985 — USDA-NIFA

Zhang, Chi — Biological Sciences

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
$400,000 — DoD-DTRA

Hunt, William — **Anthropology**

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

Hutkins, Robert — **Food Science and Technology**

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

Hygnstrom, Scott — **Natural Resources**

Outdoor U Program
$262,381 — Nebraska Game and Parks Commission

Irmak, Suat — **Biological Systems Engineering**

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

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

Water Use, Surface Energy Balance, and Vegetation Dynamics of Phragmites (*Phragmites australis*) in the Central Platte River Valley
$266,668 — Central Platte NRD

Itskov, Vladimir — **Mathematics**

Topology of Neural Coding in Recurrent Networks: Theory and Data Analysis

$316,862 — NSF

Iyengar, Srikanth — **Mathematics**

Commutative Algebra: Homological and Homotopical Aspects

$435,785 — NSF

Derived Categories of Complete Intersections and Hochschild Cohomology

$210,528 — NSF

Jhala, Amitkumar — **Agronomy and Horticulture**

* Pollen-Mediated Gene Flow from Acetolactate Synthase-Inhibiting Herbicide-Resistant Sorghum to Johnsongrass

$296,286 — E. I. Dupont

Lindquist, John — Agronomy and Horticulture

Johnson, Scott — **Biological Process Development Facility**

STTR: Process Research, Development and Stability Testing of cv-PDG-NLS.

$763,023 — DHHS-NIH through Restoration Genetics Inc

Van Cott, Kevin — Chemical and Biomolecular Engineering

Process Research and Development of a *Streptococcus pneumoniae* Whole Cell Vaccine (SPWVC)

$676,990 — PATH, through Bill & Melinda Gates Foundation

Jones, Clinton — **Veterinary Medicine and Biomedical Sciences**

* Analysis of Bovine Herpesvirus 1 Stress-Induced Reactivation from Latency

$500,000 — USDA-NIFA

Doster, Alan — Veterinary Medicine and Biomedical Sciences

Analysis of Viral Factors that Regulate the Bovine Herpesvirus 1 (BHV-1) Latency Reactivation Cycle

$375,000 — USDA-CSREES

Josiah, Scott — **Nebraska State Forest Service**

* Protecting, Rehabilitating and Restoring Nebraska's Pine Forest Ecosystems
$989,667 — Nebraska Environmental Trust

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

* Conservation and Stewardship Education for Nebraska Educators and Youth
$295,781 — USDA-FS

Forest Legacy Program: Pine Ridge Project
$500,000 — USDA-FS

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

Hazardous Fuels Reduction: Pine Ridge
$220,000 — USDA-FS

Khattak, Aemal — **Civil Engineering**

HMEP Public Sector Planning Grant-Commodity Flow Survey
$300,000 — Nebraska Military Department-NEMA

Rilett, Laurence — Civil Engineering/ Nebraska Transportation Center

Kilic, Ayse — **Natural Resources/Civil Engineering**

CPNRD Mapping Evapotranspiration with High Resolution Satellite Data
$521,705 — Central Platte NRD

Kim, Yong Rak — **Civil Engineering**

Asphalt Research Consortium
$425,000 — DOT-FHWA through Texas A&M Research Foundation

Knops, Johannes — **Biological Sciences**

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

Knutson, Cody — **Natural Resources**

Transforming Climate Variability and Change Information for Cereal Crop Producers

$284,468 — USDA-NIFA through Purdue University

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

Koelsch, Richard — **Biological Systems Engineering/ Extension**

Nebraska EIPM-CS Coordination Program

$669,915 — USDA-CSREES

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-Ziems, 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

Kranz, William — **Northeast Research and Extension Center**

Sustainable Energy Options for Rural Nebraska

$500,000 — DOE

Hay, Francis	Biological Systems Engineering
Hudgins, Jerry	Electrical Engineering
Isom, Loren	Industrial Agricultural Products Center
Keshwani, Deepak	Biological Systems Engineering
Shelton, David	Northeast Research and Extension Center

Krehbiel, Michelle — **Extension**

Nebraska CYFAR Sustainable Community Project

$627,967 — USDA-NIFA

De Guzman, Maria — Child, Youth and Family Studies

Kuzila, Mark — **Natural Resources**

* Water Quality Monitoring Wells

$814,250 — EPA through Nebraska Department of Environmental Quality

Lackey, Susan — **Natural Resources**

Developing Hydrogeologic Databases to Assist in Water Resources Management

$539,100 — Lower Elkhorn NRD

Developing Hydrogeologic Databases to Assist in Water Resources Management – UENRD

$203,353 — Upper Elkhorn NRD

Langell, Marjorie — **Chemistry**

* Effect of Composition and Particle Size in Oxidation Catalysis by Metal Oxide Solid Solution Nanoparticles

$485,000 — NSF

Metal Oxide Solid Solutions: Macroscopic to Nano-Scale

$449,855 — NSF

GAANN Fellowships in Chemistry: Research First at UNL

$396,456 — ED

Lee, Jaekwon — **Biochemistry**

Mechanistic Insights into Copper Metabolism

$834,761 — NIH-NIDDK

Kim, Heejeong — Biochemistry

Lenters, John — **Natural Resources**

Toward a Circumarctic Lakes Observation Network (CALON)

$297,082 — NSF

Lenton, Roberto — **Water for Food Institute**

Development of the Middle East and North Africa Network of Water Centers

$211,565 — USAID through DAI

Lesoing, Gary — **Southeast Research and Extension Center**

Nebraska Network for Beginning Farmers and Ranchers

$202,397 — Center for Rural Affairs

Conley, Dennis — Agricultural Economics

Lewis, Charlotte — **Center on Children, Families, and the Law**

EDN/IFSP ON-LINE

$226,136 — ED through Nebraska Department of Education

Lewis, Jim — **Mathematics/Center for Science, Mathematics and Computer Education**

* UNL-LPS Title I Mathematics Professional Development Partnership

$538,246 — Lincoln Public Schools

Homp, Michelle — Center for Science, Mathematics and Computer Education

Li, Xu — **Civil Engineering**

Bioaccumulation of Antibiotic Resistant Salmonella in Produce after Irrigation Using Recycled Waters

$500,000 — USDA-AFRI
Bartelt-Hunt, Shannon — Civil Engineering
Hodges, Laurie — Agronomy and Horticulture
Snow, Daniel — Natural Resources

Lindquist, John — **Agronomy and Horticulture**

Crop-Wild Gene Flow in Sorghum and Relative Fitness of the Shattercane x Sorghum F2 Population

$300,000 — USDA-NIFA
Bernards, Mark — Agronomy and Horticulture

Liou, Sy-Hwang — **Physics and Astronomy**

High Sensitivity Magnetoresistive Sensors for Both DC and EMI Magnetic Field Mapping

$650,000 — DoD-Strategic Environmental Research Development Program

Liska, Adam — **Biological Systems Engineering**

Second Generation Biofuels: Carbon Sequestration and Life Cycle Analysis

$500,000 — DOE
Arkebauer, Timothy — Agronomy and Horticulture
Cassman, Kenneth — Agronomy and Horticulture

Lodl, Kathleen — **Extension**

* Childcare and Youth Training and Technical Assistance Program 2013 Expansion

$390,000 — USDA-NIFA
Durden, Tonia — Child, Youth and Family Studies

Lorenz, Aaron — **Agronomy and Horticulture**

Uncovering the Genetic Basis of Tolerance to Goss's Wilt in North American Maize

$293,431 — Dow AgroSciences
Jackson-Ziems, Tamra — Plant Pathology

Lou, Marjorie — **Veterinary Medicine and Biomedical Sciences**

* Protein-Thiol Mixed Disulfide in Cataractogenesis

$409,259 — NIH-NEI
Wu, Hong Li — Veterinary Medicine and Biomedical Sciences

Lu, Ying — **Computer Science and Engineering**

CSR: Small: Energy Management for Heterogeneous MapReduce Data Centers

$432,932 — NSF
Swanson, David — Computer Science and Engineering

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
Ducharme, Stephen — Physics and Astronomy
Pannier, Angela — Biological Systems Engineering
Zhou, You — Center for Biotechnology

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

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

Synthesis of Crystalline Carbon Nitride by Simultaneous Vibrational and Electronic Excitations
$255,771 — NSF

Mackenzie, Sally — **Agronomy and Horticulture/ Biological Sciences/ Center for Plant Science Innovation**

Understanding MSH1 Developmental Reprogramming
$925,482 — Syngenta

Elucidation of Mito-Nuclear Interplay in Arabidopsis
$689,961 — DOE
Wang, Dong — Statistics

GEPR: Intersection of the Plant Epigenome and Bioenergetics in Phenotypy
$599,998 — NSF
Fromm, Michael — Agronomy and Horticulture/ Center for Biotechnology
Lorenz, Aaron — Agronomy and Horticulture
Riethoven, Jean-Jack — Center for Biotechnology
Xu, Yingzhi — Center for Plant Science Innovation
Yu, Bin — Biological Sciences

Mamo, Martha — **Agronomy and Horticulture**

* Grazing Management Effect on Micro- and Macro-Scale Fate of Carbon and Nitrogen in Rangelands

$497,000	USDA-NIFA
Bradshaw, Jeffrey	Panhandle Research and Extension Center
Eskridge, Kent	Statistics
Ferguson, Richard	Agronomy and Horticulture
Guretzky, John	Agronomy and Horticulture
Jenkins, Karla	Panhandle Research and Extension Center
Schacht, Walter	Agronomy and Horticulture
Volesky, Jerry	West Central Research and Extension Center
Whipple, Sean	Panhandle Research and Extension Center
Wingeyer, Ana	Agronomy and Horticulture
Yang, Haishun	Agronomy and Horticulture

McCurdy, Merilee — **Educational Psychology**

Training School Psychologists in Response-to-Intervention Implementation and System Change

$799,981	ED
Daly, Edward	Educational Psychology
Ihlo, Tanya	Nebraska Center for Research on Children, Youth, Families and Schools
Kunz, Gina	Nebraska Center for Research on Children, Youth, Families and Schools

McMahon, Patrice — **Political Science**

* Study of the U.S. Institute on Civic Engagement

$217,505	DOS-BECA
Major, Linda	Student Affairs
Pfister, Damien	Communication Studies

Mitra, Amit — **Plant Pathology**

Development of Transgenic Beans for Broad-Spectrum Resistance against Fungal Diseases

$250,000	USDA-NIFA
Steadman, James	Plant Pathology
Urrea Florez, Carlos	Panhandle Research and Extension Center

Morcous, George — **Durham School of Architectural Engineering and Construction**

Self-Consolidating Concrete for Cast-in-Place Bridge Components

$449,831	NAS-TRB

Moriyama, Etsuko — **Biological Sciences/ Center for Plant Science Innovation**

Large-Scale Simultaneous Multiple Alignment & Phylogeny Estimation

$266,830	NSF

Mower, Jeffrey — **Agronomy and Horticulture**

Tracing Processes of Genome Evolution using Plantaginaceae

$749,544	NSF

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

$720,444	NSF through University of Texas at Austin

Nastasi, Michael — **Mechanical & Materials Engineering/ Nebraska Center for Energy Sciences Research**

Radiation Tolerance and Mechanical Properties of Advanced Ceramic/Metal Composites

$979,978 — DOE

Negahban, Mehrdad — **Mechanical & Materials Engineering**

Polymer Parts with Tailored Microstructure Distributions Optimized for an Application

$837,503 — DoD-MDA

Tan, Li — Mechanical & Materials Engineering

EMME: US-EU Transatlantic Degree Program in Engineering Mechanics/Materials Engineering

$407,997 — ED

Nelson, Carl — **Mechanical & Materials Engineering**

* Multifunction Robotic Tools for Natural Orifice and Single-Incision Surgery

$395,905 — NIH-NIBIB

Farritor, Shane — Mechanical & Materials Engineering

* A Novel Pediatric Gait Rehabilitation Device

$394,911 — NIH-NICHD

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

$222,559 — ED

Hopkins, Megan — Educational Psychology

Shell, Duane — Educational Psychology

Osorio, Fernando — **Veterinary Medicine and Biomedical Sciences**

* Molecular Structures of Porcine Reproductive and Respiratory Virus (PRRSV) that Contribute to Protective Immunity

$500,000 — USDA-AFRI

Pattnaik, Asit — Veterinary Medicine and Biomedical Sciences

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**

* Development of a Novel Self-Propagating PRRSV-VSV G Hybrid Replicon as a Vector for Inducing Broad PRRSV Protection
$200,000 — National Pork Board
Osorio, Fernando — 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

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

Perez, Lance — **Electrical Engineering**

* A Chautauqua Program for the 21st Century
$448,603 — NSF

* Crossing the Threshold of Problem Solving: Electrical Engineering vs. Chemistry
$244,058 — NSF

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

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

$717,487 — 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

Pytlik 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 — Law/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 Atmospheric Sciences/ Antarctic Geological Drilling Program**

* Developing New Science and Technology for Subglacial Studies of the Whillans Ice Plain and West Antarctic Ice Sheet
$576,778 NSF

SIMPLE: Sub-Ice Investigation of Marine and Planetary-Analog Ecosystems
$383,297 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

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	NSF
Curto, Carina	Mathematics
Hartke, Stephen	Mathematics
Williams, Amber	Student Affairs
Woodward, Gordon	Mathematics

REU Site: Nebraska REU in Applied Math

$285,263	NSF
Ledder, Glenn	Mathematics

Reddy, N.R. Jayagopala — **Veterinary Medicine and Biomedical Sciences**

Delineating Autoimmunity in Post-Infectious Myocarditis

$308,000	American Heart Association

Reid, John — **Mechanical & Materials Engineering**

Wisconsin DOT Roadside Safety Research Program FY 2012

$606,572	DOT-FHWA through Nebraska Department of Roads
Bielenberg, Robert	Midwest Roadside Safety Facility
Faller, Ronald	Midwest Roadside Safety Facility
Lechtenberg, Karla	Midwest Roadside Safety Facility

Downstream Anchoring for MGS, Minimum Effective Guardrail Length for MGS, Short-Radius Guardrail w/Large Radii

$415,471	Nebraska Department of Roads
Bielenberg, Robert	Midwest Roadside Safety Facility
Faller, Ronald	Midwest Roadside Safety Facility
Lechtenberg, Karla	Midwest Roadside Safety Facility

Midwest States Regional Pooled Fund Program

$650,000	Nebraska Department of Roads
Faller, Ronald	Midwest Roadside Safety Facility
Bielenberg, Robert	Midwest Roadside Safety Facility

Richardson, Amanda — **Sociology**

* 2014-2015 Student Health and Risk Prevention Surveillance System

$275,981	DHHS-SAMSHA through Nebraska Department of Health
Witt-Swanson, Lindsey	Sociology

Rilett, Laurence — **Civil Engineering/ Nebraska Transportation Center**

* Traffic Calming Elements for Entry Control Facility

Threat Delay and Containment	
$474,663	National Strategic Research Institute
Faller, Ronald	Midwest Roadside Safety Facility
Jones, Elizabeth	Nebraska Transportation Center
Reid, John	Mechanical & Materials Engineering

* UTC Tier 1 with University of Texas Pan American

$424,230	DOT-FHWA through University of Texas-Pan-American
Khattak, Aemal	Civil Engineering

Enhance Awareness of Transportation and Transportation Careers - Fast Forward

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

Nebraska Transportation Center Seed Funding

$300,000	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

Rosenbaum, David — **Economics**

* Nebraska Energy Office Loan Management System

$294,745	Nebraska Energy Office

Rothermel, Gregg — **Computer Science and Engineering**

II-EN: Infrastructure Support for Software Testing Research

$345,985	NSF

Samal, Ashok — **Computer Science and Engineering**

Evaluation of GPS-Enabled Cell Phones and Laptops for Applications of Law Enforcement Patrolling Activities

$494,516	DOJ-National Institute of Justice
Ramirez, Juan	Public Policy Center
Rosenbaum, David	Economics/Public Policy Center
Tomkins, Alan	Law/Public Policy Center

Saraf, Ravi — **Chemical and Biomolecular Engineering**

Electronic Interfacing between a Living Cell and a Nanodevice: A Bio-Nano Hybrid System

$900,000	DOE

Sarma, Anita — **Computer Science and Engineering**

* HCC: Variations to Support Exploratory Programming

$857,156 — NSF

Rothermel, Gregg — 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

Bulling, Denise — Public Policy Center

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

Stockton, Matthew — West Central Research and Extension Center

Volesky, Jerry — West Central Research and Extension Center

Schlegel, Vicki — **Food Science and Technology**

* Ability of Sorghum Lipids to Reduce Metabolic Intestinal Inflammation and Lower Cholesterol Caused by High Fat Diets

$226,696 — United Sorghum Checkoff Program

Schubert, Eva — **Electrical Engineering**

* MRI: Development of an Ion-Beam-Assisted Glancing Angle Deposition Tool (iGLAD) for 3D Nanostructure Thin Film Preparation with in situ Ellipsometry Control

$411,501 — NSF

Bartelt-Hunt, Shannon — Civil Engineering

Hage, David — Chemistry

Hofmann, Tino — Electrical Engineering

Ianno, Natale — Electrical Engineering

Korlacki, Rafal — Electrical Engineering

Lai, Rebecca — Chemistry

Pannier, Angela — Biological Systems Engineering

Schmidt, Daniel — Electrical Engineering

Schubert, Mathias — Electrical Engineering

Sinitskii, Alexander — Chemistry

Seth, Sharad — **Computer Science and Engineering**

HECURA: A New Semantic-Aware Metadata Organization for Improved File-System Performance and Functionality in High-End Computing

$344,552 — NSF

CSR: Small: ProActive: A RAID Protection Activator for High Availability

$474,739 — NSF

Shadwick, Bradley — **Physics and Astronomy**

Multi-Physics Modeling of Intense, Short-Pulse Laser-Plasma Interactions

$342,000 — NSF

Kalmykov, Serguei — Physics and Astronomy

Shank, Nancy — **Public Policy Center**

SHNBHIN Improving Access Health IT

$385,528 — Health Partners Initiative

Sharif-Kashani, Hamid — **Computer and Electronics Engineering**

Research & Development - Development of a Standard Communication Protocol for Wireless Sensor Network in Mobile Railroad Environment

$999,921 — DOT-FRA

Hempel, Michael — Computer and Electronics Engineering

Shearman, Robert — **Agronomy and Horticulture**

Buffalograss Breeding, Evaluation and Management for Golf Course

$360,000 — U. S. Golf Association

Shelton, David — **Northeast Research and Extension Center**

Improving and Conserving Water Resources Through Stormwater Management Education for Community Decision Makers of Today and Tomorrow

$544,500 — USDA-CSREES

Feehan, Kelly — Northeast Research and Extension Center

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

Shulski, Martha — **Natural Resources**

* Automated Weather Data Network
$300,000 — Nebraska Department of Natural Resources

Siegfried, Blair — **Entomology**

* Characterizing Resistance Evolution to Pyrethroid Insecticides
$528,340 — Monsanto
Meinke, Lance — Entomology
Miller, Nicholas — Entomology

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 — **Biological Sciences**

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

Smith, Wendy — **Center for Science, Mathematics and Computer Education**

* Midwest Regional Robert Noyce Connections 2014-2015: Building Communities of Practice

$799,420	NSF
Lewis, Elizabeth	Teaching, Learning and Teacher Education
Lewis, Jim	Mathematics/Center for Science, Mathematics and Computer Education
Pedersen, Jon	Teaching, Learning and Teacher Education
Swidler, Stephen	Teaching, Learning and Teacher Education

Smyth, Jolene — **Sociology/Gallup Research Center**

Using Survey Methodology Research to Assist with Design Improvements and/or the Redesign of Surveys Related to Science, Engineering and Agriculture

$300,000	USDA-NASS
Olson, Kristin	Sociology/Gallup Research Center

Snow, Gregory — **Physics and Astronomy**

GAANN Fellowships for Physics at UNL

$408,315	ED
Adenwalla, Shireen	Physics and Astronomy
Batelaan, Herman	Physics and Astronomy
Claes, Daniel	Physics and Astronomy
Dominguez, Aaron	Physics and Astronomy
Gay, Timothy	Physics and Astronomy
Uiterwaal, Cornelis	Physics and Astronomy

Soh, Leen-Kiat — **Computer Science and Engineering**

Integrating Computational and Creative Thinking (IC2Think)

$250,000	NSF
Ingraham, Elizabeth	Art and Art History
Ramsay, Stephen	English
Shell, Duane	Educational Psychology

CPATH CDP: Renaissance Computing: Concept Development and Planning

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

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

Srisa-An, Witawas — **Computer Science and Engineering**

* Automatic Vetting For Malice in Android Platforms
$630,141 — DOD-DARPA through Iowa State University
Rothermel, Gregg — Computer Science and Engineering

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
$270,000 — NSF

Stowell, Richard — **Biological Systems Engineering**

Small AFO Demonstration and Education
$264,577 — Nebraska Department of Environmental Quality
Gross, Jason — Biological Systems Engineering
Powers, Crystal — Biological Systems Engineering

Subbiah, Jeyamkondan — **Biological Systems Engineering/ Food Science and Technology**

* Radio Frequency Processing for Improving Microbiological Safety
of Low Moisture Foods
$299,989 — USDA-NIFA
Birla, Sohan — Biological Systems Engineering
Thippareddi, Harshavardhan — Food Science and Technology

Modeling of Interaction of Microwaves
with Food and Packaging (Shielded)-Phase II
$230,000 — ConAgra
Birla, Sohan — Biological Systems Engineering
Jones, David — Engineering

Improving the Safety of Prepared, But Not Ready-To-Eat
Microwavable Foods through Heat Transfer
and Pathogen Destruction Modeling
$599,985 — USDA-CSREES
Jones, David — Biological Systems Engineering
Thippareddi, Harshavardhan — Food Science and Technology

Swanson, David — **Computer Science and Engineering**

Open Science Grid Consortium
$605,000 — NSF through University of Wisconsin-Madison

Tadesse, Tsegaye — **Natural Resources**

* Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa under Evolving Climate Conditions to Support Adaptation Strategies

$987,767 — NASA

Baigorria, Guillermo	Agronomy and Horticulture/ Natural Resources
Beyene, Shimelis	Anthropology
Hayes, Michael	Natural Resources
Wardlow, Brian	Natural Resources

Takacs, James — **Chemistry**

Catalytic Asymmetric Hydroboration: Uncapping the Potential with Two-Point Binding Substrates

$900,114 — NIH-NIGMS

Tan, Li — **Mechanical & Materials Engineering**

Molecularly Intercalated Nanoflakes: A Supramolecular Alloy for Strong Energy Absorption

$349,088 — NSF

Zeng, Xiao Cheng	Chemistry

Taylor, Stephen — **Food Science and Technology**

Effects of Food Processing on Food Allergens - Assessment and Improvement of Detection Methods

$500,000 — USDA-NIFA

Baumert, Joseph	Food Science and Technology
Hutkins, Robert	Food Science and Technology
Keshwani, Deepak	Biological Systems Engineering
Subbiah, Jeyamkondan	Biological Systems Engineering/ Food Science and Technology

Primary and Secondary Prevention of Peanut and Tree Nut Allergy

$275,000 — USDA-ARS

Baumert, Joseph	Food Science and Technology

Determination of Minimal Elicitation Dose for Almond in Almond-Allergic Individuals

$261,000 — Almond Board of California

Tenhumberg, Brigitte — **Biological Sciences/Mathematics**

Evaluating Integrated Resistance Management Strategies in Variable Environments

$388,279 — Monsanto

Chirakkal, Haridas	Biological Sciences
Meinke, Lance	Entomology
Siegfried, Blair	Entomology

Thipparedi, Harshavardhan — **Food Science and Technology**

Food Safety Assistance for Small Meat and Poultry Processors through Development and Implementation of Industry Best Practices

$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

Tian, Lei — **Computer Science and Engineering**

CSR: Small: SANE:
Semantic-Aware Namespace in Exascale File Systems

$249,053 — NSF

Liu, Xue — Computer Science and Engineering

Turbo Button: A Semantically Smart Flash Memory Layer
for Internet-Scale Storage Systems

$471,631 — NSF

Todd, Kim — **Agronomy and Horticulture**

* UNL Greenhouse Tomato Production

$800,000 — ConAgra

Browning, Sarah — Southeast Research and Extension Center
Gaussoin, Roch — Agronomy and Horticulture
Schlegel, Vicki — Food Science and Technology

Tomkins, Alan — **Law/Public Policy Center**

Testing a Three-Stage Model
of Institutional Confidence across Branches of Government

$283,280 — NSF

Bornstein, Brian — Psychology/Public Policy Center
Herian, Mitch — Public Policy Center
Pytlik Zillig, Lisa — Center for Instructional Innovation/
Public Policy Center

Trainin, Guy — **Teaching, Learning and Teacher Education**

NEA Foundation Grant Evaluation OPS

$336,008 — National Education Association Foundation through
Omaha Public Schools

Hamann, Edmund — Teaching, Learning and Teacher Education

Tsymbal, Evgeny — **Physics and Astronomy/
Nebraska Center for
Materials and Nanoscience**

DMREF: Multifunctional Interfacial Materials by Design

$215,000 — NSF through University of Wisconsin

Turner, Joseph — **Mechanical & Materials Engineering**

Ultrasonic Scattering for Measurement of Longitudinal Rail Stress

$461,999 — DOT-FRA

Tyler, Kimberly — **Sociology**

* Stressors, Protective Factors, and Substance Use
among Homeless Youth and Young Adults

$408,768 — NIH-NIDA

Olson, Kristen — Sociology/Survey Research and Methodology

Uiterwaal, Cornelis — **Physics and Astronomy**

REU Site: Optics and Laser Physics

$246,450 — NSF

Batelaan, Herman — Physics and Astronomy

Molecules and Intense Light in a Photodynamical Test Tube

$440,000 — NSF

Umstadter, Donald — **Physics and Astronomy**

* Nuclear Forensics

$514,995 — National Strategic Research Institute

Banerjee, Sudeep — Physics and Astronomy

NSRI Standoff Detection

$442,915 — National Strategic Research Institute

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 Den Broeke, Matthew — **Earth and Atmospheric Sciences**

* Quantifying the Relative Roles of Progressive Land Use Change, Irrigation, and Remote Forcing in Southern Great Plains Precipitation Variability

$446,697 — NSF

Hu, Qi — Natural Resources

Oglesby, Robert — Earth and Atmospheric Sciences/ Natural Resources

van Donk, Simon — **West Central Research and Extension Center**

Irrigation Management with Limited Water: A Farm Education Program

$287,080 — 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

Van Tassell, Larry — **Agricultural Economics**

Developing Economic Improvements through Cooperative Businesses in Rural Nebraska

$200,000 — USDA-RD

Burkhart-Kriesel, Cheryl — Panhandle Research and Extension Center

Variyam, Vinodchandran — **Computer Science and Engineering**

AF: Small: Studies in Nonuniformity, Completeness and Reachability

$272,031 — NSF

Vuran, Mehmet — **Computer Science and Engineering**

* CyberSEES: Type 1: Improving Crop Production Efficiency Using Wireless Underground Sensor-Guided Irrigation Systems

$300,000 — NSF

Irmak, Suat — Biological Systems Engineering

Cog-TV with Neighborhood Watch: Business and Technical Aspects of Cognitive Radio TV Sets for Enhanced Spectrum Access

$283,879 — NSF

Batur, Demet — Management

Wagner, William — **Biological Sciences**

Effects of Predation by a Phonotactic Parasitoid on Male and Female Reproductive Behavior in a Field Cricket

$523,414 — NSF

Walia, Harkamal — **Agronomy and Horticulture**

Early Seed Development under Stressful Environments

$557,708 — NSF

Wang, Dong — Statistics

Walter, Jens — **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

$402,894 — 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**

* Discovering New Aspects of Iron Uptake Regulation Controlled by the fefe Gene

$452,000 — USDA-NIFA

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

$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

Weisz, Victoria — **Center on Children, Families, and the Law**

* Court Improvement Project Infant/Toddler Program

$655,843 — Sherwood Foundation

Cole-Mossman, Jennie — Center on Children, Families, and the Law

* Project Safe Start - Nebraska 2013-2014

$222,769 — DHHS-SAMSHA through Supreme Court of Nebraska

* Nebraska Administrative Office of Probation Services

$219,838 — Supreme Court of Nebraska

Weller, Curtis — **Extension/Biological Systems Engineering/ Food Science and Technology**

* Manufacturing Extension Partnership Center for Nebraska

$600,000 — DOC-NIST

Faller, Ronald — Midwest Roadside Safety Facility

Wei, Timothy — Engineering

Whitbeck, Les — **Sociology**

Culturally-Based, Family-Centered Mental Health Promotion for Aboriginal Youth II

$749,958 — Government of Canada-Public Health Agency through Jewish General Hospital-CMHRU

A Lakota Type 2 Diabetes Mellitus Prevention

$353,806 — Aberdeen Area Tribal Chairmen's Health Board

Wiebe, Matthew — **Veterinary Medicine and Biomedical Sciences**

Intracellular Defenses against Foreign DNA: Insights from Poxvirus-Infected Cells

$340,339 — NIH-NIAID

Wiener, Richard — **Psychology**

Objectification, Affective Forecasting, and Sexual Harassment

$314,956 — NSF

Gervais, Sarah — Psychology

Wilson, Richard — **Plant Pathology**

* Defining Mechanisms of Nutrient Adaptation to Host Rice Cells by the Blast Fungus

$500,000 — USDA-NIFA

Pathogenic Gene Discovery and Elucidation of Genetic Regulatory Networks in the Rice Blast Fungus

$512,955 — NSF

Wood, Charles — **Biological Sciences/ Nebraska Center for Virology**

Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center

$419,455 — NIH-NIMH through UNMC

Wortmann, Charles — **Agronomy and Horticulture**

* Developing and Fine-Tuning Fertilizer Recommendations within an Integrated Soil Fertility Management Framework

$345,473 — Alliance for Green Revolution in Africa through CABI

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

Yoder, Ronald — **Biological Systems Engineering**

Nebraska AgrAbility

$684,000 — USDA-NIFA

Booker, William — Panhandle Research and Extension Center

Nielsen, Sharon — West Central Research and Extension Center

Yu, Bin — **Biological Sciences/ Center for Plant Science Innovation**

Understanding DAWDLE Function in miRNA and siRNA Biogenesis

$499,504 — NSF

Zera, Anthony — **Biological Sciences**

Nutritional Physiology of Life History Allocation Trade-Offs

$343,500 — NSF

Zhang, Tian — **Civil Engineering**

Influence of Soil Particle Size Fractions and Environmental Conditions on Fate and Transport of Hormones in Soils

$300,000 — NSF

American Recovery and Reinvestment Act (ARRA) Awards

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

Avalos, George — **Mathematics**

Analysis, Computation and Control of Coupled Partial Differential Equation Systems

$182,898 — NSF

Curto, Carina — **Mathematics**

Stimulus Representation and Spontaneous Activity in Recurrent Networks

$109,635 — NSF

Dominguez, Aaron — **Physics and Astronomy**

MRI-R2: Development of a Pixel Detector for the Upgraded CMS Experiment

$263,430 — NSF through University of Kansas

Bloom, Kenneth — Center for Research Physics and Astronomy

Hancock, Connie — **Panhandle Research and Extension Center**

Nebraska Broadband Planning

$2,472,652 — Nebraska Public Service Commission

Narjes, Charlotte — Center for Applied Rural Innovation

Terry, Roger — Agricultural Leadership, Education and Communication

Hartke, Stephen — **Mathematics**

Computerized Search for Combinatorial Objects

$220,000 — NSF

Lubben, Bradley — **Agricultural Economics**

2009 Trade Adjustment Assistance for Farmers

$855,000 — USDA-NIFA through University of Minnesota

Nam, Yunwoo — **Community and Regional Planning**

Nebraska Rural Health and Primary Care

$112,000 — Nebraska Department of Health and Human Services

Scholz, Gordon — Community and Regional Planning

Paul, Prem — **Research and Economic Development**

Nebraska Center for Virology Facility Expansion

$8,000,000 — NIH-NCRR

Wood, Charles — Biological Sciences/ Nebraska Center for Virology

High-Power Laser Science Collaboratory

$1,825,345 — NSF

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

Asgarpoor, Sohrab — Electrical Engineering

Hudgins, Jerry — Electrical Engineering

Patterson, Dean — Electrical Engineering

Qu, Lilyan — Electrical Engineering

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

Response to Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) Project: Drilling Support Overview and Requirements Request

$3,002,421 — NSF through Montana State University/ Northern Illinois University/ University of California, Santa Cruz

ANDRILL Coulman High Project – Investigating Antarctica's Role in Cenozoic Global Environmental Change Phase 1 (Site Surveys)

$2,684,370 — NSF

Fischbein, Steven — Antarctic Geological Drilling Program

Harwood, David — Earth and Atmospheric Sciences

Saraf, Ravi — **Chemical and Biomolecular Engineering**

Regulating Current through a Nanoparticle Necklace by Microorganism: A Transformative Technology for Biofuel Cells and Biosensors

$391,056 — NSF

Shen, Zhigang — **Durham School of Architectural Engineering and Construction**

Veterans Commissioning Training Program for Commercial-Healthcare Facilities

$405,741 — DOE

Toundykov, Daniel — **Mathematics**

Stabilization and Control in Nonlinear Structural-Acoustics, Magnetic Imaging, and Elasticity

$96,436 — NSF

Early Career Awards

Active awards, July 1, 2013-June 30, 2014
*** Indicates new in 2013-2014**

NSF CAREER Grants

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

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

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

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

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

Gu, Linxia
Mechanical & Materials Engineering
CAREER: Bridging Cellular-Level Changes to Vascular Tissue Response to Reveal Basic Mechanisms of Restenosis
$433,248 NSF

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

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

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

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

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

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

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

Qiao, Wei
Electrical Engineering
CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration
$407,999 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
$250,000 or More

Active awards, July 1, 2013-June 30, 2014
*** Indicates new in 2013-2014**

Kooser, Ted — **English**

American Life in Poetry Project
$341,385 — Poetry Foundation
1/1/05 – 12/31/14

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

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

Walt Whitman as an Author before *Leaves of Grass*
$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.

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.

Shear, Donna — **University of Nebraska Press**

Recovering Languages and Literacies of the Americas: A Collaborative Initiative

$781,900 — Andrew W. Mellon Foundation

1/3/11 – 12/31/17

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

Walter, Katherine — **University Libraries/Center for Digital Research in the Humanities**

Center for Digital Research in the Humanities Endowment

$500,000 — NEH

12/21/10 – 7/31/14

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

The National Endowment for the Humanities has awarded a four-year, $500,000 challenge grant to the Center for Digital Research in the Humanities, led by Katherine Walter, UNL Libraries chair of digital initiatives and collections, to permanently support some of the center's key programs. The grant will support two graduate student assistantships annually, an ongoing two-year postdoctoral fellowship and the Nebraska Digital Workshop, the center's signature event. The workshop brings the nation's top early career digital humanities scholars to UNL to showcase their research, get feedback from senior faculty and network with potential research partners and employers.

Wisnicki, Adrian **English/Center for Digital Research in the Humanities**

* The Livingstone Online Enrichment and Access Project (LEAP)
$275,000 NEH
9/1/13 – 8/31/16
Pytlik Zillig, Brian University Libraries/Center for Digital Research in the Humanities

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

Arts and Humanities Awards
$50,000 to $249,999

Active awards, July 1, 2013-June 30, 2014
*** Indicates new in 2013-2014**

Barney, Brett — **University Libraries/Center for Digital Research in the Humanities**

Diachronic Markup and Presentation Practices for Text Editions in Digital Research Environments

$165,005 — NEH

Behrendt, Stephen — **English**

Reassessing British Romanticism

$117,198 — NEH

Jockers, Matthew — **English/Center for Digital Research in the Humanities**

* Text Mining the Novel: Establishing the Foundations of a New Discipline

$112,524 — Government of Canada-SSHRC through McGill University

Lorang, Elizabeth — **University Libraries/Center for Digital Research in the Humanities**

* Image Analysis for Archival Discovery: Poetic Content in Historic Newspapers

$60,000 — NEH

Soh, Leen-Kiat — Computer Science and Engineering

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

Walt Whitman and Post-Reconstruction America

$156,470 — National Historical Publications and Records Commission

Barney, Brett — University Libraries/Center for Digital Research in the Humanities

Thomas, William — **History/Center for Digital Research in the Humanities**

* O Say Can You See: Early Washington, D.C., Law and Family Project

$200,000 — NEH

Walter, Katherine — **University Libraries/Center for Digital Research in the Humanities**

Major Railroad Archival Collections

$208,481 — Council on Library and Information Resources

Bolin, Mary — University Libraries

Mering, Margaret — University Libraries

Wisnicki, Adrian — **English/Center for Digital Research in the Humanities**

* Explorer David Livingstone's 1870 Field Diary and Select 1871 Letters: A Multispectral Critical Edition

$158,605 — NEH

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

Arts and Humanities Awards
$5,000 to $49,999

Active awards, July 1, 2013-June 30, 2014
* Indicates new in 2013-2014

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

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

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

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

Early American Regions
$30,100 — University of Georgia

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

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

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

Arts Across Nebraska Education Enhancement
$23,000 — NEA

Arts Across Nebraska Extension
$23,000 — Nebraska Arts Council

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

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

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

NUtech VENTURES™

Pioneering Partnerships for Innovation™

NUtech Ventures' mission is to facilitate the commercialization and practical use of innovations generated through the research activities at UNL. We do this by identifying, evaluating, protecting, marketing and licensing UNL intellectual property to promote economic development and improve the quality of life.

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

We would like to recognize the following UNL inventors and creators whose technologies have formed the basis of licensing agreements with our industry partners between July 1, 2013, and June 30, 2014.
(UNL faculty and staff are indicated in red. Other co-inventors are students, postdocs or collaborators at other institutions.)

2013-2014 License Agreements

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

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

P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn, Richard Little, Agronomy and Horticulture; Jerry Bohlmann, Chris Hoadland
Technology: Millennium and Overland Hard Red Winter Wheat Varieties
Technology: Overland and Freeman Hard Red Winter Wheat Varieties

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Paul Blum, Biological Sciences
Technology: Novel Bacterial Enzymes Used for Conversion of Plant Starch to Fuel

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

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

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

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

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

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

Sally Mackenzie, Yingzhi Xu, Agronomy and Horticulture/Center for Plant Science Innovation; **Dong Wang,** Statistics; **Michael E. Fromm, Yashitola Wamboldt,** Agronomy and Horticulture; Kamaldeep S. Virdi
Technology: An Improved Method of Plant Breeding, Plant Yields, and Inbred Lines

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

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

Blair Siegfried, Entomology
Technology: Transgenic Crops with Novel Resistance to Western Corn Rootworms

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Blair Siegfried, Entomology; Kanika Arora, Chitvan Khajuria, Kenneth Narva, Sarah Worden
Technology: Transgenic Crops with Novel Resistance to Western Corn Rootworms

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Carlos Urrea Florez, Panhandle Research and Extension Center; **James Steadman,** Plant Pathology; **Dale T. Lindgren,** Agronomy and Horticulture; Dermot Coyne, Marcial Pastor-Corrales
Technology: Great Northern Common Bean Cultivar "Coyne"

Haishun Yang, Kenneth G. Cassman, Daniel T. Walters, Agronomy and Horticulture; Achim Dobermann
Technology: Hybrid-Maize: A Simulation Model for Corn Growth and Yield (2 licenses)

Creative Activity

Faculty who created, performed or produced creative works in the fine and performing arts and architecture, nationally or internationally, July 1, 2013-June 30, 2014

Submitted by faculty, chairs/heads or deans

Stacy J. Asher — **Art and Art History**

Artist, "Distraction 01." Painting exhibition, Artists Alliance, Inc., Cuchifritos Gallery + Project Space / Benefit Auction, New York, NY.

John Bailey — **Glenn Korff School of Music**

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

Performer, "Teaching and Performing *the Prokofiev Flute Sonata, op. 94*." Flute lecture/recital, National Flute Association National Convention, Chicago, IL.

Lexi Bass — **Art and Art History**

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

Charles Burr — **West Central Research and Extension Center**

Developer, mobile app, "Irrigation Flow Meter Calculator."

Chiara String Quartet — **Glenn Korff School of Music**

Rebecca Fischer, violin; Hyeyung Julie Yoon, violin; Jonah Sirota, viola; Gregory Beaver, cello. Performers, *Brahms by Heart*. CD recording, Azica Records, Cleveland, OH.

Wheeler Winston Dixon — **English**

Director, *Serial Metaphysics* (1972), *The DC Five Memorial Film* (1969), *Quick Constant and Solid Instant* (1969), *Wedding* (1969), *London Clouds* (1970), *Tightrope* (1974), *Dana Can Deal* (1974), *Gaze* (1974). Film exhibition, The Early Films of Wheeler Winston Dixon - May 4, 2014, Microscope Gallery, Brooklyn, NY.

Thomas Dorn — **Cooperative Extension Division**

Developer, mobile app, "Agriculture Irrigation Costs."

Bethany Johnston — **Panhandle Research and Extension Center**

Developer, mobile app, "GrassSnap – A Mobile App for Monitoring Grasslands."

Derrel Martin — **Biological Systems Engineering**

Developer, mobile app, "Irrigation Pumping Plant Efficiency Calculator."

Bernard "Barney" McCoy — **Journalism and Mass Communications**

Director, *They Could Really Play the Game: Reloaded*. Film televised by WOSU-TV, Columbus, OH.

Mo Neal **Art and Art History**

Artist, "Hung Up on Eva Again." Sculpture exhibition, The Last Brucennial, New York, NY.

Artist, "Robert's Hole in One." ISC Little Sculpture Show, International Sculpture Center, Miami, FL.

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

Performer, violin, *Boston Circa 1900.* CD recording, Albany Records, Albany, NY.

Books

Faculty who wrote or edited books published July 1, 2013-June 30, 2014

UNL authors in red

Submitted by faculty, chairs/heads or deans

Marco Abel — **English**

Author. *The Counter-Cinema of the Berlin School*. Rochester, NY: Camden House.

Craig R. Allen — **Natural Resources**

Editor, with Ahjond S. Garmestani. *Social-Ecological Resilience and Law*. New York, NY: Columbia University Press.

Deeann Allison — **University Libraries**

Author. *The Patron Driven Library*. Oxford, UK: Chandros.

Ikuho Amano — **Modern Languages and Literature**

Author. *Decadent Literature in Twentieth-Century Japan: Spectacles of Idle Labor*. New York, NY: Palgrave Macmillan.

John E. Anderson — **Economics**

Author, with Richard W. England. *Use-Value Assessment of Rural Land in the United States*. Cambridge, MA: Lincoln Institute of Land Policy.

Radha Balasubramanian — **Modern Languages and Literature**

Author. *The Influence of India on Leo Tolstoy and Tolstoy's Influence on India: A Study of Reciprocal Receptions*. Lewiston, NY: The Edwin Mellen Press.

Grace Bauer — **English**

Author. *Nowhere All At Once*. Nacogdoches, TX: Stephen F. Austin University Press.

David Beukelman — **Special Education and Communication Disorders**

Editor, with Pat Mirenda. *Augmentative and Alternative Communication (4th ed.)*. Baltimore, MD: Brookes Publishing.

Editor, with Nina Simons-Mackie and Julia King. *Supporting Communication for Adults with Acute and Chronic Aphasia*. Baltimore, MD: Brookes Publishing.

Christopher Bilder — **Statistics**

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

Dawn O. Braithwaite — **Communication Studies**

Author, with Kathleen Galvin and Carma Bylund. *Family Communication: Cohesion and Change (9th ed)*. Boston, MA: Pearson.

Les Carlson — **Marketing**

Editor, with Nora J. Rifon and Marla B. Royne. *Advertising and Violence: Concepts and Perspectives*. Armonk, NY: M. E. Sharpe.

Kiyomi D. Deards — **University Libraries**
Editor, with Gene R. Springs. *Succession Planning and Implementation in Libraries: Practices and Resources*. Hershey, PA: IGI-Global.

Bedross Der Matossian — **History**
Author. *Shattered Dreams of Revolution: From Liberty to Violence in the Late Ottoman State*. Redwood, CA: Stanford University Press.

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

Wheeler Winston Dixon — **English**
Author. *Cinema at the Margins*. London, England: Anthem Press.

Beth Doll — **Educational Psychology**
Author, with Katherine Brehm and Steven Zucker. *Resilient Classrooms: Creating Healthy Environments for Learning (2nd ed.)*. New York, NY: Guilford.

Kirk Dombrowski — **Sociology**
Author. *Culture Politics: The Story of Native Land Claims in Alaska*. Lincoln, NE: Syron Design Academic Publishing.

Marcia L. Dority Baker — **Law/Schmid Law Library**
Author, with Stefanie S. Pearlman, Law. *A Bibliography of University of Nebraska College of Law Faculty Scholarship 1892-2013*. Lincoln, NE: University of Nebraska Press.

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

Gwendolyn A. Foster — **English**
Author. *Hoarders, Doomsday Preppers, and the Culture of Apocalypse*. New York, NY: Palgrave Macmillan.

Rhonda K. Garelick — **Hixson-Lied College of Fine and Performing Arts/English**
Author. *Mademoiselle: Coco Chanel and the Pulse of History*. New York, NY: Random House.

Kurt F. Geisinger — **BUROS**
Editor, with Bruce A. Bracken; Janet F. Carlson, BUROS; Jo-Ida C. Hansen; Nathan R. Kuncel; Steven P. Reise; and Michael C. Rodriguez. *APA Handbook of Testing and Assessment in Psychology, Vol 1: Test Theory and Testing and Assessment in Industrial and Organizational Psychology*. Washington, DC: American Psychological Association.

Editor, with Bruce A. Bracken; Janet F. Carlson, BUROS; Jo-Ida C. Hansen; Nathan R. Kuncel; Steven P. Reise; and Michael C. Rodriguez. *APA Handbook of Testing and Assessment in Psychology, Vol 2: Testing and Assessment in Clinical and Counseling Psychology*. Washington, DC: American Psychological Association.

Jerry L. Hudgins — **Electrical Engineering**

Author, with Tanya Gachovska, Bin Du and Enrico Santi. *Transient Electro-Thermal Modeling of Bipolar Semiconductor Devices*. Denver, CO: Morgan and Claypool.

Margaret D. Jacobs — **History**

Author. *A Generation Removed, The Fostering and Adoption of Indigenous Children in the Postwar World*. Lincoln, NE: University of Nebraska Press.

Matthew L. Jockers — **English**

Author. *Text Analysis with R for Students of Literature*. Cham, Heidelberg, New York, Dordrecht, London, Switzerland: Springer International Publishing.

Paul A. Johnsgard — **Biological Sciences**

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

Ted Kooser — **English**

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

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

Glenn Ledder — **Mathematics**

Author. *Mathematics for the Life Sciences*. New York, NY: Springer.

Qingsheng Li — **Biological Sciences/ Nebraska Center for Virology**

Author, with Charles Wood, Nebraska Center for Virology. *Humanized Mice for HIV Research*. New York, NY: Springer.

Suping Lu — **University Libraries**

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

Melissa Amateis Marsh — **Center for Great Plains Studies**

Author. *Nebraska POW Camps: A History of World War II Prisoners in the Heartland*. Charleston, SC: The History Press.

Bernard "Barney" McCoy — **Journalism and Mass Communications**

Author. *Digital Distractions: Student Uses of Digital Devices for Non-Classroom Purposes.* Saarbrücken, Germany: LAP Lambert Academic Publishing.

Colleen Medill — **Law**

Author, with Grant S. Nelson, Dale A. Whitman and Shelley Ross Saxer. *Contemporary Property (4th ed.)*. Minneapolis, MN: West Academic.

Joseph Mendola — **Philosophy**

Author. *Human Interests, or Ethics for Physicalists*. Oxford, UK: Oxford University Press.

Katherine Nashleanas — **Geography/Natural Resources**

Editor. *Human Geography Reader*. San Diego, CA: Cognella Academic Publishing.

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

Author, with Ronald C. Martella and Nancy E. Marchand-Martella. *Research Methods: Learning to Become a Critical Research Consumer*. New York, NY: Gilford Press.

Jon E. Pedersen — **Education and Human Sciences**

Editor, with Sam Totten. *Educating About Social Issues in the 20th and 21st Centuries: A Critical Annotated Bibliography Volume Three*. Charlotte, NC: Information Age Publishing.

Editor, with Sam Totten. *Educating About Social Issues in the 20th and 21st Centuries: Critical Pedagogues and Their Pedagogical Theories*. Charlotte, NC: Information Age Publishing.

Luis Peon-Casanova — **Journalism and Mass Communications**

Author. *Digital Photography: An Interactive Practical Course*. Dubuque, IA: Great River Technologies.

Reece Peterson — **Special Education and Communication Disorders**

Editor, with Michael Rozalski and Joseph B. Ryan. *Physical Restraint and Seclusion in Schools*. Arlington, VA: Council for Exceptional Children.

Yi Qian — **Computer and Electronics Engineering**

Author, with Rose Q. Hu. *Resource Management for Heterogeneous Networks in LTE Systems*. New York, NY: Springer.

Brett C. Ratcliffe — **Entomology/ University of Nebraska State Museum**

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

Robert Reid — **Special Education and Communication Disorders**

Author, with Torri O. Lienemann and Jessica Hagaman. *Strategy Instruction for Students with Learning Disabilities (2nd ed)*. New York, NY: Guilford Press.

Brandon K. Ruud — **Sheldon Memorial Art Gallery and Sculpture Garden**

Editor, with Gregory Nosan, Sheldon Museum of Art. *Painting from the Collection of the Sheldon Museum of Art*. Lincoln, NE: University of Nebraska Press.

Lowell Sandell — **Agronomy and Horticulture**

Editor. *2014 Guide for Weed Management in Nebraska with Insecticide and Fungicide Information*. Lincoln, Nebraska: UNL Printing Services.

Khalid Sayood — **Electrical Engineering**

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

Timothy Schaffert — **English**

Editor. *You Will Never See Any God: Stories by Ervin D. Krause*. Lincoln, NE: University of Nebraska Press.

Author. *The Swan Gondola*. New York, NY: Penguin Random House.

William J. Seiler — **Communication Studies**

Author, with Melissa Beall and Joseph Mazer. *Communication Making Connections (9th ed.)*. Boston, MA: Pearson.

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

Editor, with William P. Erchul. *Handbook of Research in School Consultation: Empirical Foundations for the Field (2nd ed.)*. Mahwah, NJ: Erlbaum.

Author. *The Tough Kid: Teachers and Parents as Partners*. Eugene, OR: Pacific Northwest Publishers.

Alison G. Stewart — **Art and Art History**

Editor, with Paul Royster, University Libraries. *Society and Style: Prints from the Sheldon Museum of Art*. Lincoln, NE: Zea Books.

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

Editor. *Genes and the Motivation to Use Substances*. New York, NY: Springer.

Steve Taylor — **Food Science and Technology**

Author, with Charlotte Madsen, Rene Crevel and Clare Mills. *Risk Management for Food Allergy*. Oxford, UK: Elsevier.

William G. Thomas — **History**

Editor. *A Lincoln Dialogue* by James A. Rawley. Lincoln, NE: University of Nebraska Press.

Cho Wing S. To — **Mechanical & Materials Engineering**

Author, with Meilan Liu. *Vibration and Nonlinear Dynamics of Plates and Shells: Applications of Flat Triangular Finite Elements*. Sharjah, U.A.E.: Bentham Science Publishers.

Author. *Stochastic Structural Dynamics: Application of Finite Element Methods*. Chichester, West Sussex, UK: John Wiley & Sons, Ltd.

Joseph Weber — **Journalism and Mass Communications**

Author. *Transcendental Meditation in America: How a New Age Movement Remade a Small Town in Iowa*. Iowa City, IA: University of Iowa Press.

Les B. Whitbeck **Sociology**

Author, with Kelley J. Sittner Hartshorn, Sociology; and Melissa L. Walls. *Indigenous Adolescent Development: Psychological, Social, and Historical Contexts*. New York, NY: Routledge, Taylor and Francis Group.

Simon A. Wood **Classics and Religious Studies**

Editor, with David Harrington Watt. *Fundamentalism: Perspectives on a Contested History*. Columbia, SC: University of South Carolina Press.

Sandra B. Zellmer **Law**

Author, with Jan G. Laitos. *Principles of Natural Resources Law*. St. Paul, MN: West Academic.

Author, with Christine A. Klein. *Mississippi River Tragedies: A Century of Unnatural Disaster*. New York, NY: NYU Press.

Recognitions and Honors

Faculty who have been elected to honor academies or who have received national or international honors or awards, July 1, 2013-June 30, 2014

Submitted by faculty, chairs/heads or deans

Joseph S. Francisco — **Chemistry/Dean of the College of Arts and Sciences**

National Academy of Sciences

Brian Larkins — **Agronomy and Horticulture/ Associate Vice Chancellor for Life Sciences**

National Academy of Sciences

James Van Etten — **Plant Pathology**

National Academy of Sciences

Marco Abel — **English**

Best Book, German Studies Association

Changbum Ahn — **Durham School of Architectural Engineering and Construction**

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

P. Stephen Baenziger — **Agronomy and Horticulture**

Genetics and Plant Breeding Award, National Council of Commercial Plant Breeders

Frederick P. Baxendale — **Entomology**

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

Edward Becker — **Philosophy**

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

Christopher Bilder — **Statistics**

Outstanding Statistical Application, American Statistical Association

Erin Blankenship — **Statistics**

Jackie Dietz Best JSE Paper, American Statistical Association

Dawn O. Braithwaite — **Communication Studies**

Distinguished Scholar Award, Western States Communication Association

Charles A. Braithwaite — **Communication Studies/ Center for Great Plains Studies**

Visiting Scholar, Lund University, Sweden

Jennifer Brand — **Chemical and Biomolecular Engineering**

ELATE Fellow, Drexel University

Dennis Brink — **Animal Science**

Teaching Fellow, American Society of Animal Science

Tami Brown-Brandl — **Biological Systems Engineering**
Presidential Citation, American Society of Agricultural and Biological Engineers

Les Carlson — **Marketing**
Best Article Award, *Marketing Education Review Journal*

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

Bertrand Clarke — **Statistics/IANR**
Fellow, American Statistical Association

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

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

Concetta DiRusso — **Biochemistry**
Jefferson Science Fellow, National Academies, U.S. Department of State, U.S. Agency for International Development

Fellow, American Academy for the Advancement of Science

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

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

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

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

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

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

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

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

Cory Forbes — **Natural Resources/ Teaching, Learning, and Teacher Education**
Early Career Research Award, National Association for Research in Science Teaching

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

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

Sheri Fritz — **Earth and Atmospheric Sciences/ Biological Sciences**
Fellow, American Association for the Advancement of Science

Hans Oeschger Medal for Outstanding Achievements in Climate Change Science, European Geophysical Union

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

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

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

Ron Hanson — **Agricultural Economics**
Distinguished Educator Award, North American Colleges and Teachers of Agriculture

Senior Distinguished Undergraduate Teaching Award, Agricultural and Applied Economics Association

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

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

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

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

Scott Hygnstrom — **Natural Resources**
Career Award, Wildlife Society Nebraska Chapter

Suat Irmak — **Biological Systems Engineering**
Heermann Sprinkler Irrigation Award, American Society of Agricultural and Biological Engineers

John Deere Gold Medal Award, American Society of Agricultural and Biological Engineers

Superior Paper Award, American Society of Agricultural and Biological Engineers

Award of Excellence, Western Association of Agricultural Experiment Station Directors

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

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

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

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

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

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

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

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

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

Terry Klopfenstein — **Animal Science**
Member of "The Beef 50," *Beef* Magazine

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

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

Barbara LaCost — **Educational Administration**
2014 Distinguished Fellow Award, National Education Finance Conference

Ming Li — **Psychology**
Fellow, American Psychological Association, Division 28

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

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

Bernard "Barney" McCoy — **Journalism and Mass Communications**
Interactive Multimedia and Emerging Technologies Paper Competition Winner, Broadcast Education Association

Eric Sevareid Award- Radio - Best Use of Audio, Northwest Broadcast News Association

John Meakin — **Mathematics**
Fellow, American Mathematical Society

Fulbright Scholar, Council for International Exchange of Scholars

Robert Mitchell — **Agronomy and Horticulture**
Fellow, American Society of Agronomy

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

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

Kristen Olson — **Sociology**
President, Midwest Association for Public Opinion Research

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

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

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

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

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

Steve Rodie — **Agronomy and Horticulture**
Outstanding Team Gold Award, Association of Natural Resources Extension Professionals

Scott K. Rosenbaugh — **Midwest Roadside Safety Facility**
Best Paper Award, TRB Committee AFB20 Roadside Safety Design, Transportation Research Board

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

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

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

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

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

Dennis Schulte — **Biological Systems Engineering**
Outstanding Teaching Award, American Society of Engineering Education - Midwest Section

Blue Ribbon Award for Air Quality in Animal Agriculture eXtension, American Society of Agricultural and Biological Engineers

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

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

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

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

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

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

Jay Storz — **Biological Sciences**
Outstanding Paper, *Journal of Experimental Biology*

Rick Stowell — **Biological Systems Engineering**
Blue Ribbon Award for Air Quality in Animal Agriculture eXtension, American Society of Agricultural and Biological Engineers

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

Steve Taylor — **Food Science and Technology**
William C. Frazier Memorial Lectureship in Food Microbiology, Food Research Institute, University of Wisconsin-Madison

John C. Halverson Memorial Lectureship, American Association of Cereal Chemists - Milling and Baking Division

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

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

Joseph Turner — **Mechanical & Materials Engineering**
Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation (Germany)

Fellow, Acoustical Society of America

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

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

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

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

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

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

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

Xiao Cheng Zeng — **Chemistry**
Fellow, Royal Society of Chemistry

Glossary of Federal Agency Abbreviations

DHS Department of Homeland Security

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

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

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

DOE Department of Energy

DOI Department of Interior
- BR Bureau of Reclamation
- GS Geological Survey

DOJ Department of Justice

DOL Department of Labor

DOS Department of State
- BECA Bureau of Educational and Cultural Affairs

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

ED Department of Education
- IES Institute of Education Sciences

EPA Environmental Protection Agency

HUD	Department of Housing and Urban Development
NAS	National Academy of Sciences
	TRB Transportation Research Board
NASA	National Aeronautics and Space Administration
NEA	National Endowment for the Arts
NEH	National Endowment for the Humanities
NIH	National Institutes of Health
	DFCI Dana-Farber Cancer Institute
	FIC Fogarty International Center
	NCI National Cancer Institute
	NCRR National Center for Research Resources
	NEI National Eye Institute
	NHLBI National Heart, Lung and Blood Institute
	NIAAA National Institute on Alcohol Abuse and Alcoholism
	NIAID National Institute on Allergy & Infectious Diseases
	NIBIB National Institute of Biomedical Imaging and Bioengineering
	NICHD National Institute of Child Health and Human Development
	NIDA National Institute on Drug Abuse
	NIDCD National Institute on Deafness & Communication Disorders
	NIDDK National Institute of Diabetes, Digestive & Kidney Disease
	NIEHS National Institute of Environmental Health Sciences
	NIGMS National Institute on General Medical Sciences
	NIMH National Institute of Mental Health
	NINDS National Institute of Neurological Disorders & Stroke
NSF	National Science Foundation
	EPSCoR Experimental Program to Stimulate Competitive Research
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
	AFRI Agriculture and Food Research Initiative
	APHIS Animal and Plant Health Inspection Service
	ARS Agricultural Research Service
	CSREES Cooperative State Research, Education & Extension Service
	FNS Food and Nutrition Service
	FS Forestry Service
	NASS National Agricultural Statistics Service
	NIFA National Institute for Food and Agriculture
	NRCS Natural Resources Conservation Service
	NRICGP National Research Initiative Competitive Grant Program
	RD Rural Development

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