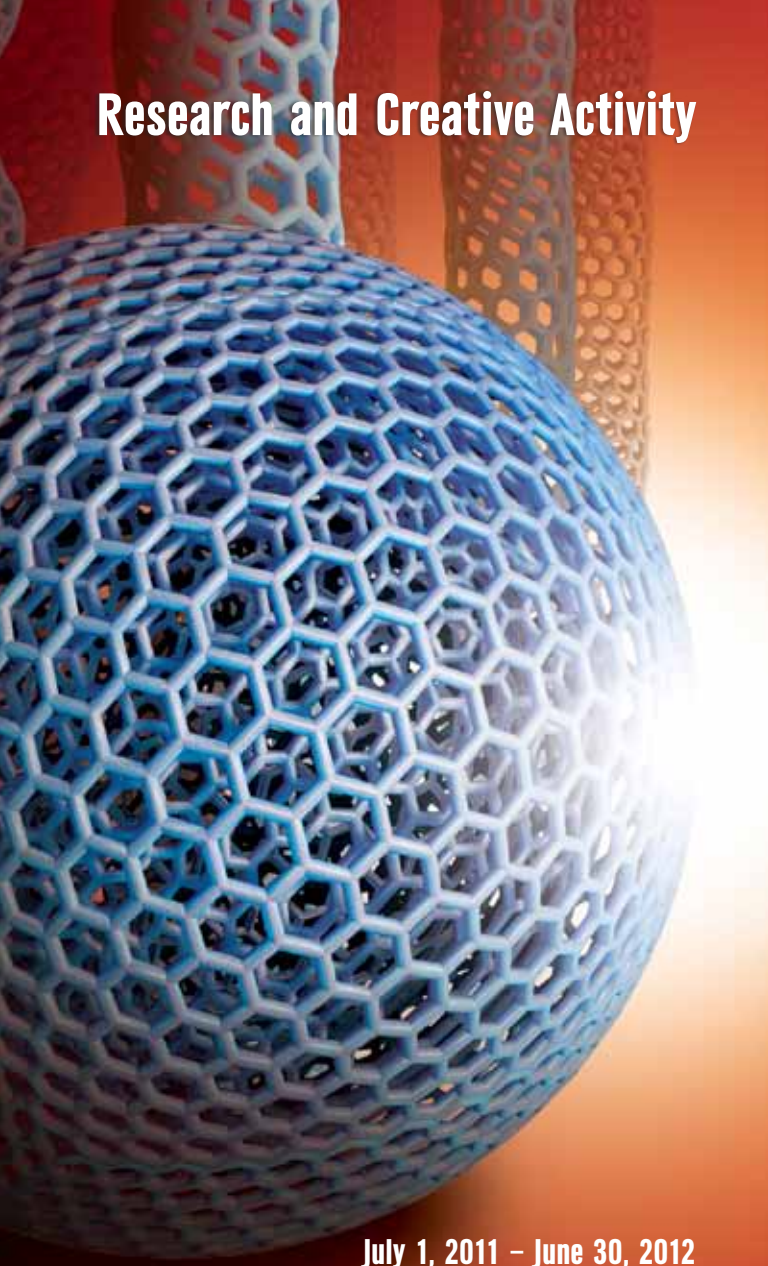
Research and Creative Activity



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

Office of Research and
Economic Development
University of Nebraska–Lincoln

On the Cover: Nanotechnology promises to revolutionize industry, energy, medicine and science with products and technologies from everyday consumer goods to sophisticated electronics and biomaterials. Nanotechnology is among the University of Nebraska–Lincoln's research strengths. From nanomagnetism and spintronics to laser-assisted nanomaterials and nanohybrids, our faculty are turning nanotechnology's potential into reality. The cover features 3-D illustrations of a carbon nano-onion and carbon nanotubes.

Vice Chancellor Prem Paul and Chancellor Harvey Perlman

This eleventh annual "Major Sponsored Programs and Faculty Awards for Research and Creative Activity" booklet highlights the successes of the University of Nebraska–Lincoln faculty during the fiscal year July 1, 2011-June 30, 2012. It lists the funding sources, projects and investigators on major grants and sponsored program awards received during the year; published books and scholarship; fellowships and other recognitions; startups and intellectual property licenses; and performances and exhibitions in the fine and performing arts.

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

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

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

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

Prem

Prem S. Paul
Vice Chancellor for Research
and Economic Development

AWARDS OF $3 MILLION OR MORE

Active awards, July 1, 2011-June 30, 2012
*** Indicates new in 2011-2012**

Allen, Craig — Natural Resources

IGERT: Resilience and Adaptive Governance in Stressed Watersheds

$3,116,173 — NSF
8/15/09 – 7/31/14

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

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

Becker, Donald — Biochemistry

Redox Biology Center

$10,096,061 — NIH-NCRR
8/1/07 – 7/31/13

Donald Becker, professor of biochemistry in the Institute of Agriculture and Natural Resources, is the director of the Redox Biology Center. Established in 2002 with a grant from the National Institutes of Health as a Center of Biomedical Research Excellence, the center received a competitive renewal grant in 2007 to support it through 2012. The center's researchers investigate how cells maintain a reduction-oxidation balance, a process called redox homeostasis, and study links between redox homeostasis and diseases such as cancer, cardiovascular disease, Alzheimer's disease and cataracts. The center's research will provide important advances in the understanding of redox regulation, comprising aspects of cellular aging and controlled cell death.

Cotton, Dan **eXtension**

* eXtension Building Cooperative Extension's 21st Century Network
$6,626,640 USDA-NIFA
9/1/11 – 8/31/15

National eXtension Project
$16,870,000 Association of Public
10/1/04 – 12/31/15 and Land-Grant Universities

eXtension: The Transformation of Cooperative Extension
$5,961,221 USDA-CSREES
8/15/07 – 8/14/12

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

DiLillo, David **Psychology**

Sexual Revictimization: Emotional and Psychosocial Mechanisms
$3,280,773 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.

Dussault, Patrick **Chemistry**

Building Infrastructure in Nanohybrid Materials and Algal Biology Research

$11,100,982 NSF-EPSCoR

10/01/10 – 09/30/15

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

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

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

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

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

Midwest Child Welfare
Technical Assistance Implementation Center
$8,695,638 DHHS-ACF
9/1/08 – 9/29/13
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 system. The ultimate goal is to ensure all children have safe, stable and permanent homes. Co-leaders of the project are Mark Ells and Michelle Graef of the Center on Children, Families and the Law.

Espy, Kimberly Andrews **Psychology**

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

Farritor, Shane **Mechanical & Materials Engineering**

Track Stability Assessment & Data Transmission

$3,534,439 DOT-FRA

9/17/04 – 12/31/11

Turner, Joseph Mechanical & Materials Engineering

Nelson, Carl Mechanical & Materials Engineering

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

Harwood, David **Earth and Atmospheric Sciences**

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

$12,978,160 NSF

6/1/05 – 5/31/13

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.

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

Language Bases of Skilled Reading Comprehension
$4,344,886 — ED-IES through The Ohio State University
7/1/10 – 6/30/15
Bovaird, James — Educational Psychology/ Nebraska Center for Research on Children, Youth, Families and Schools
Nelson, J. Ron — Special Education and Communication Disorders

A UNL team led by Tiffany Hogan in the Department of Special Education and Communication Disorders is collaborating with researchers at The Ohio State University, University of Kansas and Arizona State University to study the language bases of skilled reading comprehension in 4- to 8-year-old children. The UNL researchers are working with local school districts to assess reading comprehension in approximately 300 children aged 4 to 8. They also work with other teams to develop instructional materials and procedures to improve reading comprehension and will then examine the effectiveness of those materials and procedures. The primary goal is to determine the feasibility and efficacy of instruction focused on basic and higher-order language skills for improving children's reading comprehension in the short- and long-term.

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

Therapeutic Countermeasures against the Botulinum Neurotoxin in Support of USAMRIID Botulinum Therapeutic Program
$3,875,001 — DoD-DTRA
8/16/10 – 8/15/13

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

Process Research, Development and Manufacturing of 5P12 RANTES
$3,793,418 — Mintaka Foundation for Medical Research
3/1/10 – 3/31/12
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.

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

Cooperative Forestry Program

$2,490,776 — USDA-FS

10/1/10 – 9/30/15

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

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

Nebraska NOYCE: NSF Mathematics Teaching and Master Teaching Fellows Program

$3,000,000 — NSF

9/1/10 – 8/31/16

Fowler, David	Teaching, Learning and Teacher Education
Kauffman, Douglas	Educational Psychology
Papick, Ira	Mathematics/Center for Science, Mathematics and Computer Education
Smith, Wendy	Center for Science, Mathematics and Computer Education
Swidler, Scott	Teaching, Learning and Teacher Education

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

NebraskaMATH

$9,235,407 NSF
1/1/09 – 12/31/13

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

Jim Lewis, professor of mathematics; Ruth Heaton, associate professor of teaching, learning and teacher education; Thomas McGowan, professor of teaching, learning and teacher education; Carolyn Edwards, professor of psychology; Ira Papick, professor of mathematics; and Barbara Jacobson, curriculum director for Lincoln Public Schools, are directing NebraskaMATH, a statewide program aimed at improving mathematics achievement for all students and narrowing the achievement gap for at-risk students in kindergarten through third grade. The program is supported by a $9.2 million grant from the National Science Foundation. NebraskaMATH is a partnership of UNL, public school districts in Omaha, Lincoln, Grand Island, and Papillion-La Vista and Nebraska's Educational Service Units. It builds on the success of UNL's Math in the Middle Institute by initiating new programs that focus on enhancing teachers' knowledge of mathematics and teaching methods.

Math in the Middle Institute Partnership

$5,900,000 NSF
8/1/04 – 7/31/11

Heaton, Ruth	Teaching, Learning and Teacher Education/ Center for Science, Mathematics and Computer Education
McGowan, Thomas	Teaching, Learning and Teacher Education
Jacobson, Barbara	Lincoln Public Schools

Lewis, Heaton, McGowan and Jacobson are co-leaders of a $5.9 million project titled the Math in the Middle Institute Partnership. The goal is to create the next set of leaders in middle school mathematics who will mentor peers and offer challenging courses to their students. With support from the grant, 156 teachers from across Nebraska are taking 12 challenging math and pedagogy courses and earning master's degrees from UNL. Middle school is a gateway to high school success, and efforts to improve middle school learning, especially in mathematics, show benefits at later stages in students' academic careers.

Lodl, Kathleen **Extension**

Child Care and Youth Training and Technical Assistance Project
$7,045,455 USDA-NIFA
7/1/10 – 6/30/15
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 will work with counterparts at Penn State University to develop and deliver content and provide programming for a nationwide educational program to help the children of military families succeed as they enter the school system. The three-year project, led by Kathleen Lodl, assistant dean of UNL Extension, aims to develop and deliver early childhood professional development in 13 states, focusing on children through age 12 from military families who live off base. The goals of the program are to improve the quality of existing home and center-based child care and school-age/afterschool programs and to increase the number of military-connected children with access to services by increasing the number of practitioners. The Child and Youth TTAP will provide training and technical assistance to increase the knowledge and skills of child care providers and youth program staff. Content will be delivered to early childhood educators both face-to-face and online.

Lu, Yongfeng **Electrical Engineering**

Multi-Energy Processing for Novel Coating Technologies
$4,138,000 DoD-ONR
4/10/09 – 4/9/12

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

Multi-Laser-Beam Open-Atmosphere Surface Coating Techniques Based on Precursor Excitation, Photodissociation and Controlled Cooling

$5,014,954 DoD-ONR-MURI

3/15/05 – 10/30/11

Zeng, Xiao Cheng Chemistry

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

Lubben, Bradley — Agricultural Economics

North Central Risk Management Education Center

$3,506,736 USDA-CSREES

11/15/09 – 11/14/13

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

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 – 12/31/13

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**

Region 7 University Transportation Center

$3,500,000 — DOT-RITA

1/1/12 – 1/31/14

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

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

Safeguarding End-User Military Software

$3,975,935 — DoD-AFOSR

9/1/10 – 8/31/14

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

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

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

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

$5,864,300 — DoD-ARO

9/24/10 – 9/23/13

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

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

third general area of this project involves the purchase and installation of a variety of state-of-the-art nanofabrication and characterization tools to be housed in the new NIST ARRA-supported Nanoscience Metrology Facility.

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

$4,260,001 DoD-ARO
9/25/09 – 9/24/12

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

The Department of Defense's Army Research Office also supports research to develop high-sensitivity nanosensors for defense applications. The key to improving the sensitivity of the magnetic sensors is to understand and control sources of noise and to understand the fundamental limitations due to both noise and signal. This research will provide clear pathways for applications developers to improve signal and reduce noise and lead to development of new materials for improving future sensors. In particular, there is considerable room for improvement in ferromagnetic materials. The project has important applications in the areas of homeland security, health care, information technology and nanotechnology.

Sheridan, Susan

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

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

$3,212,919 ED-IES
07/01/12 – 06/30/16

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

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

complete preschool; whether changes in parent engagement and parent-teacher relationships mediate the effects of the intervention on child outcomes as children complete preschool; and the long-term effects of the GR intervention through kindergarten.

Nebraska Center for Research on Rural Education (R2Ed)
$9,997,852 ED-IES
7/1/09 – 6/30/14

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

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

Stowell, Richard — Biological Systems Engineering

National Facilitation of Extension Programming in Climate Change Mitigation and Adaptation for Animal Agriculture
$4,290,618 USDA-NIFA
4/1/11 – 3/31/16

Heemstra, Jill	Northeast Research and Extension Center
Koelsch, Richard	Biological Systems Engineering/Extension

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

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

US CMS Tier 2 Center

$3,987,767 — NSF through UCLA

5/1/05 – 12/31/11

Bloom, Kenneth — Physics and Astronomy

Dominguez, Aaron — Physics and Astronomy

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

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**

Materials Research Science & Engineering Center: Quantum Spin

$6,626,180 — NSF

9/1/08 – 8/31/14

Gruverman, Alexei — Physics and Astronomy

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

Umstadter, Donald — **Physics and Astronomy**

High-Energy Laser for Detection, Inspection, & Non-Destructive Testing

$4,846,860 — DoD-AFOSR

5/15/08 – 5/14/12

Banerjee, Sudeep — Physics and Astronomy

Shadwick, Bradley — Physics and Astronomy

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

Tunable, Monoenergetic Gamma-Ray Source
for Identification of Embedded SNM

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

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

Velander, William — Chemical and Biomolecular Engineering

cGMP Recombinant FIX and Oral Hemophilia B Therapy

$9,587,071 NIH-NHLBI
9/6/05 – 8/31/12
Van Cott, Kevin Chemical and Biomolecular Engineering

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

Weissinger, Ellen **Academic Affairs**

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

$3,801,443 NSF

9/1/08 – 8/31/13

Holmes, Mary Anne — Earth and Atmospheric Sciences
McQuillan, Julia — Sociology
Manderscheid, David — Arts and Sciences
Wei, Timothy — Engineering
Yoder, Ron — Biological Systems Engineering

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

Whitbeck, Les **Sociology**

Ojibwe Pathways Through the High School Years

$3,121,678 NIH-NIDA

9/3/05 – 6/30/12

Johnson, Kurt — Sociology

Les Whitbeck, John G. Bruhn Professor of Sociology, is coordinating a seven-year project, funded by the National Institute on Drug Abuse, to investigate risk and resilience for early onset substance use and abuse among pre-teen Native children in the Upper Midwest.

Wood, Charles

Biological Sciences/ Nebraska Center for Virology

Nebraska Center for Virology

$5,538,387 NIH-NCRR
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

$4,093,684 NIH-NCI
7/16/10 – 4/30/15

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

Yohe, John

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

International Sorghum/Millet Collaborative
Research Support Program (INTSORMIL)

$15,300,000 USAID
9/30/06 – 9/29/12
Heinrichs, Elvis Entomology/INTSORMIL

John Yohe, associate professor in the Department of Agronomy and Horticulture, directs the International Sorghum/Millet (INTSORMIL) Collaborative Research Support Program. INTSORMIL is a collaborative international organization that supports research focused on improving nutrition and increasing income in developing countries and the United States. Scientists from U.S. land grant universities collaborate with scientists in host countries in the development of technology to improve production and utilization of sorghum and millet and facilitate natural resource management. Their work is done in Africa, Eurasia, Latin America and the United States.

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

$5,250,000 USAID
10/1/07 – 9/30/12

John Yohe, with support from the U.S. Agency for International Development, is directing this project designed to improve sorghum and millet farmers' productivity and incomes in targeted areas of Mali by moving sorghum and millet production technologies onto farmers' fields, linking farmers' organizations to food and feed processors, and commercializing processing technologies. Ultimately, the project's goal is to improve the supply chain from the farm level to the consumer.

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

Active awards, July 1, 2011-June 30, 2012

* Indicates new in 2011-2012

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

Suppression of Innate Immunity by ADP Ribosyltransferase Type III Effectors

$1,797,433 — NIH-NIAID

Azizinamini, Atorod — **Civil Engineering/ Nebraska Transportation Center**

Bridges for Service Life Beyond 100 Years: Innovative Systems

$1,999,637 — NAS-TRB

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

Improving Barley and Wheat Germplasm for Changing Environments

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

Lee, Donald — Agronomy and Horticulture

Regassa, Teshome — Agronomy and Horticulture

Waters, Brian — Agronomy and Horticulture

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

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

$2,498,908 — NSF

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

Adamchuk, Viacheslav — Biological Systems Engineering

Barycki, Joseph — **Biochemistry**

Structural Insights into Redox Homeostasis

$1,065,673 — NIH-NIGMS

Becker, Donald — **Biochemistry**

Role of Proline in Redox Homeostasis and Apoptosis

$1,089,521 — NIH-NIGMS

Mechanistic Studies of Functional Switching in the PutA Flavoprotein

$1,211,201 — NIH-NIGMS

Bellows, Laurie — **Graduate Studies**

McNair Scholars Project and the University of Nebraska–Lincoln

$1,118,025 — ED

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

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

$2,354,004 — USDA-NIFA

Kachman, Stephen — Statistics

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

Bevins, Rick — **Psychology**

* Pharmacological Interventions
to Diminish Nicotine-Associated Responding

$1,448,584 — NIH-NIDA

Black, Paul — **Biochemistry**

Research for Developing Renewable Biofuels from Algae

$1,903,000 — DOE
Van Etten, James — Plant Pathology
Weeks, Donald — Biochemistry

Bloom, Kenneth — **Physics and Astronomy**

* Transatlantic Networking

$1,520,000 — DOE-Fermi National Laboratory

* U.S. CMS Operations at the LHC

$1,035,732 — NSF through Princeton University
Dominguez, Aaron — Physics and Astronomy
Swanson, David — Computer Science and Engineering

Searching for and Discovering New Physics
at the Large Hadron Collider, the Tevatron, and in Cosmic Ray

$1,960,000 — NSF
Claes, Daniel — Physics and Astronomy
Dominguez, Aaron — Physics and Astronomy
Kravchenko, Ilya — Physics and Astronomy
Snow, Gregory — Physics and Astronomy

Blum, Paul — **Biological Sciences**

Value-Added Products from Renewable Biofuels

$1,968,000 — DOE
Cassman, Kenneth — Agronomy and Horticulture

Bond, Alan — **Biological Sciences**

Mechanisms of Social Cognition

$1,458,126 — NIH-NIMH
Kamil, Alan — Biological Sciences

Bulling, Denise — **Public Policy Center**

Nebraska Youth Suicide Prevention and Early Intervention

$1,500,000 — DHHS-SAMSHA through Nebraska
Department of Health and Human Services

Cassman, Kenneth — **Agronomy and Horticulture**

* Global Yield Gap and Water Productivity Atlas

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

Chandra, Namas — **Mechanical & Materials Engineering**

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

$2,530,894 — DoD-ARO
Feng, Ruqiang — Mechanical & Materials Engineering
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

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

SPIRIT^2.0 Silicon Prairie Initiative for Robotics in IT

$2,999,963 — NSF

Cotton, Dan — **eXtension**

Supporting Military Families and Youth Partnership

$2,500,000 — USDA-NIFA

Cupp, Andrea — **Animal Science**

Role of VEGF in Testis Morphogenesis

$1,063,552 — NIH-NICHD
Weber, John — Animal Science
White, Brett — Animal Science

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

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

$1,328,618 — NIH-NCRR
Angeletti, Anisa — Biological Sciences
Bailey, Cheryl — Biochemistry
McQuillan, Julia — Sociology
Wood, Charles — Biological Sciences/ Nebraska Center for Virology

World of Viruses

$1,394,316 — NIH-NCRR
Wood, Charles — Biological Sciences/ Nebraska Center for Virology

DiMagno, Stephen — **Chemistry**

* Synthesis of Radiofluorinated PET Imaging Agents

$1,202,168 — NIH-NIBIB

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

High Throughput Screens for Fatty Acid Uptake Inhibitors

$1,270,155 — NIH-NIDDK
Black, Paul — Biochemistry

Doll, Elizabeth — **Educational Psychology**

NU Data: Using Data and Technology to Foster Achievement

$1,496,461 — ED
Horn, Christy — Educational Psychology
Shope, Ronald — Educational Psychology

Dzenis, Yuris — **Mechanical & Materials Engineering**

NIRT: Nanomanufacturing and Analysis of Active Hierarchical Nanofilamentary Nanostructures

$1,000,000 — NSF
Zeng, Xiao Cheng — Chemistry
Feng, Ruqiang — Mechanical & Materials Engineering
Turner, Joseph — Mechanical & Materials Engineering
Poser, Susan — Law/Center for the Teaching and Study of Applied Ethics
Tomkins, Alan — Law/Public Policy Center

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

Mountain Prairie Upgrade Partnership-Itinerant

$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

$1,249,142 — ED

McGowan, Thomas — Teaching, Learning and Teacher Education

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

On the Way Home: A Family-Centered Academic Reintegration Intervention Model

$1,443,284 — ED

Torkelson-Trout, Alexandra — Special Education and Communication Disorders

Espy, Kimberly Andrews — **Psychology**

Prenatal Smoking and the Substrates of Disruptive Behavior in Early Life

$2,130,842 — NIH-NIDA

Garza, John — Psychology

Farrell, Michael — **University Television**

IPY: Engaging Antarctica

$1,246,068 — NSF

Diamond, Judy — University of Nebraska State Museum

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

Robots for Telesurgery Research

$1,485,000 — DoD-AMR through UNMC

Goddard, Stephen — Computer Science and Engineering

Nelson, Carl — Mechanical & Materials Engineering

Perez, Lance — Electrical Engineering

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

Bulbar Motor Deterioration in ALS

$2,294,633 — NIH-NIDCD

Early Speech Motor Development

$1,754,412 — NIH-NIDCD

Guretzky, John — **Agronomy and Horticulture**

* Agro-Ecosystem Approach to Sustainable Biofuels Production

$1,916,143 — USDA-NIFA through Iowa State University

Baxendale, Fred — Entomology
Cassman, Kenneth — Agronomy and Horticulture
Glewen, Keith — Southeast Research and Extension Center
Hay, Francis — Biological Systems Engineering
Heng-Moss, Tiffany — Entomology
James, Theresa — Agronomy and Horticulture
Namuth Covert, Deana — Agronomy and Horticulture
Perrin, Richard — Agricultural Economics
Waters, Brian — Agronomy and Horticulture
Wegulo, Stephen — Plant Pathology
Yuen, Gary — Plant Pathology

Heinrichs, Elvis — **Entomology/INTSORMIL**

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

$1,100,000 — USAID

Hygnstrom, Scott — **Natural Resources**

Development of Spatially Explicit Models of Wildlife Diseases

$1,220,184 — USDA-APHIS

Irmak, Suat — **Biological Systems Engineering**

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

$1,066,416 — Central Platte NRD

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

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

Technical Transfer and cGMP Production of a Trivalent Vaccine

$2,302,839 — Industry client

USAMRAA CGMP Production Contract #1

$2,164,301 — DoD-AMR

Van Cott, Kevin — Chemical and Biomolecular Engineering

Jones, David — **Biological Systems Engineering**

Strengthening Transitions into Engineering Program

$1,993,942 — NSF

Ballard, John — Industrial and Management Systems Engineering
Perez, Lance — Electrical Engineering

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

Rural Language and Literacy Connections (Rural LLC)

$2,741,563 — ED

Raikes, Helen — Child, Youth and Family Studies

Koszewski, Wanda — **Nutrition and Health Sciences**

Innovation and Collaboration: Creating a Transdisciplinary Childhood Obesity Prevention Graduate Program

$1,450,389 — USDA-NIFA through South Dakota State University

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

Supplemental Nutrition Assistance Program (SNAP-ED)

$1,809,238 — USDA-FNS through Nebraska Department of Health and Human Services

Birnstihl, Elizabeth — Extension
Schnepf, Marilynn — Nutrition and Health Sciences

Lee, Jaekwon — **Biochemistry**

Mechanistic Insights into Cellular Metal Detoxification

$1,414,177 — NIH-NIEHS

Li, Ming — **Psychology**

Behavioral Mechanisms of Antipsychotic Action

$1,435,910 — NIH-NIMH

Li, Qingsheng — **Biological Sciences**

The Early Events Determining SIV Rectal Transmission

$1,368,245 — NIH-NIDDK

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

Protein-Thiol Mixed Disulfide in Cataractogenesis

$2,083,886 — NIH-NEI

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

TRMS: An Integrative Study of Plant Mitochondrial Biology

$1,420,753 — NSF

Christensen, Alan — Biological Sciences
Elthon, Thomas — Agronomy and Horticulture
Wang, Dong — Statistics

Marley, Tom — **Mathematics**

EMSW21-MCTP: Nebraska Mentoring through Critical Transition Points

$2,225,689 — NSF

Walker, Judy — Mathematics
Donsig, Allan — Mathematics

McCutcheon, Allan — **Gallup Research Center**

* Reducing Error in Computer Survey Data Collection

$2,967,347 — NSF

Belli, Robert — Gallup Research Center/Psychology
Olson, Kristin — Gallup Research Center/Sociology
Smyth, Jolene — Gallup Research Center/Sociology
Soh, Leen-Kiat — Computer Science and Engineering

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

Classic Upward Bound

$1,242,250 — ED

Upward Bound Math/Science Program

$1,242,250 — ED

Oyler, George — **Biochemistry**

Consortium for Commercialization
of Algae Biofuels and Biotechnology

$1,188,000 — DOE through University of California, San Diego

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

Nickerson, Kenneth — Biological Sciences

Van Etten, James — Plant Pathology

Weeks, Donald — Biochemistry

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

Lewis, Elizabeth — Teaching, Learning and Teacher Education

Swidler, Scott — Teaching, Learning and Teacher Education

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

* Homeostatic Regulation
of Peripheral Oscillators via Autonomic Circuitry

$1,848,542 — NIH-NINDS

Sollars, Patricia — Veterinary Medicine and Biomedical Sciences

Redepenning, Jody — **Chemistry**

Bioceramic Bones for Battlefield Traumas

$1,358,000 — DoD-AMR

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

UNL Educational Talent Search

$2,104,080 — ED

Rutenbeck, Kathy — **Student Affairs**

Upward Bound-Northeast Nebraska

$1,449,278 — ED

Schaefer, Matthew — **Law**

University of Nebraska College of Law
Space & Telecommunications Law Program:
Filling a National Need, Advancing the Field

$1,717,370 — NASA

Willborn, Steven — Law

Leiter, Richard — Law

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

An Extensible Semantic Bridge
between Biodiversity and Genomics

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

Sellmyer, David — **Physics and Astronomy**

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

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

A Randomized Trial of Conjoint Behavioral Consultation (CBC)
in Rural Educational Settings:
Efficacy for Elementary Students with Disruptive Behaviors

$2,999,994	ED-IES
Bovaird, James	Educational Psychology
Glover, Todd	Nebraska Center for Research on Children, Youth, Families and Schools
Kunz, Gina	Nebraska Center for Research on Children, Youth, Families and Schools

Development of a Three-Tiered Model in Early Intervention
to Address Language and Literacy Needs of Children at Risk

$1,499,511	ED-IES
Knoche, Lisa	Nebraska Center for Research on Children, Youth, Families and Schools
Ihlo, Tanya	Nebraska Center for Research on Children, Youth, Families and Schools

Shi, Jonathan — **Durham School of Architectural Engineering and Construction**

Advanced Decentralized Water/Energy Network Design for Sustainable Infrastructure

$1,249,995 — EPA

Zhang, Tian — Civil Engineering
Shen, Zhigang — Durham School of Architectural Engineering and Construction
Stansbury, John — Civil Engineering
Alahmad, Mahmoud — Durham School of Architectural Engineering and Construction
Li, Haorong — Durham School of Architectural Engineering and Construction
Schwer, Avery — Durham School of Architectural Engineering and Construction
Lau, Siu Kit — Durham School of Architectural Engineering and Construction

Shulski, Martha — **Natural Resources**

Regional Climate Services Support in the High Plains Region

$2,840,103 — DOC-NOAA

Hubbard, Kenneth — Natural Resources
You, Jinsheng — Natural Resources

Simpson, Melanie — **Biochemistry**

Role of Hyaluronan Matrix in Prostate Cancer Progression

$1,084,884 — NIH-NCI

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

Citric Acid Cycle Regulation of Exopolysaccharide Synthesis in Staphylococci

$1,406,003 — NIH-NIAID

Powers, Robert — Chemistry

Spreitzer, Robert — **Biochemistry**

Role of the Rubisco Small Subunit

$1,496,500 — DOE

Starace, Anthony — **Physics and Astronomy**

Dynamics of Few-Body Atomic Processes

$1,816,554 — DOE

Storz, Jay — **Biological Sciences**

Mechanisms of Hemoglobin Adaptation to Hypoxia in High-Altitude Rodents

$1,411,572 — NIH-NHLBI

Moriyama, Hideaki — Center for Biotechnology

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

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

$1,213,475 — NSF

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

Tsymbal, Evgeny — **Physics and Astronomy**

Cyberinfrastructure-Enabled Computational Nanoscience for Energy Technologies

$2,587,878 — NSF

Swanson, David — Computer Science and Engineering

Umstadter, Donald — **Physics and Astronomy**

* Propagation and Interactions of Ultrahigh Power Light: Relativistic Nonlinear Optics

$1,199,891 — DoD-AFOSR

Banerjee, Sudeep — Physics and Astronomy

Kalmykov, Serguei — Physics and Astronomy

Shadwick, Bradley — Physics and Astronomy

Compact Source of Laser-Driven Monoenergetic Gamma-Rays

$2,982,685 — DoD-DTRA

Laser Produced Coherent X-Ray Sources

$1,095,000 — 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

Verma, Shashi — **Natural Resources**

Carbon Sequestration in Dryland & Irrigated Agroecosystems

$2,364,500 — DOE

Cassman, Kenneth — Agronomy and Horticulture

Knops, Johannes — Biological Sciences

Hubbard, Kenneth — Natural Resources

Arkebauer, Timothy — Agronomy and Horticulture

Walters, Daniel — Agronomy and Horticulture

Suyker, Andrew — Natural Resources

Viljoen, Hendrik — **Chemical and Biomolecular Engineering**

A Rational Design of a Platform for de novo Gene Synthesis

$1,312,056 — NIH-NCRR

Subramanian, Anuradha — Chemical and Biomolecular Engineering

Walter, Jens — **Food Science and Technology**

* Determination of the Importance of Colonization History in the Assembly of the Gastrointestinal Microbiota

$1,205,011 — NIH-NIGMS

Benson, Andrew — Food Science and Technology

Peterson, Daniel — Food Science and Technology

Weissinger, Ellen — **Academic Affairs**

Great Plains National Security Education Consortium (GP-NSEC)

$1,200,000 — DoD-NGIA

Adenwalla, Shireen — Physics and Astronomy

LeSueur, James — History

McMahon, Patrice — Political Science

Wedeman, Andrew — Political Science

Wood, Simon — Classics and Religious Studies

Paul, Prem — Research and Economic Development

Whitbeck, Les — **Sociology**

* Alcohol Abuse/Dependence and Its Consequences for Indigenous Adolescents

$1,303,987 — NIH-NIAAA

Cheadle, Jacob — Sociology

Hoyt, Dan — Sociology

Resilience through the High School Years

$2,609,905 — NIH-NIMH

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

Redox Regulation of DJ-1 Function

$1,339,726 — NIH-NIGMS

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

Neuropathogenesis and Neuroinvasiveness of Subtype C Human Immunodeficiency Virus-1

$1,727,755 — DHHS-NINDS

Programs in HIV & AIDS Assoc Diseases/Malignancies

$2,634,627 — NIH-FIC

Research Training in Comparative Viral Pathogenesis

$1,318,857 — NIH-NIAID

Vaccination against Mucosal HIV Clade C Transmission

$1,291,235 — NIH-DFCI

Yamamoto, Catherine — **Student Affairs**

Student Support Services Program

$2,559,875 — ED

Zempleni, Janos — **Nutrition and Health Sciences**

Biotin Deficiency Impairs Silencing of Repeat Regions and Retrotransposons

$1,224,019 — NIH-NIDDK

Awards of $200,000 - $999,999

Active awards, July 1, 2011-June 30, 2012

* Indicates new in 2011-2012

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

* 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**

Food Safety for Diverse Families with Young Children

$554,302 — USDA-NIFA

Alexander, Dennis — **Electrical Engineering**

Ultrafast Laser Interaction Processes for Libs & Other Sensing Technologies

$702,784 — DoD-ARO through University of Central Florida

Allen, Craig — **Natural Resources**

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

$295,770 — Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources

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

$338,250 — Nebraska Game and Parks Commission

NCFWRU: Adaptive Management for Nebraska Legacy Program Goals

$200,000 — Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources

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

$601,886 — DOI-GS

Anderson, John — **Economics**

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

$500,000 — DOC-ITA

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

Development of Northern Hemisphere Snow & Ice Climate Data Records

$213,461 — NASA through Rutgers University

Avramov, Luchezar — **Mathematics**

Cohomology over Commutative Rings: Structure and Applications

$458,919 — NSF

Avramova, Zoya — **Biological Sciences**

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

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

Azizinamini, Atorod — **Civil Engineering**

Comprehensive Evaluation of Fracture Critical Bridges
$286,348 — Nebraska Department of Roads

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

* Enhance Variety Development
of Scab Resistant Hard Winter Wheat Varieties in Nebraska
$224,218 — USDA-ARS
Wegulo, Stephen — Plant Pathology

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

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

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

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

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

Barletta-Chacon, Ofelia — **Veterinary Medicine and Biomedical Sciences**

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

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

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

Fate and Bioavailability of Steroids in Aquatic Sediment
$221,981 — NSF
Snow, Daniel — Natural Resources

Basolo, Alexandra — **Biological Sciences**

The Consistency of Behavioral Plasticity
Across Different Selective Contexts

$500,998 — 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

$473,000 — 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**

Coordination of Functions by Proline Metabolic Proteins

$536,000 — NIH-NIGMS through University of Missouri-Columbia

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

$250,000 — ConAgra

Modeling Heterogeneity
for Safe Cancer Prevention and Detection

$293,986 — NIH-NCI through North Carolina State University
Kachman, Stephen — Statistics
Walter, Jens — Food Science and Technology

Pyrosequencing and Community Profiling for
Risk Assessment in Leafy Greens

$370,927 — USDA-NRICGP
Walter, Jens — Food Science and Technology
Hutkins, Robert — Food Science and Technology

Berens, Charlyne — **Journalism and Mass Communications**

Carnegie-Knight Initiative on the Future of Journalism Education

$250,000 — Carnegie Corporation of New York

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**

* SGP-Carbon Project
$217,219 — 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
Springer, Paul — Child, Youth and Family Studies
Reisbig, Allison — 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**

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

REU Site: Integrated Development of Bioenergy Systems
$279,592 — 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
$229,616 — DoD-ARO

Adaptivity in Peridynamics for Composite Plates
$305,278 — DOE–Sandia National Laboratories

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

* Quantifying Gamma/Neutron Discrimination in Gadolinium-Rich Real-Time Neutron Detection Materials and Devices

$349,664 — DoD-DTRA

Dowben, Peter — Physics and Astronomy

Hallbeck, Susan — Mechanical & Materials Engineering/ Biological Systems Engineering

Novel Rare-Earth Semiconductors for Solid-State Neutron Detectors

$867,242 — DoD-DTRA

Belashchenko, Kirill — Physics and Astronomy

Dowben, Peter — Physics and Astronomy

Brisson, Jennifer — **Biological Sciences**

Contrasting Environmental and Genetic Controls of Alternative Phenotypes

$782,884 — NIH-NIEHS

Brown, Deborah — **Biological Sciences**

Vaccine Strategies that Target Cytolic CD4 T Cells to the Lung

$398,919 — NIH-NIAID

Brown, Mary — **Natural Resources**

Advancing Tern and Plover Common Sense Conservation into the Future

$270,000 — Nebraska Environmental Trust

Bulling, Denise — **Public Policy Center**

Developing Nebraska's Homeland Security Planning Capacity

$356,500 — DHS through Nebraska Military Department-NEMA

Tri-County Urban Area Security Initiative (UASI) Planning

$200,000 — DHS through Nebraska Military Department-NEMA

Burgin, Amy — **Natural Resources**

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

$454,545 — USDA-NIFA

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

$240,448 — EPA through Nebraska Department of Environmental Quality

Pegg, Mark — Natural Resources

Pope, Kevin — Natural Resources

Thomas, Steven — Natural Resources

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

$239,555 — NSF

Cady, Daniel — **Extension**

Nebraska Technology Transfer Center at UNL

$594,431 — Nebraska Department of Roads

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

* Integrating the Regulatory Components of Sphingolipid Biosynthesis in Arabidopsis

$686,815 — NSF

Stone, Julie — Biochemistry

* Center for Enhanced Camelina Oil (CECO)

$555,698 — DOE through Donald Danforth Plant Science Center

Development of Bio-Based Lubricants in a Dedicated Industrial Oilseed Crop

$500,000 — USDA-NIFA

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

Probing the Metabolic and Physiological Significance of Sphingolipid Long-Chain Base Desaturation in Plants

$550,500 — NSF

Biochemical Genomics: Quizzing the Chemical Factories of Oilseeds

$948,028 — NSF through Washington State University

Center for Metabolic Channeling for Enhanced Biofuel Systems

$852,403 — DOE through Donald Danforth Plant Science Center

BioCassava Plus

$298,442 — 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

Carlo, Gustavo — **Psychology**

An Ecological Model of Latino Youth Development

$315,000 — NSF

Buhs, Eric — Educational Psychology

Carranza, Miguel — Sociology/Institute for Ethnic Studies

Crockett, Lisa — Psychology

De Guzman, Maria — Child, Youth and Family Studies

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

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

Histone H3 Phosphorylation and Gene Silencing in Chlamydomonas and Arabidopsis

$591,661 — NSF

Chen, Xun-Hong — **Natural Resources**

Development of Groundwater Flow Model in the Lower Platte North NRD Area

$220,458 — Lower Platte North NRD

Cheung, Chin Li — **Chemistry**

Boron Coatings for Scalable Solid-State Neuron Detectors

$400,000 — DOE-Livermore National Laboratory

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

* RI: Small: Towards Practical Tractability in Constraint Processing

$401,564 — NSF

Ci, Song — **Computer and Electronics Engineering**

IHCS: ARMS: A Novel Adaptive Configurable Multi-Cell Battery System for Power-Aware Electronics

$299,626 — NSF

Alahmad, Mahmoud — Durham School of Architectural Engineering and Construction

Sharif-Kashani, Hamid — Computer and Electronics Engineering

Clemente, Thomas — **Agronomy and Horticulture/ 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

$389,948 — United Soybean Board/Smith/Bucklin

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

$386,403 — DOE through University of Illinois at Urbana-Champaign

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

$217,320 — NSF through University of Georgia

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

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

$324,883 — NSF

Comfort, Steven — **Natural Resources**

Field-Scale Demonstrations of Innovative Remediation Techniques for Contaminated Soil and Water

$994,100 — EPA

Conley, Dennis — **Agricultural Economics**

Developing Economic Improvements
through Cooperative Businesses in Rural Nebraska

$224,982	USDA-RD
Burkhart-Kriesel, Cheryl	Panhandle Research and Extension Center
Narjes, Charlotte	Center for Applied Rural Innovation

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**

* RI: Small: Adaptive Sampling with Robots
for Marine Observations

$249,971	NSF

DiMagno, Stephen — **Chemistry**

New Approaches to Catalyst Screening & Development

$465,000	NSF

Dominguez, Aaron — **Physics and Astronomy**

PIRE: Collaborative Research with the Paul Scherrer Institute
and Eidgenoessische Technische Hochschule
on Advanced Pixel Silicon Detectors for the CMS Detector

$782,447	NSF through University of Kansas Center for Research
Bloom, Kenneth	Physics and Astronomy

Dowben, Peter — **Physics and Astronomy/Nebraska Center for Materials and Nanoscience**

Polymer Interface Induced Spin and Dipole Ordering

$484,478	NSF

Doped Boron Carbide Polymers: Fundamental Studies
of a Novel Class of Materials for Enhanced Radiation Detection

$300,000	DoD-DTRA through University of North Texas

Du, Liangcheng — **Chemistry**

* Discovering New Anti-Infective Agents from Lysobacter

$851.814	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

Rational Design of Molecular Ferroelectric
Materials and Nanostructures

$449,054	DOE
Takacs, James	Chemistry

Duppong Hurley, Kristin — **Special Education and Communication Disorders**

Treatment Implementation and Mental Health Outcomes for Youth in Residential Care

$510,300 — NIH-NIMH

Epstein, Michael — Special Education and Communication Disorders

Dussault, Patrick — **Chemistry**

* New Reactions of Organic Peroxides

$420,000 — NSF

Dweikat, Ismail — **Agronomy and Horticulture**

Characterization of Nitrogen Use Efficiency in Sweet Sorghum

$390,000 — DOE

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

Weeks, Donald — Biochemistry

Dwyer, Matthew — **Computer Science and Engineering**

CSR-EHS Predictable Adaptive Residual Monitoring for Real-time Embedded Systems

$515,950 — NSF

Goddard, Stephen — Computer Science and Engineering

Elbaum, Sebastian — Computer Science and Engineering

Dzenis, Yuris — **Mechanical & Materials Engineering**

* Advanced Single-Polymer Nanofiber-Reinforced Composite: Towards Next Generation Ultralight Superstrong/Tough Structural Material

$595,285 — DoD-AFOSR

MURI: Multiscale Design and Manufacturing of Hybrid DWCNT-Polymer Fibers

$458,850 — DoD through Northwestern University

Nanoengineered Interfaces

$250,002 — NSF

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

Mountain Prairie Upgrade Partnership - Early Childhood

$781,642 — ED

Marvin, Chris — Special Education and Communication Disorders

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

Differential Symbolic Execution:
Supporting Evolution of High-Assurance Software

$693,250 — NASA through UNO

Dwyer, Matthew — Computer Science and Engineering

Enhancing the Dependability of Complex Missions
through Automated Analysis

$548,852 — DoD-AFOSR

Dwyer, Matthew — Computer Science and Engineering

T2T: A Framework for Amplifying Testing Resources

$491,688 — NSF

Dwyer, Matthew — Computer Science and 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

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 — **Civil Engineering/ Midwest Roadside Safety Facility**

Wisconsin DOT Roadside Safety Research Program FY 2010
$601,736 — Nebraska Department of Roads
Sicking, Dean — Civil Engineering/ Midwest Roadside Safety Facility
Reid, John — Mechanical & Materials Engineering

Development of a New Precast Concrete Bridge Railing System
$229,820 — Nebraska Department of Roads
Bielenberg, Robert — Civil Engineering
Reid, John — Mechanical & Materials Engineering
Tadros, Maher — Civil Engineering

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

Robotic Devices to Support Long-Term Human Space Flight
$675,000 — NASA through UNO

Feng, Song — **Natural Resources**

Megadrought: Local vs. Remote Causal Factors 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

Flores, Rolando — **Food Science and Technology**

Midwest Advanced Food Manufacturing Alliance
$319,775 — USDA-CSREES

Fomenko, Dmitri — **Biochemistry**

* Methionine Sulfoxide Reduction, Selenium and Aging
$248,679 — NIH-NIA through Harvard Med School-Brigham & Women's

Fontaine, Joseph — **Natural Resources**

* Assessing the Effects of Habitat Incentive Programs and Public Access Programs on Pheasant Population Dynamics and Hunter Harvest
$224,283 — Nebraska Game and Parks Commission
Powell, Larkin — Natural Resources

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

Forbes, Valery — **Biological Sciences**

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

Franti, Thomas — **Biological Systems Engineering**

Heartland Regional Water Coordination Initiative

$571,988 — USDA-CSREES through Iowa State University

Wortmann, Charles — Agronomy and Horticulture

Fromm, Michael — **Agronomy and Horticulture/ Center for Biotechnology**

MRI: Acquisition of High Capacity DNA Sequencing System

$714,750 — NSF

Gardner, Scott — **Biological Sciences/ University of Nebraska State Museum**

Mongolia Vertebrate Parasite Project

$627,491 — NSF

Enabling Access to Priority Taxa for Biodiversity Studies in the Manter Laboratory of Parasitology

$546,597 — NSF

Jimenez-Ruiz, Francisco — University of Nebraska State Museum

Gaussoin, Roch — **Agronomy and Horticulture**

Evaluation of FRAC Group C Fungicides and Compounds Designed to Amplify Physiological Benefits on Mitochondrial and Whole Leaf Respiration

$204,252 — Syngenta

Schlegel, Vicki — Food Science and Technology

Gay, Timothy — **Physics and Astronomy**

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

$300,000 — NSF

Batelaan, Herman — Physics and Astronomy

Uiterwaal, Kees — Physics and Astronomy

Geisinger, Kurt — **Educational Psychology**

Technical Support for the Development and Delivery of the Hawaii Alternate Assessment

$593,103 — Keystone Alternate Assessment Design

Chin, Tzu-Yun — Educational Psychology

Foley, Brett — Educational Psychology

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

Gitelson, Anatoly — **Natural Resources**

A Satellite-Based Quantification of Carbon Exchange of the Dominant Ecosystem (Maize-Soybean) in the NACP Mid-Continent Intensive (MCI) Region

$496,124 — NASA
Verma, Shashi — Natural Resources
Suyker, Andrew — Natural Resources

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

State-Wide Response-to-Intervention Consortium for Training & Evaluation

$499,989 — Nebraska Department of Education
Ihlo, Tanya — Nebraska Center for Research on Children, Youth, Families and Schools

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

* CSR: Small: Systematic Approaches for Real-Time Stream Data Services

$250,000 — NSF
Liu, Xue — Computer Science and Engineering

Gogos, George — **Mechanical & Materials Engineering**

Innovative Propane Flaming Technology for Crop Production

$274,000 — Propane Education and Research Council
Knezevic, Stevan — Northeast Research and Extension Center

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

* In Vitro IgE Testing of a Biotech Soybean Event LEPI 2800

$200,470 — Pioneer Hi-Bred

Differentiating Biologically Relevant from Irrelevant IgE Binding to Food Antigens for Improved Risk Assessment and Diagnostic Studies Using a Humanized Rat Basophil Cell Line (RBL 30/25)

$372,340 — EPA
Siddanakoppalu, Pramod — Food Science and Technology

Food Allergen Database

$679,742 — Various Industries

Goosby, Bridget — **Sociology**

Intergenerational Transmission of Race Disparities in Health

$546,345 — NIH-NICHD

Gosselin, David — **Natural Resources**

Global Climate Change Education: Research Experiences, Modeling and Data

$349,973 — NASA
Bonnstetter, Ron — Teaching, Learning and Teacher Education
Low, Russanne — Natural Resources
Oglesby, Robert — Earth and Atmospheric Sciences/ Natural Resources

Online Master's Degree in Applied Science Education

$540,345 — Toyota USA Foundation
Bonnstetter, Ronald — Teaching, Learning and Teacher Education
Strand, Billie — Extended Education and Outreach

Graef, George — **Agronomy and Horticulture**

Quality Traits Regional Tests
$236,490 — United Soybean Board/Smith/Bucklin

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

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

* Development of Childhood Chewing
$429,360 — Nestec Ltd.

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

* Energy Efficient Housing Research Partnerships
$528,254 — DOE-NREL

Alahmad, Mahmoud	Durham School of Architectural Engineering and Construction
Cho, Yong Kwon	Durham School of Architectural Engineering and Construction
Goedert, James	Durham School of Architectural Engineering and Construction
Hemsath, Timothy	Architecture
Li, Haorong	Durham School of Architectural Engineering and Construction
Norton, Terri	Durham School of Architectural Engineering and Construction
Schwer, Avery	Durham School of Architectural Engineering and Construction
Shen, Zhigang	Durham School of Architectural Engineering and Construction
Shi, Jonathan	Durham School of Architectural Engineering and Construction
Tiller, Dale	Durham School of Architectural Engineering and Construction
Waters, Clarence	Durham School of Architectural Engineering and Construction
Yuill, Grenville	Durham School of Architectural Engineering and Construction

Gruverman, Alexei — **Physics and Astronomy**

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

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

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

Guretzky, John — **Agronomy and Horticulture**

* Demonstrating Mob Grazing Impacts in the Northern Great Plains on Grazingland Efficiency, Botanical Composition, Soil Quality, and Ranch Economics

$330,256 — USDA-NRCS through South Dakota State University

Mamo, Martha — Agronomy and Horticulture
Schacht, Walter — Agronomy and Horticulture
Stockton, Matthew — West Central Research and Extension Center
Volesky, Jerry — West Central Research and Extension Center

Gursoy, Mustafa — **Electrical Engineering**

Energy Efficiency in Wireless Communications under Queuing Constraints

$335,856 — NSF
Velipasalar, Senem — Electrical Engineering

Hage, David — **Chemistry**

* Chromatographic Automation of Immunoassays

$816,026 — NIH-NIGMS

* Microcolumns for Biomarker Detection

$250,000 — DoD-DRMRP through SFC Fluids LLC

Chromatographic Studies of Functional Proteomics

$756,640 — NIH-NIDDK

Hallbeck, M. Susan — **Industrial and Management Systems Engineering**

VA Engineering Research Center

$450,986 — VA Medical Center-Omaha
Savory, Paul — Management

Han, Ming — **Electrical Engineering**

Highly Sensitive and Multiplexed Fiber-Optic Ultrasonic Sensors

$305,658 — DoD

Distributed Fiber-Optic Laser Ultrasound Generation

$300,103 — DoD

Harms, Peter — **Management**

Comprehensive Soldier Fitness Program Assessment

$954,906 — TKC Global Solutions
Bien, Mary — Management
Bulling, Denise — Public Policy Center
Pearce, Craig — Management

Harshman, Lawrence — **Biological Sciences**

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

$302,713 — NSF

Moriyama, Etsuko — 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

Harvey, F. Edwin — **Natural Resources**

Investigation of the Role of Rainwater Basin Wetlands in Contributing to the Functions of Groundwater Recharge, Water Quality Improvement, and the Wildlife Habitat, Including an Assessment of the Impact of Sediment on These Functions

$386,520 — Nebraska Game and Parks Commission

Habitat Conservation Plan for the Salt Creek Tiger Beetle and the Eastern Saline Wetlands of Nebraska

$380,000 — Nebraska Game and Parks Commission

Hayes, Michael — **Natural Resources**

Drought Mitigation, Nebraska Project

$558,401 — USDA-NIFA

Svoboda, Mark — Natural Resources

Knutson, Cody — Natural Resources

Wardlow, Brian — Natural Resources

Transitioning the Drought Impact Reporter into an Operational System

$445,257 — DOC-NOAA

Heemstra, Jill — **Northeast Research and Extension Center**

Engaging Young Farmers and Ranchers in Environmental Management Education

$644,408 — USDA-CSREES

Hein, Gary — **Entomology**

National Needs Fellow: Integrated Practitioners for Tomorrow's Sustainable Agricultural Systems

$234,000 — USDA-CSREES

Lagrimini, Mark — Agronomy and Horticulture

Steadman, James — Plant Pathology

Brewer, Gary — Entomology

Heng-Moss, Tiffany — **Entomology**

* Mitigating Insect Herbivory of Warm-Season Bioenergy Grasses – Getting Ahead of the Curve

$734,477 — USDA-ARS

Bradshaw, Jeffrey — Entomology

Lagrimini, Mark — Agronomy and Horticulture

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

Enhancing Irrigation Management Tools & Developing a Decision Support System for Managing Limited Irrigation Supplies for the High Plains

$249,999 — USDA-RMA-FCIC

Burgener, Paul — Panhandle Research and Extension Center
Lyon, Drew — Panhandle Research and Extension Center
Martin, Derrel — Biological Systems Engineering
Pavlista, Alexander — Panhandle Research and Extension Center
Santra, Dipak — Panhandle Research and Extension Center
Supalla, Raymond — Agricultural Economics

Hibbing, John — **Political Science**

DHB: Identifying the Biological Underpinnings of Political Temperaments

$587,068 — NSF

Espy, Kimberly Andrews — Psychology
Smith, Kevin — Political Science
Dodd, Michael — Psychology
Wiebe, Sandra — Psychology

Higley, Leon — **Natural Resources**

Establishing Blow Fly Development and Sampling Procedures to Estimate Postmortem Intervals

$483,323 — DOJ-National Institute of Justice

Hoffman, Lesa — **Psychology**

Visual Attention in Aging: Bridging Experimental and Psychometric Approaches

$322,745 — NIH-NIA

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

The Lexicon and Phoneme Awareness

$429,156 — NIH-NIDCD

Holmes, Mary Anne — **Earth and Atmospheric Sciences**

Building a Community of Women Geoscience Leaders

$228,774 — NSF

Horn, Christy — **Equity, Access and Diversity Programs**

Building Accepting Campus Communities

$976,900 — ED

Bruning, Roger — Educational Psychology

Sydik, Jeremy — Equity, Access and Diversity Programs

Houston, Adam — **Earth and Atmospheric Sciences**

* Criticality: A Theory for Understanding and Forecasting Deep Convective Initiation

$226,730 — NSF

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

Development of a Northern Hemisphere Gridded Precipitation Dataset Spanning the Past Half Millennium for Analyzing Interannual and Longer-Term Variability in the Monsoons

$529,501 — DOC-NOAA

Feng, Song — Natural Resources

Oglesby, Robert — Earth and Atmospheric Sciences

Understanding and Predicting Tropical and North Atlantic SST Forcing on Variations in Warm Season Precipitation over North America

$292,000 — DOC-NOAA

Oglesby, Robert — Earth and Atmospheric Sciences

Feng, Song — Natural Resources

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

* Extremely Sensitive Solid-State Ultraviolet Photodetector by Fabricated Low-Cost Solution Process

$628,183 — DoD-ONR

* Tailoring the Energy Levels of Donor and Acceptor in Organic Photovoltaics for Increased Photovoltage with Ferroelectric Dipole Layer

$410,000 — NSF

Ducharme, Stephen — Physics and Astronomy

Highly Sensitive, Low Cost Organic Photodetector Based Photomultiplication

$200,000 — DoD-DTRA

Hudgins, Jerry — **Electrical Engineering**

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

$999,504 — DOT-FHWA

Jones, Elizabeth — Civil Engineering

Qiao, Wei — Electrical Engineering

Rilett, Laurence — Civil Engineering

Sharma, Anuj — Civil Engineering

Hunt, William — **Anthropology**

* Pilot Project: A Multidisciplinary Exploratory Study of Alpine Cairns, Baranof Island, Southeast Alaska

$201,697 — NSF

Hartley, Ralph — Anthropology

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

Assessing and Enhancing Stability
of Prebiotics in Processed Foods

$444,920 — USDA-NRICGP

Wehling, Randy — Food Science and Technology

Schlegel, Vicki — Food Science and Technology

Hygnstrom, Scott — **Natural Resources**

Outdoor U Program

$252,790 — Nebraska Game and Parks Commission

Ianno, Natale — **Electrical Engineering**

UNO-NASA Space Grant:
Satellite Contaminant Materials Research Program

$665,978 — NASA through UNO

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

CPNRD Mapping Evapotranspiration
with High Resolution Satellite Data

$325,789 — Central Platte NRD

Irmak, Suat — **Biological Systems Engineering**

* 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

Jiang, Hong — **Computer Science and Engineering**

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

$249,053 — NSF

Liu, Xue — Computer Science and Engineering

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

$471,631 — NSF

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

$474,739 — NSF

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

$344,552 — NSF

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

* STTR: Process Research, Development and Stability Testing of cv-PDG-NLS.
$763,023 — DHHS-NIH through Restoration Genetics Inc
Van Cott, Kevin — Chemical and Biomolecular Engineering

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

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

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

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

Analysis of Viral Factors that Regulate the Bovine Herpesvirus 1 (BHV-1) Latency Reactivation Cycle
$375,000 — USDA-CSREES

Functional Analysis of biCPO
$375,000 — USDA-NRICGP

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

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

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

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

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

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

Kamil, Alan — **Biological Sciences**

Operant Research on Episodic Memory in an Animal Model
$405,625 — NIH-NIMH
Bond, Alan — Biological Sciences

Khattak, Aemal — **Civil Engineering**

* HMEP Public Sector Planning Grant-Commodity Flow Survey

$225,000 — Nebraska Military Department-NEMA

Rilett, Laurence — Civil Engineering

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

Ko, Jeonghan — **Mechanical & Materials Engineering**

* GOALI: Module-Centric Approach to Integrated Adaptation of Assembly Products and Supply Chains

$202,770 — NSF

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

Nebraska EIPM-CS Coordination Program

$669,915	USDA-CSREES
Wright, Robert	Entomology
Bernards, Mark	Agronomy and Horticulture
Ogg, Clyde	Agronomy and Horticulture
Kamble, Shripat	Entomology
Gaussoin, Roch	Agronomy and Horticulture
Baxendale, Fred	Entomology
Streich, Anne	Agronomy and Horticulture
Hygnstrom, Scott	Natural Resources
Bradshaw, Jeffrey	Panhandle Research and Extension Center
Jackson, Tamra	Plant Pathology
Timmerman, Amy	Plant Pathology
Reicher, Zac	Agronomy and Horticulture

Koszewski, Wanda — **Nutrition and Health Sciences**

Growing Healthy Kids through Healthy Communities

$947,093 — USDA-AFRI

Bergman, Gary — Southeast Research and Extension Center

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

Sustainable Energy Options for Rural Nebraska

$500,000	DOE
Hay, Francis	Biological Systems Engineering
Hudgins, Jerry	Electrical Engineering
Isom, Loren	Industrial Agricultural Products Center
Keshwani, Deepak	Biological Systems Engineering
Shelton, David	Northeast Research and Extension Center

Krehbiel, Michelle — **Extension**

Nebraska CYFAR Sustainable Community Project

$635,967	USDA-NIFA
De Guzman, Maria	Child, Youth and Family Studies

Lackey, Susan — **Natural Resources**

Developing Hydrogeologic Databases to Assist in Water Resources Management

$459,600	Lower Elkhorn NRD

Developing Hydrogeologic Databases to Assist in Water Resources Management – UENRD

$203,353	Upper Elkhorn NRD

Langell, Marjorie — **Chemistry**

Metal Oxide Solid Solutions: Macroscopic to Nano-Scale

$449,855	NSF

GAANN Fellowships in Chemistry: Research First at UNL

$396,456	ED

Ledder, Glenn — **Mathematics**

UBM: Research for Undergraduates in Theoretical Ecology (RUTE)

$905,000	NSF
Deng, Bo	Mathematics
Gibson, Robert	Biological Sciences
Loladze, Irakli	Mathematics
Louda, Svata	Biological Sciences

Lee, Jaekwon — **Biochemistry**

* Mechanistic Insights into Copper Metabolism

$844,614	NIH-NIDDK
Kim, Heejeong	Biochemistry

Lenters, John — **Natural Resources**

* Toward a Circumarctic Lakes Observation Network (CALON)

$297,082	NSF

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

Nebraska Network for Beginning Farmers and Ranchers

$202,397	Center for Rural Affairs
Conley, Dennis	Agricultural Economics

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

Answers4Families/
Nebraska Aging and Disability Resource Center
$343,707 Nebraska Department of Health and Human Services

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

Li, Haorong — **Durham School of Architectural Engineering and Construction**

Enterprise Plug n Play Diagnostics
and Optimization for Smart Buildings
$617,013 Sensus Machine Intelligence
Lu, Ying Computer Science and Engineering

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

Li, Xu — **Civil Engineering**

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

Lindquist, John — **Agronomy and Horticulture**

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

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

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

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

Advanced Probes for Characterizations
of Magnetic Nanostructures
$539,998 DoD
Sellmyer, David Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Skomski, Ralph Physics and Astronomy

Lodl, Kathleen — **Extension**

Communicating Capacity Building: Supporting Military Children & Families: An Environmental Scan of Child Care Provider Training

$250,000 — USDA-NIFA through Purdue University

Durden, Tonia — Child, Youth and Family Studies

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

CSR: Small: Energy Management for Heterogeneous MapReduce Data Centers

$432,932 — NSF

Swanson, David — Computer Science and Engineering

Lu, Yongfeng — **Electrical Engineering**

* Fast Deposition of Diamond Films in Open Air for Thermal Management, Wear Resistance, and Corrosion Resistance

$795,389 — DoD-MDA

* Fast Growth of Large Diamond Crystals in Open Air

$275,195 — NSF

* MRI: Development of Multifunctional CARS (Coherent Anti-Stokes Raman Spectroscopy) Imaging System

$266,460 — NSF

Black, Paul — Biochemistry

Chandra, Namas — Mechanical & Materials Engineering

Ducharme, Stephen — Physics and Astronomy

Pannier, Angela — Biological Systems Engineering

Zhou, You — Center for Biotechnology

Low-Temperature Epitaxy of Gallium Nitride Thin Films

$275,338 — NSF

Laser-Assisted Chemical Vapor Deposition of Carbon Nanotubes

$275,000 — Panasonic Boston Laboratory

Synthesis of Crystalline Carbon Nitride by Simultaneous Vibrational and Electronic Excitations

$255,771 — NSF

Coating and Patterning Diamond Films by Laser Resonant Bond Breaking in Polymer Precursors

$259,384 — NSF

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

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

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

Marston, Twig — **Northeast Research and Extension Center**

Extension and Educational Programs and Materials for Small- and Medium-Sized Pork Operations
$258,644 — USDA-NRICGP

Martin, Derrel — **Biological Systems Engineering**

Modeling and Field Experimentation to Determine Effects of Land Terracing-Republican River Basin (CESU)
$515,775 — DOI-BR

McCurdy, Merilee — **Educational Psychology**

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

McQuillan, Julia — **Sociology**

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

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

Moore, Raymond — **Engineering**

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

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

Self-Consolidating Concrete for Cast-in-Place Bridge Components
$449,831 — NAS-TRB

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

Efficient and Sensitive Mining System for G-Protein Coupled Receptors
$577,014 — NIH-NLM

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

Mower, Jeffrey — **Agronomy/Horticulture**

* Tracing Processes of Genome Evolution using Plantaginaceae
$594,190 — NSF

The Geraniaceae Genomes Project: Accelerated and Coordinated Evolution across the Three Plant Genomes
$720,444 — NSF through University of Texas at Austin

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

* Polymer Parts with Tailored Microstructure Distributions Optimized for an Application
$837,503 — DoD-MDA
Tan, Li — Mechanical & Materials Engineering

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

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

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

Nelson, J. Ron — **Special Education and Communication Disorders/ Nebraska Center for Research on Children, Youth, Families and Schools**

* Efficacy of Supplemental Early Vocabulary Connections Instruction for English Language Learners
$274,955 — ED-IES through Washington Research Institute
Bovaird, James — Educational Psychology

Newman, Ian — **Educational Psychology**

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

Nguyen, Lim — **Computer and Electronics Engineering**

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

Nowak, Andrzej — **Civil Engineering/ Nebraska Transportation Center**

SHRP2 R19 Bridges for Service Life beyond 100 years: Service Limit States
$293,118 — Modjeski and Masters
Azizinamini, Atorod — Civil Engineering

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

* Immunologic Consequences of PRRSV Diversity
$273,078 — USDA-NIFA through Kansas State University

Porcine Reproductive and Respiratory Virus: Role of Viral Genes in Virulence/Attenuation
$375,000 — USDA-NRICGP
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
$307,808 — American Heart Association

Pattnaik, Asit — **Veterinary Medicine and Biomedical Sciences**

Porcine Reproductive and Respiratory Syndrome Virus: Modulation of Innate and Acquired Immune Response
$484,245 — USDA-NIFA
Osorio, Fernando — Veterinary Medicine and Biomedical Sciences

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

Nebraska Innovation Center (Whittier) to Renovate and Improve the Whittier School for Use as the Nebraska Innovation Center
$656,600 — HUD

Pegg, Mark — **Natural Resources**

Platte River Catfish Population Dynamics
$530,321 — Nebraska Game and Parks Commission

Environmental Flows in the Niobrara River for Fish and Wildlife
$779,254 — Nebraska Game and Parks Commission

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

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

Perez, Lance — **Electrical Engineering**

* 2012 Math Science Partnership Learning Network Conference
$255,394 — NSF
Heaton, Ruth — Teaching, Learning and Teacher Education
Smith, Wendy — Center for Science, Mathematics and Computer Education

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

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

Peterson, Daniel — **Food Science and Technology**

Adaptive Immune Response to Symbiotic Bacteria as a Mediator of Gut Homeostasis
$379,890 — NIH-NIAID

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

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

Pope, Kevin — **Natural Resources**

Recruitment of Walleye and White Bass in Irrigation Reservoirs
$678,884 — Nebraska Game and Parks Commission

Powell, Larkin — **Natural Resources**

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

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

Powers, Thomas — **Plant Pathology**

* Integrative Taxonomy and Biogeography of Criconematidae
$528,561 — NSF

Pytlik Zillig, Lisa — **Educational Psychology/ Public Policy Center**

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

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

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

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

Qian, Yi — **Computer and Electronics Engineering**

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

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

Qiao, Wei — **Electrical Engineering**

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

$214,754 — NSF

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

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

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

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

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

Raikes, Helen — **Child, Youth and Family Studies**

* Evaluation of Early Steps to School Success

$605,303 — Save the Children

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

High-Spin Nitroxide Diradical for Biomedical Imaging Applications

$421,174 — NIH-NIBIB
Rajca, Suchada — Chemistry

Stable High-Spin Polyradicals & Chiral Pi-Conjugated Systems

$508,191 — NSF

Rajurkar, Kamlakar — **Industrial and Management Systems Engineering**

Theoretical and Experimental Study of Debris Removal & Tool Wear in Micro-EDM

$250,000 — NSF

Ramamurthy, Byravamurthy — **Computer Science and Engineering**

Mobility First: A Trustworthy Mobility-Centric Architecture for the Future Internet

$300,000 — NSF

Dynamic Optimized Advance Scheduling of Bandwidth Demands

$449,976 — DOE

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
Hunter, Amber — Student Affairs
Woodward, Gordon — Mathematics

REU Site: Nebraska REU in Applied Math

$324,492 — NSF
Tenhumberg, Brigitte — Biological Sciences

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
Faller, Ron	Midwest Roadside Safety
Lechtenberg, Karla	Midwest Roadside Safety
Sicking, Dean	Midwest Roadside Safety

Testing of a New Guardrail Post for the Midwest Guardrail System

$237,901	Roll Form Group
Faller Ronald	Midwest Roadside Safety

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

$415,471	Nebraska Department of Roads
Bielenberg, Robert	Midwest Roadside Safety Facility
Faller, Ron	Civil Engineering/ Midwest Roadside Safety Facility
Lechtenberg, Karla	Midwest Roadside Safety Facility
Sicking, Dean	Civil Engineering/ Midwest Roadside Safety Facility

Midwest States Regional Pooled Fund Program

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

Rilett, Laurence — **Civil Engineering**

Nebraska Transportation Center Seed Funding

$300,000	Nebraska Department of Roads

Intelligent Transportation System Deployment Project

$831,942	Nebraska Department of Roads
Jones, Elizabeth	Civil Engineering
Khattak, Aemal	Civil Engineering

Riveros Iregui, Diego — **Natural Resources**

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

$480,000	USDA-NIFA
Li, Xu	Civil Engineering

Robertson, Brian — **Mechanical & Materials Engineering/ Nebraska Center for Materials and Nanoscience**

Spintronic Devices Enabled by Semiconducting Boron Carbide

$299,998	NSF
Adenwalla, Shireen	Physics and Astronomy/Nebraska Center for Materials and Nanoscience
Dowben, Peter	Physics and Astronomy/Nebraska Center for Materials and Nanoscience

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

II-EN: Infrastructure Support for Software Testing Research

$345,985 — NSF

Ruser, Kevin — **Law**

UNL-UNAM Rule of Law Partnership

$449,384 — American Council on Education-HED

Bennett, Robert — Law
Lenich, John — Law
Lepard, Brian — Law
Lyons, William — Law
Moberly, Richard — Law
Pierce, Glenda — Law
Poser, Susan — Law
Schmidt, Steven — Law
Schopp, Robert — Law
Willborn, Steven — Law

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

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

$494,516 — DOJ-National Institute of Justice

Ramirez, Juan — Public Policy Center
Rosenbaum, David — Economics/Public Policy Center
Tomkins, Alan — Law/Public Policy Center

Building Knowledge Discovery & Information Fusion Tools for Collaborative Systems to Adaptively Manage Uncertain Hydrological Resources

$651,816 — NSF

Chen, Xun-Hong — Natural Resources
Soh, Leen-Kiat — Computer Science and Engineering
Tomkins, Alan — Law/Public Policy Center
Zellmer, Sandra — Law

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

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

$900,000 — DOE

Nanodevice for Digital Imaging of Palpable Structure at Human-Finger Resolution for Clinical Breast Examination

$377,552 — NIH-NIBIB

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

* HCC: Large: Large-Scale Human-Centered Coordination Systems to Support Interdependent Tasks in Context

$267,936 — NSF

Sayood, Khalid — **Electrical Engineering**

* ATD: Algorithms for the Analysis of Microbiomes

$246,367 — NSF

Scalora, Mario — **Psychology**

Post-Secondary Institutions Safety Threat Assessment Technical Assistance Center

$535,537 — DHS through Nebraska Military Department-NEMA

Yardley, Owen — UNL Police

Bulling, Denise — Public Policy Center

Scheffler, Marilyn — **Special Education and Communication Disorders**

Project RTI: Building Capacity Together to Implement Response to Intervention

$800,000 — ED

Sanger, Dixie — Special Education and Communication Disorders

Project Re-entry: Preparing Speech-Language Pathologists to Serve Students with Traumatic Brain Injury

$800,000 — ED

Hux, Karen — Special Education and Communication Disorders

Schubert, Mathias — **Electrical Engineering**

STTR: THz Ellipsometer for Reflection-Mode Signature Acquisition

$225,000 — J.A. Woollam Company

MRI: Development of an Optical Hall Effect Instrumentation for Non-Contact Nanostructure Electrical Characterization

$299,915 — NSF

Lu, Yongfeng — Electrical Engineering

Han, Ming — Electrical Engineering

Schubert, Eva — Electrical Engineering

Binek, Christian — Physics and Astronomy

Ducharme, Stephen — Physics and Astronomy

Tsymbal, Evgeny — Physics and Astronomy

Shield, Jeffrey — Mechanical & Materials Engineering

Hofmann, Tino — Electrical Engineering

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

Studies of Artificially Structured Composite Magnets

$948,000 — DOE

Shadwick, Bradley — **Physics and Astronomy**

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

$342,000 — NSF

Kalmykov, Serguei — Physics and Astronomy

Wavebreaking and Particle Trapping in Collisionless Plasmas

$561,840 — DOE

Shank, Nancy — **Public Policy Center**

SHNBHIN Improving Access Health IT

$385,528 — Health Partners Initiative

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

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

$499,985 — DOT-FRA

Hempel, Michael — Computer and Electronics Engineering

Shearman, Robert — **Agronomy and Horticulture**

Buffalograss Breeding, Evaluation and Management for Golf Course

$300,000 — U. S. Golf Association

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

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

$544,500 — USDA-CSREES

Feehan, Kelly — Northeast Research and Extension Center

Franti, Thomas — Biological Systems Engineering

Rodie, Steven — Agronomy and Horticulture

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

* A Meta-Analysis of Parent Involvement Interventions and Family-School Partnerships' Effects on Student Outcomes

$699,997 — ED-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

Sicking, Dean — **Civil Engineering**

Adaptation of the SAFER Barrier
for Roadside and Median Applications

$990,000 — Nebraska Department of Roads
Faller, Ron — Civil Engineering/ Midwest Roadside Safety Facility
Reid, John — Mechanical & Materials Engineering

Enhancement of Research Infrastructure
at the Midwest Roadside Safety Facility

$519,000 — Nebraska Department of Roads

Siegfried, Blair — **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

Simmons, Mark — **Southeast Research and Extension Center**

Operation Military Kids

$359,211 — USDA-CSREES through Kansas State University

Sleight, Weldon — **Nebraska College of Technical Agriculture**

Biomass Energy System

$360,000 — Nebraska Environmental Trust

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

$200,000 — USDA-NASS
Olson, Kristin — Sociology/Gallup Research Center

Snow, Gregory — **Physics and Astronomy**

The Luminosity Measurement
for the DZERO Experiment at Fermilab

$410,352 — DOE
Bloom, Kenneth — Physics and Astronomy
Claes, Daniel — Physics and Astronomy
Dominguez, Aaron — Physics and Astronomy

GAANN Fellowships for Physics at UNL

$656,410 — ED
Claes, Daniel — Physics and Astronomy
Dominguez, Aaron — Physics and Astronomy
Uiterwall, Cornelis — Physics and Astronomy
Batelaan, Herman — Physics and Astronomy
Gay, Timothy — Physics and Astronomy
Adenwalla, Shireen — 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

iLOG: Embedding & Validating Empirical Usage Intelligence in Learning Objects

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

Soundararajan, Madhavan — **Biochemistry**

The Hunt for Green Every April: Factors Affecting Fitness in Switchgrass

$289,424	USDA-ARS

Spalding, Roy — **Agronomy and Horticulture**

Impact of 30,000 Gallon Ethanol Release on Equus Beds Aquifer beneath South Hutchinson, Kansas

$204,390	Nebraska Ethanol Board
Spalding, Mary	Natural Resources

Effectiveness of Irrigated Crop Management Practices in Reducing Groundwater Nitrate Contamination

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

Spangler, Matthew — **Animal Science**

* National Program for Genetic Improvement of Feed Efficiency in Beef Cattle

$398,937	USDA-NIFA through University of Missouri

Specht, James — **Agronomy and Horticulture**

Development and Analysis of Nested Association Mapping Populations in Soybean

$213,384	USDA-ARS

Stansbury, John — **Civil Engineering**

Feasibility of Integrating Natural and Constructed Wetlands in Roadway Drainage System Design

$255,562 — Nebraska Department of Roads

Moussavi, Massoum — Civil Engineering

Zhang, Tian — Civil Engineering

Starace, Anthony — **Physics and Astronomy**

Strong Field & Ultrafast Atomic and Molecular Processes

$279,000 — NSF

Staswick, Paul — **Agronomy and Horticulture**

Deciphering Novel Signaling Roles for Amino Acid Conjugates of Jasmonic Acid

$249,969 — NSF

Steadman, James — **Plant Pathology**

A Search for Improvement & Resistance in Common Bean through Multi-Site Screening & Pathogen Characterization

$261,794 — USDA-ARS

Stentz, Terry — **Durham School of Architectural Engineering and Construction**

Analytic Study of Acute Extremity Lacerations in Meat Packing

$616,052 — Harvard School of Public Health

Stockton, Matthew — **West Central Research and Extension Center**

Whole-Farm Economic Biological Stochastic Simulation Model of Small to Medium Cow-calf Firms with Research, Teaching and Extension Modules

$499,740 — USDA-NRICGP

Storz, Jay — **Biological Sciences**

The Mechanistic Basis of Parallel Evolution: Functional Analysis of Hemoglobin Polymorphism in Andean Ducks

$378,104 — NSF

Moriyama, Hideaki — Biological Sciences/Center for Biotechnology

Stowell, Richard — **Biological Systems Engineering**

Air Quality Extension & Education: Enhanced Learning Opportunities for Addressing Air Quality Issues in Animal Agriculture

$498,562 — USDA-NRICGP

Livestock Producer Environmental Assistance Project

$600,000 — Nebraska Environmental Trust

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**

Improving the Safety of Prepared, But Not Ready-To-Eat Microwavable Foods through Heat Transfer and Pathogen Destruction Modeling

$599,985 — USDA-CSREES
Jones, David — Biological Systems Engineering
Thippareddi, Harshavardhan — Food Science and Technology

Svoboda, Mark — **Natural Resources**

NIDIS Portal Content Development and Help Desk Support

$497,496 — DOC-NOAA

Integrating Enhanced GRACE Water Storage Data into the U.S. and North American Drought Monitors

$224,991 — NASA-Goddard Space Flight Center
Wardlow, Brian — Natural Resources
Fuchs, Brian — Natural Resources
Scott, Soren — Natural Resources

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

Open Science Grid Consortium

$561,000 — NSF through University of Wisconsin-Madison

Takacs, James — **Chemistry**

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

$907,820 — NIH-NIGMS

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

* Molecularly Intercalated Nanoflakes: A Supramolecular Alloy for Strong Energy Absorption

$349,088 — NSF
Zeng, Xiao Cheng — Chemistry

Self-Organized Nanolayers for Organic Thin-Film Transistors

$387,463 — NSF
Zeng, Xiao Cheng — Chemistry

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

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

$500,000 — USDA-NIFA
Baumert, Joseph — Food Science and Technology
Hutkins, Robert — Food Science and Technology
Keshwani, Deepak — Biological Systems Engineering
Subbiah, Jeyamkondan — Biological Systems Engineering/ Food Science and Technology

Primary and Secondary Prevention of Peanut and Tree Nut Allergy

$275,000 — USDA-ARS
Baumert, Joseph — Food Science and Technology

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

$261,000 — Almond Board of California

Thippareddi, 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

FIBR: Linking Genes to Ecosystems

$477,335 — NSF through University of California-Riverside

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

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

$283,280 — NSF
Bornstein, Brian — Psychology/Public Policy Center
Herian, Mitch — Public Policy Center
Pytlik Zillig, Lisa — Center for Instructional Innovation/ Public Policy Center

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

Ultrasonic Scattering for Measurement of Longitudinal Rail Stress

$461,999 — DOT-FRA

Development of Improved Product Performance through Optimization and Modeling of Engineering Materials, Processing, and Function

$408,516 — Brenco/Amsted Industries
Shield, Jeffrey — Mechanical & Materials Engineering

Tyre, Richard — **Natural Resources**

Quantifying Uncertainty in Missouri River Adaptive Management Processes

$410,858 — DOI-GS
Allen, Craig — Natural Resources

Uiterwaal, Cornelis — **Physics and Astronomy**

REU Site: Optics and Laser Physics

$246,450 — NSF
Batelaan, Herman — Physics and Astronomy

Molecules and Intense Light in a Photodynamical Test Tube

$440,000 — NSF

Van Cott, Kevin — **Chemical and Biomolecular Engineering**

Structural Characterization of Recombinant Glycoproteins

$250,000 — Inspiration Biopharmaceuticals

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

Irrigation Management with Limited Water:
A Farm Education Program

$287,080 — DOI-BR

Martin, Derrel — Biological Systems Engineering
Corr, Alan — West Central Research and Extension Center
Melvin, Steven — West Central Research and Extension Center

Van Tassell, Larry — **Agricultural Economics**

* Developing Economic Improvements through
Cooperative Businesses in Rural Nebraska

$224,995 — USDA-RD

Burkhart-Kriesel, Cheryl — Panhandle Research and Extension Center
Hancock, Connie — Panhandle Research and Extension Center
Henneman, Alice — Southeast Research and Extension Center

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

AF: Small: Studies in Nonuniformity,
Completeness and Reachability

$272,031 — NSF

Velipasalar, Senem — **Electrical Engineering**

CSR-DMSS, SM: Cooperative Activity Analysis
in Wireless Smart-Camera Networks (Wi-SCaNs)

$300,000 — NSF

Gursoy, Mustafa — Electrical Engineering

Verma, Shashi — **Natural Resources**

Second Generation Biofuels:
Carbon Sequestration and Life Cycle Analysis

$500,000 — DOE

Arkebauer, Timothy — Agronomy and Horticulture
Cassman, Kenneth — Agronomy and Horticulture
Liska, Adam — Biological Systems Engineering

Wagner, William — **Biological Sciences**

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

$523,414 — NSF

Walia, Harkamal — **Agronomy and Horticulture**

* Early Seed Development under Stressful Environments

$557,708 — NSF

Wang, Dong — Statistics
Southeast Research and Extension Center

Walter, Jens — **Food Science and Technology**

* Application of a Novel Synbiotic to Modulate the Human Gut Microbiota and Improve Health in Obese Adults

$489,699 — USDA-NIFA

Hutkins, Robert — Food Science and Technology

* Quantitative Evaluation of the Colonization and Persistence of Bifidobacterium longum AH1206 in the Gastrointestinal Tract and its Tolerance by Human Subjects

$204,340 — Mead Johnson Nutrition

Hutkins, Robert — Food Science and Technology

Wang, Dong — **Statistics**

Expanding the Scope of Association Mapping in Important Crop Species with Methodology Development in Statistics

$282,000 — USDA-AFRI

Eskridge, Kent — Statistics

Baenziger, P. Stephen — Agronomy and Horticulture

Dweikat, Ismail — Agronomy and Horticulture

Wang, Jun — **Earth and Atmospheric Sciences**

* Evaluate and Enhance the VIIRS Aerosol EDRs for Air Quality and Public Health Applications

$372,894 — NASA

AERONET Skylight Retrievals Using Polarimetric Measurements: Toward Physically Consistent Validation of APS Aerosol Products

$443,464 — NASA

A Combined EOS Data and GEOS-Chem Modeling Study of the Direct Radiative Forcing of Volcanic Sulfate Aerosols

$359,638 — NASA

Regional Air Quality and Climate Impact of Biomass-Burning Aerosols from Central America: An Analysis with EOS Data and Numerical Models

$300,676 — NASA

Weber, Karrie — **Biological Sciences**

Feammox - A New Pathway for Nitrogen Loss from Terrestrial Ecosystems: REU

$202,210 — NSF

Weeks, Donald — **Biochemistry**

LiT: Novel Bicarbonate Transporters in Chlamydomonas CO2-Concentrating Mechanism

$553,000 — NSF

Bailey, Cheryl — Biochemistry

Wegulo, Stephen — **Plant Pathology**

Regional Distribution and Host Range of Triticum Mosaic Virus, an Emerging Virus of Wheat, and Its Potential Impact on Wheat Production

$621,284 — USDA-NIFA

Baenziger, P. Stephen — Agronomy and Horticulture

Hein, Gary — Doctor of Plant Health Program

Whitbeck, Les — **Sociology**

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

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

* A Lakota Type 2 Diabetes Mellitus Prevention

$231,359 — Aberdeen Area Tribal Chairmen's Health Board

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

BAF: an Intrinsic Host Defense Responsive to Foreign DNA

$270,000 — NIH-NIAID

Wiegand, Roger — **Mathematics**

GAANN Fellowship Program: Mathematics at UNL

$525,128 — ED

Lewis, Jim — Mathematics

Walker, Judy — Mathematics

Meakin, John — Mathematics

Bellows, Laurie — Graduate Studies

Wiener, Richard — **Psychology**

* Objectification, Affective Forecasting, and Sexual Harassment

$300,000 — NSF

Gervais, Sarah — Psychology

REU Site: Psychology and Law

$200,000 — NSF

Self-referencing, Social Identity & Judgments of Sexual Harassment

$302,364 — NSF

Wilson, Richard — **Plant Pathology**

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

$500,955 — NSF

Wilson Jr., Robert — **Panhandle Research and Extension Center**

Assessing the Long Term Viability of Roundup Ready Technology as a Foundation for Cropping Systems

$945,000 — Monsanto Co.

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

* Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center

$219,472 — NIH-NIMH through UNMC

Xiang, Shi-Hua — **Biological Sciences**

Mucosal Delivery and Retention of Anti-HIV Agents Using Lactobacillus

$611,119 — Bill & Melinda Gates Foundation

Xu, Lisong — **Computer Science and Engineering**

NeTS: Small: Internet Congestion Control Census

$450,000 — NSF

Deogun, Jitender — Computer Science and Engineering

Lu, Ying — Computer Science and Engineering

Yang, Yiqi — **Textiles, Clothing and Design**

Resistance of Sulfur Dyed Fabrics to Oxidative Bleaching & Acidic Tendering: Improvement & Application

$300,618 — Procter & Gamble

Yoder, Ronald — **Biological Systems Engineering**

Enhancing the Value of Water through Management Education

$225,000 — Nebraska Department of Natural Resources

Nebraska AgrAbility

$522,000 — 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

Zempleni, Janos — **Nutrition and Health Sciences**

Biotin Sensing and Chromatin Remodeling by Holocarboxylase Synthetase

$800,742 — NIH-NIDDK

Zera, Anthony — **Biological Sciences**

* Nutritional Physiology of Life History Allocation Trade-Offs

$331,500 — NSF

Enzymatic and Molecular Bases of Trade-Offs in Lipid Metabolism that Underlie Life History Trade-Off

$441,682 — NSF

Harshman, Lawrence — Biological Sciences

Zhang, Tian — **Civil Engineering**

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

$300,000 — NSF

Zlotnik, Vitaly — **Earth and Atmospheric Sciences**

Mechanisms Producing Variation in Lake Salinity in Dune Environments: Nebraska Sand Hills

$219,958 — NSF

Fritz, Sherilyn — Earth and Atmospheric Sciences

Swinehart, James — Natural Resources

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.

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

EAGER: Plant Chromatin Remodeling in Response to the Bacterial Pathogen Pseudomonas syringae

$299,929 — NSF

Avalos, George — **Mathematics**

Analysis, Computation and Control of Coupled Partial Differential Equation Systems

$182,898 — NSF

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

Isolation and Verification of Mycobacterium tuberculosis Mutant Strains

$122,532 — NIH-NIAID through Texas A&M University

Barletta-Chacon, Ofelia — Veterinary Medicine and Biomedical Sciences

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

Genetic Control over the Gut Microbiome Composition

$997,732 — NIH-NIDDK

Walter, Jens — Food Science and Technology

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

Bevins, Rick — **Psychology**

Acquired Appetitive Properties of Nicotine

$533,413 — NIH-NIDA

Black, Paul — **Biochemistry**

Fatty Acid Transport in Eukaryotes

$627,878 — NIH-NIGMS

DiRusso, Concetta — Nutrition and Health Sciences/Biochemistry

Blum, Paul — **Biological Sciences**

Metabolic Engineering Studies of Extreme Thermoacidophily

$260,406 — NIH through North Carolina State University

Cartwright, Tamara — **Center on Children, Families and the Law**

NE Management Information System

$81,314 — Nebraska Management Information System

Centurion, Martin — **Physics and Astronomy**

Ultrafast Electron Diffraction from Aligned Molecules

$600,000 — DOE

Chandra, Namas — **Engineering**

Factors that Facilitate or Inhibit Enrollment of Domestic Engineering PhD Students: A Mixed Methods Study

$149,851 — NSF
Weissinger, Ellen — Educational Psychology
Smith, Michelle Howell — Graduate Studies

Crabtree, Kay — **Biological Sciences/ Nebraska Center for Virology**

Epidemiology of HHV-8 Transmission in Lusaka, Zambia

$63,468 — NIH-NIAID
Wood, Charles — Biological Sciences/ Nebraska Center for Virology

Curto, Carina — **Mathematics**

Stimulus Representation and Spontaneous Activity in Recurrent Networks

$109,635 — NSF

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

World of Viruses Supplement to NIH-NCRR Grant

$200,000 — NIH-NCRR
Cottingham, Ian — Computer Science and Engineering
Dugas, William — University Television
Wagler, Adam — Journalism and Mass Communications
Angeletti, Anisa — Biological Sciences

Dominguez, Aaron — **Physics and Astronomy**

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

$263,430 — NSF through University of Kansas Center for Research
Bloom, Kenneth — Physics and Astronomy

Gay, Timothy — **Physics and Astronomy**

Polarized Electron Physics

$610,000 — NSF

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

Veterans Commissioning Training Program for Commercial-Healthcare Facilities

$405,741 — DOE
Shen, Zhigang — Durham School of Architectural Engineering and Construction

Building a Green Economy: Nebraska Workforce Development in New and Emerging Industries

$1,253,000 — Nebraska Department of Labor
Norton, Terri — Durham School of Architectural Engineering and Construction
Shi, Jonathan — Durham School of Architectural Engineering and Construction

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

Hanson, Paul — **Natural Resources**

REU Site: Dune Undergraduate Geomorphology and Geochronology Project in Wisconsin
$45,331 — NSF

Linking Loess Landforms and Eolian Processes
$45,730 — NSF

Harris, Steven — **Plant Pathology/ Center for Plant Science Innovation**

Evolutionary Genetics of Morphogenetic Regulatory Systems in Fungi
$392,796 — NSF

Harshman, Lawrence — **Biological Sciences**

Nebraska Research Network in Functional Genomics INBRE
$242,092 — NIH through UNMC

Hartke, Stephen — **Mathematics**

Computerized Search for Combinatorial Objects
$220,000 — NSF

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

Development of a Next Generation PA Vaccine, dmPA7909
$1,507,529 — Industry client

Jorgensen, Stacia — **Sociology**

Communities Putting Prevention to Work
$134,806 — Douglas County Health Department
McQuillan, Julia — Sociology

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

Phase II Coaching Support Evaluation
$68,216 — Nebraska Children and Families Foundation

Li, Qingsheng — **Biological Sciences**

Cellular Innate Activation as a Tactic to Prevent HIV-1 Transmission
$38,514 — NIH-NIAID through Wistar Institute

Li, Yusong — **Civil Engineering**

Fate and Transport of Metal-Based Nanoparticles in the Subsurface
$122,572 — NSF through Tufts University

Lubben, Bradley — **Agricultural Economics**

2009 Trade Adjustment Assistance for Farmers
$855,000 — USDA-NIFA through University of Minnesota

Manderscheid, David — **Arts and Sciences**

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

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

Nebraska Rural Health and Primary Care

$112,000	Nebraska Department of Health and Human Services
Scholz, Gordon	Community and Regional Planning

Norton, Terri — **Durham School of Architectural Engineering and Construction**

City Owned Facility Assessment and Energy Audit Component

$160,871	City of Omaha
Schwer, Avery	Durham School of Architectural Engineering and Construction

Nowak, Andrzej — **Civil Engineering**

IRES Poland: Experience in Civil Infrastructure Systems

$144, 108	NSF
Rilett, Laurence	Civil Engineering
Szerszen, Maria	Civil Engineering

Othman, Shadi — **Biological Sciences**

Regenerative Elastography:
Monitoring Soft Tissue Reconstruction

$144,900	NIH-NIBIB

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

Construction of a Nanoscience Metrology Facility

$6,904,993	DOC-NIST

Nebraska Center for Virology Facility Expansion

$8,000,000	NIH-NCRR
Wood, Charles	Biological Sciences/ Nebraska Center for Virology

Powers, Robert — **Chemistry**

Revealing Functions
for Newly Discovered Proteins by FAST-NMR

$375,670	NIH-NIAID
Cerny, Ronald	Chemistry
Hage, David	Chemistry

Qiao, Wei — **Electrical Engineering**

A Nationwide Consortium of Universities
to Revitalize Electric Power Engineering Education
by State-of-the-Art Laboratories

$24,999 — DOE through University of Minnesota
Asgarpoor, Sohrab — Electrical Engineering
Hudgins, Jerry — Electrical Engineering
Patterson, Dean — Electrical Engineering
Qu, Lilyan — Electrical Engineering

Online Nonintrusive Condition Monitoring
and Fault Detection for Wind Turbines

$380,398 — DOE
Hudgins, Jerry — Electrical Engineering

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

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

$2,225,720 — NSF through Montana State University/ Northern Illinois University/ University of California, Santa Cruz

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

$2,684,370 — NSF
Harwood, David — Earth and Atmospheric Sciences
Fischbein, Steven — Antarctic Geological Drilling Program

Rosenbaum, David — **Economics**

An Economic Evaluation of the Benefits of Nebraska's
Weatherization Program

$499,469 — Nebraska Energy Office
DeKraai, Mark — Psychology/Public Policy Center
Thompson, Eric — Bureau of Business Research

Energy Loan Program Evaluation

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

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

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

$391,056 — NSF

Schubert, Mathias — **Electrical Engineering**

Effects of Polarization Fields and
Surface Charge Layers on p-type Conductivity in In(Ga)N

$231,857 — NSF

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

MRI-R2: Acquisition of FEG TEM/STEM for Materials and Nanotechnology Research and Education

$1,300,000 — NSF

Cheung, Chin Li — Chemistry
Robertson, Brian — Mechanical & Materials Engineering
Schubert, Eva — Electrical Engineering
Shield, Jeffrey — Mechanical & Materials Engineering

High Energy Permanent Magnets for Hybrid Vehicles and Alternative Uses

$674,998 — DOE through University of Delaware

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

Shank, Nancy — **Public Policy Center**

Health Information Technology Extension Program (HIT EP) Local Workforce Development Coordination

$285,861 — CIMRO of Nebraska

Shield, Jeffrey — **Mechanical & Materials Engineering**

REU Site: Undergraduate Research Opportunities in Nanomaterials and Nanoscience at the University of Nebraska–Lincoln

$360,000 — NSF

Enders, Susan — Mechanical & Materials Engineering

Subramanian, Anuradha — **Chemical and Biomolecular Engineering**

Design and Evaluation of Ultrasound Stimulation-Aided Bioreactor Configurations

$533,941 — NIH-NCRR

Turner, Joseph — Mechanical & Materials Engineering

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

Free-Standing All-Nanoparticle Thin Fibers: A Novel Building Block for Organic Photovoltaic Applications

$300,002 — NSF

Toundykov, Daniel — **Mathematics**

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

$96,436 — NSF

Tsymbal, Evgeny — **Physics and Astronomy**

FRG: Switchable Two-Dimensional Materials at Oxide Hetero-Interfaces

$210,000 — NSF through University of Wisconsin-Madison

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

Sonolysis in Acute Coronary Syndromes

$64,073 — NIH-NIBIB through UNMC

Weidner, Theodore — **Facilities Management**

UNL Energy Efficient Building Retrofits
$347,050 — Nebraska Energy Office

Scott Engineering Center Convert
Constant-Volume Dual Duct System to Variable-Volume
$247,910 — Nebraska Energy Office

Othmer Hall Room Occupancy Sensors
and Room Controls Upgrade
$145,990 — Nebraska Energy Office

Beadle Center, Bessey Hall, and Home Economics Buildings
Upgrade Fluorescent Lights
$136,810 — Nebraska Energy Office

UNL Hamilton Hall Energy Efficient Retrofits
$92,240 — Nebraska Energy Office

Whitbeck, Les — **Sociology**

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

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

Immunofocusing for Kaposi's Sarcoma-Associated
Herpesvirus Neutralizing Epitopes
$990,796 — NIH-NCI

Nebraska Center for Virology T1
$998,839 — NIH-NCRR

Vaccination Against Mucosal HIV Clade C Transmission
$251,363 — NIH-DFCI

Nebraska Center for Virology
$398,981 — NIH-NCRR

Programs in HIV and AIDS-Associated Diseases/Malignancies
$172,800 — NIH-FIC

Zhang, Shunpu — **Statistics**

A Computational Genotyping System
for Improved Influenza Surveillance
$203,488 — NIH through UNO

Zhang, Luwen — **Biological Sciences/ Nebraska Center for Virology**

Modulation of Apoptosis by IRF-4 in EBV Transformation
$545,682 — NIH-NCI

Early Career Awards

Active awards, July 1, 2011-June 30, 2012
*** Indicates new in 2011-2012**

NSF CAREER Grants

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

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

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

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

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

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

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

Dominguez, Aaron
Physics and Astronomy
Superior Silicon Tracking & Discovery as CMS & D0
$550,000 NSF

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

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

Gursoy, Mustafa
Electrical Engineering
CAREER: Energy-Efficient Wireless Communications under Channel Uncertainty
$400,000 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

Kim, Yong Rak
Civil Engineering
Research & Education on Advanced Multiscale Modeling-Analysis of Roadway Materials, Mixtures, & Infrastructure Systems
$402,044 NSF

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

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

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

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

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

K Awards

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

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

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

Young Investigator Research Program (YIP)

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

Cohen, Myra
Computer Science and Engineering
Just-Enough-Testing: Adaptive Targeted Testing of Software Product Lines
$316,551 DoD-AFOSR

Arts and Humanities Awards
$50,000 or more

Active awards, July 1, 2011-June 30, 2012
*** Indicates new in 2011-2012**

Awakuni-Swetland, Mark — **Anthropology/Ethnic Studies**

Omaha and Ponca Digital Dictionary

$348,800 — NEH

9/1/08 – 8/31/12

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

Mark Awakuni-Swetland, assistant professor of anthropology, and colleagues are creating a comprehensive Omaha and Ponca digital dictionary that will be available online for native communities, students, researchers and the public. The National Endowment for the Humanities funds this work through a joint NEH-National Science Foundation-Smithsonian Institution "Documenting Endangered Languages" initiative. It's also a "We the People" project, a special NEH recognition for model projects advancing the study, teaching and understanding of American history and culture. This project will provide extensive information on the Omaha and Ponca language and will be far more robust and usable than existing resources.

Engen-Wedin, Nancy — **Teaching, Learning and Teacher Education/Lied Center for Performing Arts**

The Teaching Artist Initiative (Nebraska)

$50,000 — Dana Foundation

1/1/09 – 8/31/11

Nancy Engen-Wedin, lecturer in the Department of Teaching Learning and Teacher Education and ArtsREACH coordinator with the Lied Center for Performing Arts, is using funding from the Dana Foundation to support the Nebraska Teaching Artist Initiative. This program helps community and teaching artists plan artist residencies for K-12 students in Nebraska's rural school districts.

Graybill, Andrew — History

A Mixture of So Many Bloods:
A Family Saga of the American West

$50,400 — NEH
8/1/10 – 7/31/11

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

Kooser, Ted — English

American Life in Poetry Project

$236,800 — Poetry Foundation
1/1/05 – 12/31/11

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

Moeller, Aleidine — **Teaching, Learning and Teacher Education**

* Chinese Academy

$84,778 — NSA

Hurlbut, Sherri — Teaching, Learning and Teacher Education

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

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

* An Integrated Guide to Walt Whitman's Literary Manuscripts

$275,000 — NEH

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

The Walt Whitman Archive (whitmanarchive.org), with support from the National Endowment for the Humanities, is using Encoded Archival Description (EAD) to create item-level finding guides to the more than seventy individual repositories holding Walt Whitman's prose manuscripts. Each description is linked to high-quality digital images of the manuscript material and dynamically joined in an integrated guide. Under the direction of Kenneth Price, professor of English and Hillegass University Professor of 19th Century American Literature, the archive has developed a system that creates a relationship between the manuscript and the final manifestation of the prose draft, most often the version Whitman published in his collection, *Complete Prose Works* (1892). Creating EAD records for Whitman's prose manuscripts will provide unprecedented documentation of and access to the literary manuscripts of a major literary figure. The end result will be an overarching guide to a virtual collection of all of Whitman's manuscripts, organized not around their physical location but according to the conceptual work to which they contribute.

Walt Whitman and Reconstruction

$86,142 National Historical Publications
9/1/10 – 8/31/11 and Records Commission

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

Seefeldt, William

History/Center for Digital Research in the Humanities

William Cody Research Project

$131,374 Buffalo Bill Historical Center
7/1/09 – 8/31/12

William Seefeldt, assistant professor of history, has received support from the Buffalo Bill Historical Center to develop a series of thematic digital datasets that can be used to provide historical context for the center's Cody Papers project. The digital datasets will include the rosters of the various Wild West shows from published programs and other business records and biographical sketches of the participants, including the Show Indians. They will be marked and encoded for inclusion in the larger Buffalo Bill digital archive collection hosted by BBHC. Other research projects may include a database containing encoded full-text transcriptions of newspaper coverage of the tour stops throughout North America and Europe and a geospatial database of Cody's travels and residences throughout his lifetime that could be used to create maps and visualizations by date or location.

Shear, Donna **University of Nebraska Press**

Recovering Languages and Literacies of the Americas:
A Collaborative Initiative

$781,900 Andrew W. Mellon Foundation
1/3/11 – 11/30/14

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

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

Railroads and the Making of Modern America—
Tools for Spatio-Temporal Correlation, Analysis and Visualization

$99,493 NEH
1/1/10 – 8/31/11
Ian Cottingham Computer Science and Engineering
Stephen Scott Computer Science and Engineering

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

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.

Major Railroad Archival Collections
$208,481 — Council on Library and Information Resources
12/16/10 – 12/31/13
Bolin, Mary — University Libraries
Mering, Margaret — University Libraries

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

centerNet: Cyberinfrastructure for Digital Humanities
$50,000 — NEH
9/1/09 – 8/31/12

The National Endowment for the Humanities also is supporting construction of a technical infrastructure and institutional framework that will enable centerNet to play a vital role in developing both national and international cyberinfrastructure and become a stable, self-supporting organization. Through centerNet, digital humanities centers can collaborate and maximize their capacity for sparking further innovation in the digital humanities.

National Digital Newspaper Program: Nebraska

$563,012 NEH

7/1/07 – 8/31/12

Wunder, John — Journalism and Mass Communications

Mering, Margaret — Center for Digital Research in the Humanities

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

Katherine Walter, who co-directs UNL's Center for Digital Research in the Humanities, leads the Nebraska Digital Newspapers Project, through which about 100,000 pages of Nebraska newspapers from 1880 through 1910 will be digitized for inclusion in the Library of Congress' national "Chronicling America" website. UNL Libraries is partnering with the College of Journalism and Mass Communications and the Nebraska State Historical Society on this "We the People" grant. Nebraska is one of nine states selected in the early phases of this project, which eventually will include all 50 states. "We the People" grants recognize model projects that advance the study, teaching and understanding of American history and culture.

Winkle, Kenneth — History

Civil War Washington Collaborative Research

$220,000 NEH

7/1/10 – 6/30/13

Lawrence, Susan — History

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

History professor Kenneth Winkle received a three-year, $220,000 collaborative research grant from the National Endowment for the Humanities to expand digital research on Civil War-era Washington, D.C., especially its pivotal role in the antislavery and civil rights movements. The Civil War Washington project examines the war's impact on the nation's capital. The grant received "We the People" designation, which recognizes projects that advance the study, teaching and understanding of American history and principles. The grant will enable researchers to study how race, slavery and emancipation changed the capital a century and a half ago. Researchers will investigate how African Americans living in Washington during the Civil War gained their freedom, won the fight for the Union and against slavery and achieved legal equality.

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

Active awards, July 1, 2011-June 30, 2012
*** Indicates new in 2011-2012**

Ducey, Carolyn — **Textiles, Clothing and Design/ International Quilt Study Center**
The Ardis and Robert James Collection Conservation
$25,000 — Institute of Museum and Library Services

Elias Rowley, Kristen — **University of Nebraska Press**
Literary Publishing at the University of Nebraska Press
$20,000 — NEA

Engen-Wedin, Nancy — **Teaching, Learning and Teacher Education/Lied Center for Performing Arts**
Lied Center Community Engagement Touring Grant – MAAA
$15,000 — Mid-America Arts Alliance

Hanson, Marin — **International Quilt Study Center**
Quilt Index Internationalization Collaborative Planning
$9,879 — Michigan State University
Crews, Patricia — International Quilt Study Center

Jacobs, Margaret — **History**
* Pauley Symposium on History, Truth, and Reconciliation
$5,000 — Nebraska Humanities Council
Borstelmann, Thomas — History

Richmond, John — **Music**
2010 Honors Jazz Weekend & Summer Camp
$12,000 — Berman Music Foundation
Haar, Ora — Music

Seefeldt, William — **History**
Sustaining Digital History
$49,116 — NEH
Thomas, William — History

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

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

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

Arts across Nebraska Extension
$25,000 — Nebraska Arts Council

Weiss, Wendy — **Textiles, Clothing and Design**

TSA Textile Exhibitions Outreach
$8,300 — Woods Charitable Fund

Hillestad Textiles Gallery
$37,170 — Friends of the Hillestad Textiles Gallery

Yoon, Hye Yung — **Music**

* Music for Hope Concert Series
$5,000 — Woods Charitable Fund

Commissioning/USA Meet the Composer: Amerindia
$10,000 — Meet the Composer
Sirota, Jonah — Music
Fischer, Rebecca — Music
Beaver, Gregory — Music

NUtech VENTURES™

Pioneering Partnerships for Innovation™

NUtech Ventures connects innovators with the people and resources they need to start companies, develop products and create jobs. If you're interested in starting a company, licensing your technologies or securing developmental funding for your leading-edge research, we can help you connect with industry partners, entrepreneurs and investors. Because we're commercialization agents and not just brokers of intellectual property, we represent your interests to external partners. We add value to your research by enabling a fully collaborative process for joint creation, development and commercialization so your technologies can change the world.

We would like to recognize the following UNL inventors and creators whose technologies have formed the basis of UNL startup companies and licensing agreements with our industry partners between July 1, 2011, and June 30, 2012. (UNL faculty and staff are indicated in red):

2011-2012 STARTUPS

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

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

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

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

2011-2012 INTELLECTUAL PROPERTY LICENSE AGREEMENTS

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

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

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

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

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

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

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

George L. Graef, Leslie Korte, Dennis White, Agronomy and Horticulture
Technology: Soybean Varieties U99-013032 and U97-307754

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

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

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Dale T. Lindgren, Agronomy and Horticulture
Technology: Bluestem (Schizachruim) #1 (proposed name "Little Red")
Technology: Bluestem (Schizachruim) #2 (proposed name "Ember Waves")

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

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

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

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

Robert C. Shearman, Leonard A. Wit Jr., Tiffany M. Heng-Moss, Bekele G. Abeyo, Keenan L. Amundsen, Agronomy and Horticulture
Technology: Sundancer, a Cultivar of Buffalograss (Buchloe dactyloides)

Blair Siegfried, Terence Spencer, Entomology
Technology: European Corn Borer Displaying Resistance to CRY1AB Bt Toxin "Kandiyohi"

2011-2012 OPTION AGREEMENTS

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

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

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

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

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

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

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

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

Jinsong Huang, Mechanical & Materials Engineering; Christopher L. Exstrom, University of Nebraska-Kearney
Technology: Synthesis of Air Stable Pyrite Nanocrystals for Photovoltaic Application

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Haorong Li, Siu Kit Lau, Yanshun Yu, Durham School of Architectural Engineering and Construction; **Tian Zhang,** Civil Engineering
Technology: Novel Heat Pump System for Biomass Energy Recovery for Hot Water and Space Heating

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

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

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

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Jens Walter, Robert Hutkins, Thomas E. Burkey, Food Science and Technology
Technology: Natural in vivo Selection of Prebiotic-Fermenting Bacteria from Animal and Human Gastrointestinal Tracts

CREATIVE ACTIVITY

Faculty who created, performed or produced creative works in fine and performing arts and architecture, nationally or internationally, July 1, 2011-June 30, 2012

Submitted by faculty, chairs/heads or deans

Diane C. Barger — Music

Editor, for clarinet and piano. *Pensieri Belliani-Fantasi; Duetto Concertanta Omaggio sopra motivi dell'opera Norma; Fantasia sopra motivi della Norma di Bellini; Fantasia sopra motivi dell'opera Beatrice di Tenda; Melodie dei Puritani di Bellini; Gran Duetto Concertato sopra motivi dell'opera La Sonnambula; Fantasia sopra motivi dell'opera Norma ; Andante con Variazioni sopra un tema dell'opera I Capuleti e Montecchi; Fantasia sopra motivi dell'opera La Sonnambula; Souvenirs de Bellini; Adagio, Tema con Variazioni e Finale sopra il tema nell'opera Il Pirata del Bellini.* Potenza Music, Louisville, KY.

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

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

Michael Burton — Textiles, Clothing and Design

Artist. Juried film festival, *Open Call: Video Film Festival.* Rhode Island School of Design Museum, Providence, RI.

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

Dana Fritz — Art and Art History

Artist, photography. *Terraria Gigantica: the World Under Glass.* Joseph Gross Gallery, University of Arizona, Tucson, AZ.

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

Karen Kunc — Art and Art History

Artist, woodcut prints. Solo exhibition, *The Nature of Abstraction.* Alexandre Hogue Art Gallery, University of Tulsa, Tulsa, OK.

Artist, woodcut print. *International Woodblock Prints: Contemporary Mokuhanga.* Royal Scottish Academy, Edinburgh, Scotland.

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

Artist, book. *Fine & Dirty: Contemporary Letterpress Art.* Center for Book Arts, New York, NY.

Artist, woodcut print. *The Annual: 2012.* National Academy Museum, New York, NY.

Jamie Reimer — **Music**

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

Performer, soprano, lecture-recital. "A life in song: The music of Robert Owens." African American Art Song Alliance International Conference, Irvine, CA.

Francisco E. Souto — **Art and Art History**

Artist, hybrid prints, a combination of digital and traditional. *Epicenter/Epicentro: Re Tracing the plains.* University of Ca' Foscari, Venice, Italy.

Artist, hybrid prints, a combination of digital and traditional. 3rd Qijiang International Invitational Print Exhibition and Symposium, Northwest University and the Sichuan Academy of Fine Arts, Chonqing, China.

Hans Sturm — **Music**

Soloist, double bass. *China Tour.* Central Conservatory, Langzhou Conservatory, Tong Li Festival, Beijing, Langzhou, Tong Li, Shanghai, China.

Performer, double bass and jazz voice. *Bass Meets Voice.* Jazz Educator's Network National Conference, Louisville, KY.

Soloist, CD recording. *Sketches from Composer Roscoe Mitchell's CD Entitled "Numbers on RogueArt,"* RogueArt CD label, Paris, France.

BOOKS

Faculty who wrote or edited books published July 1, 2011-June 30, 2012

UNL authors in red

Submitted by faculty, chairs/heads or deans

Marco Abel — **English**

Editor, with Christoph Wahl, Jesko Jockenhoevel, Michael Wahl. *Im Angesicht des Fernsehens: Der Filmemacher Dominik Graf.* Munich, Germany: text + kritik.

John E. Anderson — **Economics**

Author. *Public Finance: Principles and Public Policy, 2nd edition.* Cincinnatti, OH: Cengage Publishing.

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

Editor, with Stephen J. Lavin, Natural Resources, Stanley D. Brunn, Gerald R. Webster, Richard L. Morrill, Fred M. Shelley. *Atlas of the 2008 Elections.* Lanham, MD: Rowan and Littlefield

Edward F. Becker — **Philosophy**

Author. *The Themes of Quine's Philosophy.* Cambridge, UK: Cambridge University Press.

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

Editor. *True and False Recovered Memories: Toward a Reconciliation of the Debate.* New York, NY: Springer Science+Business Media.

John Bender — **News-Editorial**

Author, with Lucinda D. Davenport, Michael W. Drager, Fred Fedler. *Reporting for the Media, 10th edition.* New York, NY: Oxford University Press.

Mary Bomberger Brown — **Natural Resources**

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

Thomas Borstelmann — **History**

Author. *The 1970s: A New Global History from Civil Rights to Economic Inequality.* Princeton, NJ: Princeton University Press.

Susan Bullard — **News-Editorial**

Author. *Everybody's an Editor.* Dubuque, IA: Great River Technologies.

Amy Burnett — **History**

Translator and editor. *The Eucharistic Pamphlets of Andreas Bodenstein Von Karlstadt.* Kirksville, MO: Truman State University Press.

Author. *Karlstadt and the Origins of the Eucharistic Controversy: A Study in the Circulation of Ideas.* Oxford, UK: Oxford University Press.

Editor. *John Calvin, Myth and Reality. Images and Impact of Geneva's Reformer.* Eugene, OR: Cascade Books.

Stephen G. Burnett — **Classics and Religious Studies**

Author. *Christian Hebraism in the Reformation Era: Authors, Books and the Transmission of Jewish Learning.* Leiden, the Netherlands: Brill.

Janet Carlson — **BUROS**

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

Kenneth G. Cassman — **Agronomy and Horticulture**

Author, with David J. Connor, Robert S. Loomis. *Crop Ecology: Productivity and Management in Agricultural Systems, 2nd edition.* Cambridge, UK: Cambridge University Press.

Raymond Chollet — **Biochemistry/ Center for Plant Science Innovation**

Editorial adviser, with Florence K. Gleason. *Plant Biochemistry.* Sudbury, MA: Jones & Bartlett Learning.

Frankie Condon — **English**

Author. *I Hope I Join the Band: Narrative, Affiliation, and Antiracist Rhetoric.* Logan, UT: Utah State University Press.

John Creswell — **Educational Psychology**

Author, with V.L. Plano Clark. *Designing and Conducting Mixed Methods Research.* Thousand Oaks, CA: Sage.

Rochelle L. Dalla — **Child, Youth and Family Studies**

Editor, with B. A. Okeke-Oti, A. A. Terfa. *Education in Contemporary Perspectives.* Jos, Plateau State, Nigeria: Fab Anieh Press.

Yasar Demirel — **Chemical and Biomolecular Engineering**

Author. *Energy: Production, Conversion, Storage, Conservation, and Coupling.* London, UK: Springer-Verlag.

Wheeler Winston Dixon — **English**

Author. *Death of the Moguls: The End of Classical Hollywood.* New Brusnwick, NJ: Rutgers University Press.

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

Editor, with Lella Gandini, George Forman. *The Hundred Languages of Children, Third Edition: The Reggio Emilia Approach in Transformation.* Westport, CT: Praeger ABC-CLIO Publishers.

Iker Gonzalez-Allende — **Modern Languages and Literature**

Author. *Lineas de Fuego: Genero y Nacion en la Narrativa Espanola Durante la Guerra Civil (1936-1939).* Madrid, Spain: Biblioteca Nueva.

Marilyn Grady — **Educational Administration**

Author. *The Daily Practices of Successful Principals.* Thousand Oaks, CA: Corwin.

Author. *Leading the Technology-Powered School.* Thousand Oaks, CA: Corwin.

Rose Holz — **History/Women's and Gender Studies**

Author. *The Birth Control Clinic in a Marketplace World.* Rochester, NY: University of Rochester Press.

Melissa J. Homestead — **English/Women's and Gender Studies**

Editor, with Ellen A. Foster. *Clarence; or, A Tale of Our Own Times.* Peterborough, Ontario, Canada: Broadview Press.

Terry Housh — **Nutrition and Health Sciences**

Author, with Dona Housh, H.A. DeVries. *Applied Exercise and Sport Physiology with Labs.* Scottsdale, AZ: Holcomb Hathaway Publishers.

Scott Hygnstrom — **Natural Resources**

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

Srikanth Iyengar — **Mathematics**

Author, with David J. Benson, Henning Krause. *Representations of Finite Groups: Local Cohomology and Support.* New York, NY: Springer.

Jody Koenig Kellas — **Communication Studies**

Editor. *Family Storytelling: Negotiating Identities, Teaching Lessons, and Making Meaning.* London, UK: Routledge/Taylor and Francis Group.

Yaroslav Komarovski — **Classics and Religious Studies**

Author. *Visions of Unity: The Golden Pandita Shakya Chokden's New Interpretation of Yogacara and Madhyamaka.* Albany, NY: State University of New York Press.

Richard A. Leiter — **Law**

Author, with Roy M. Mersky. *Landmark Supreme Court Cases, 2nd edition* (3 Vols.). Facts on File.

Carole Levin — **History/ Medieval and Renaissance Studies**

Editor, with Donald Stump, Linda Shenk. *Elizabeth I and the "Sovereign Arts": Essays in Literature, History, and Culture.* Tempe, AZ: The Arizona Center for Medieval and Renaissance Studies.

Fred Luthans — **Management**

Author. *Organizational Behavior, 12th edition.* New York, NY: McGraw-Hill/Irwin.

Author, with Jonathan P. Doh. *International Management, 8th edition.* New York, NY: McGraw-Hill/Irwin.

Tom Lynch — **English**

Editor, with Susan N. Maher. *Artifacts and Illuminations: Critical Essays on Loren Eisley.* Lincoln, NE: University of Nebraska Press.

Editor, with Cheryll Glotfelty, Karla Armbruster. *The Bioregional Imagination: Literature, Ecology, and Place.* Athens, GA: University of Georgia Press.

Ann Mari May — **Economics**

Editor, with Lourdes Beneria, Diana Strassman. *Feminist Economics: Feminism, Economics and Well-being (Elgar Research Collection, Volume 248 of International Library of Critical Writings in Economics, Volume 1 of Feminist Economics).* Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.

Editor, with Lourdes Beneria, Diana Strassman. *Feminist Economics: Households, Paid and Unpaid Work, and the Care Economy (Elgar Research Collection, Volume 248 of International Library of Critical Writings in Economics, Volume 2 of Feminist Economics).* Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.

Editor, with Lourdes Beneria, Diana Strassman. *Feminist Economics: Global Perspectives on Gender (Elgar Research Collection, Volume 248 of International Library of Critical Writings in Economics, Volume 3 of Feminist Economics).* Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.

Patrice C. McMahon — **Political Science**

Editor, with Jon W. Western. *Getting Its Act Together?* London, UK: Routledge.

Colleen E. Medill — **Law**

Author. *Developing Professional Skills: Property.* West Academic Publishing.

Nancy A. Mitchell — **Advertising/Academic Affairs**

Author, with Sandra Moriarty, William Wells. *Advertising & IMC: Principles & Practice, 9th edition.* Saddle River, NJ: Pearson/Prentice Hall.

Mehrdad Negahban — **Mechanical & Materials Engineering**

Author. *The Mechanical and Thermodynamical Theory of Plasticity.* Boca Raton, FL: CRC Press, Taylor and Francis Group.

David L. Olson — **Management**

Author. *Supply Chain Risk Management.* New York, NY: Business Expert Press.

Author. *Supply Chain Information Technology.* New York, NY: Business Expert Press.

Jon E. Pedersen — **Teaching, Learning and Teacher Education**

Editor, with Sam Totten. *Social Issues Education: An Annotated Bibliography, Volume 1.* Charlotte, NC: Information Age Publishing.

Editor. *Teaching and Studying Social Issues: Major Programs and Approaches.* Greenwich, CT: Information Age Publishing.

Juan Paulo Ramirez — **Geography/Natural Resources**

Author. *Geography of Latin America: A Geographic Information System Approach.* Dubuque, IA: Kendall Hunt Publishing.

Stephen Ramsay — **English/Center for Digital Research in the Humanities**

Author. *Reading Machines: Toward an Algorithmic Criticism.* Champaign, IL: University of Illinois Press.

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

Author, with J. Johnson. *Teacher's Guide to ADHD.* New York, NY: Guilford.

Karl J. Reinhard — **Earth and Atmospheric Sciences/ Natural Resources**

Author, with Luiz Fernando Ferreira, Adauto Araújo. *Fundamentos de Paleoparasitologia.* Rio de Janeiro, Brazil: Editora Fiocruz.

George E. Rejda — **Finance**

Author. *Social Insurance and Economic Security, 7th edition.* Armonk, NY: M.E.Sharpe, Inc.

Guy J. Reynolds — **English**

Editor, with Melissa J. Homestead, English. *Cather Studies Volume 9: Willa Cather and Modern Cultures.* Lincoln, NE: University of Nebraska Press.

Editor, with Kari A. Ronning, English. *Willa Cather Scholarly Edition of "The Song of the Lark."* Lincoln, NE: University of Nebraska Press.

Khalid Sayood — **Electrical Engineering**

Author, with Ozkan Ufuk Nalbantoglu, Electrical Engineering. *Computational Genomic Signatures (Synthesis Lectures on Biomedical Engineering).* San Rafael, CA: Morgan and Claypool.

Gerald Steinacher — **History**

Author. *Nazis on the Run: How Hitler's Henchmen Fled Justice.* Oxford, UK: Oxford University Press.

Jordan Stump — **Modern Languages and Literature**

Translator. *Demolishing Nisard.* Champaign, IL: Dalkey Archive.

Author. *The Other Book: Bewilderments of Fiction.* Lincoln, NE: University of Nebraska Press.

William G. Thomas — **History**

Author. *The Iron Way: Railroads, the Civil War, and the Making of Modern America.* New Haven, CT: Yale University Press.

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

Author. *Nonlinear Random Vibration: Analytical Techniques and Applications.* Boca Raton, FL: CRC Press, Taylor and Francis Group.

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

Editor, with Igor Zutic. *Handbook of Spin Transport and Magnetism.* Boca Raton, FL: CRC Press, Taylor and Francis Group.

John D. Turner — **Classics and Religious Studies**

Editor, with Liv Lied, Christian Bull. *Mystery and Secrecy in the Nag Hammadi Collection and Other Ancient Literature: Ideas and Practices. Essays in Honor of Einar Thomassen on the Occasion of His Sixtieth Birthday.* Leiden, the Netherlands: Brill.

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

Hendrik van den Berg — **Economics**

Author. *International Economics, A Heterodox Approach, 2nd edition.* Armonk, New York: M.E. Sharpe.

Author. *Economic Growth and Development, 2nd edition.* Singapore: World Scientific Publishing Co.

Frans Von der Dunk — **Law**

Author. *National Space Legislation in Europe – Issues of Authorisation of Private Space Activities in the Light of Developments in European Space Cooperation.* Leiden, the Netherlands: Brill.

Brian D. Wardlow — **Natural Resources**

Author, with Martha C. Anderson, James P. Verdin. *Remote Sensing and Drought: Innovative Monitoring Approaches.* Boca Raton, FL: CRC Press.

Roger Wiegand — **Mathematics**

Author, with Graham J. Leuschke. *Cohen-Macaulay Representations.* Providence, RI: American Mathematical Society.

Richard L. Wiener — **Psychology**

Editor, with Brian H. Bornstein, Psychology/Law. *Handbook of Trial Consulting.* New York, NY: Springer.

Kenneth J. Winkle — **History**

Author. *Abraham and Mary Lincoln:* Carbondale, IL: Southern Illinois University Press.

RECOGNTIONS AND HONORS

Faculty who have been elected to honor academies or who received national or international honors or awards, July 1, 2011-June 30, 2012

Submitted by faculty, chairs/heads or deans

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

National Academy of Sciences

William Splinter — **Biological Systems Engineering, Emeritus/ Larsen Tractor Test and Power Museum**

National Academy of Engineers
William Splinter died September 26, 2012.

James Van Etten — **Plant Pathology**

National Academy of Sciences

Sam Allgood — **Economics**

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

Kathleen P. Anderson — **Animal Science**

Excellence in Teamwork Award, Joint Council of Extension Professionals

Carlos Asarta — **Economics**

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

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

Inducted into Gamma Sigma Delta, Honor Society of Agriculture

Kim J. Bearnes — **Northeast Research and Extension Center**

Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Terri Bek — **Nebraska College of Technical Agriculture**

Woman of the Year, National Association of Professional Women

Lloyd Bell — **Agricultural Leadership, Education and Communication**

Senior Fellow, American Association for Agricultural Education

Shubhapriya Bennur — **Textiles, Clothing and Design**

2011 Sarah Douglas Fellowship for International Studies, International Textile and Apparel Association

Eric Berger — **Law**

Winner of 2011 Richard D. Cudahy Writing Competition on Regulatory and Administrative Law, American Constitution Society

Robert Bielenberg — **Midwest Roadside Safety**
2011 Practice-Ready Paper Award, Transportation Research Board Design and Construction Group

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

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

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

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

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

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

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

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

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

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

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

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

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

Sidnie W. Crawford — **Classics and Religious Studies**
Chairman of the Board of Trustees, W. F. Albright Institute of Archaeological Research

John Creswell — **Educational Psychology**
Fulbright Specialist Award 2007-2012, Council for the International Exchange of Scholars, Fulbright Commission

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

Kwame Dawes — **English**
Fellow, John Simon Guggenheim Memorial Foundation

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

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

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

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

Richard Ferguson — **Agronomy and Horticulture**
Fellow, American Society of Agronomy

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

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

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

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

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

Jill Heemstra — **Northeast Research and Extension Center**
Outstanding Community of Practice, National eXtension Initiative

Blue Ribbon Award, Educational Aids Competition (electronic delivery), American Society of Agricultural and Biological Engineers

John Hibbing — **Political Science**
Fellow, American Association for the Advancement of Science

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

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

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

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

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

2011 Superior Paper Award, American Society of Agricultural and Biological Engineers

Srikanth Iyengar — **Mathematics**
Fellow, Simons Foundation

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

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

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

Terry J. Klopfenstein — **Animal Science**
Industry Leadership Award, Cattle Feeders Hall of Fame

American Feed Industry Association's New Frontiers in Animal Nutrition Award, Federation of Animal Science Societies

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

Jody Koenig Kellas — **Communication Studies**
2011 Distinguished Article in Family Communication, Family Communication Division of the National Communication Association

Karen Kunc — **Art and Art History**
Juror's Award (Juror: Professor Barbara Tetenbaum), *Un-Speak-Able,* Book Art Exhibition, The Arts Center Corvallis, Oregon

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

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

Fred Luthans — **Management**
2011 Citations of Excellence Award, Emerald Publishing

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

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

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

Martin Massengale — **Center for Grassland Studies**
One of the Top 100 Educators for 2011, Leading Scientists of the World, and Outstanding Intellectuals of the 21st Century; the International Biographical Center

Fellow, American Biographical Institute

Order of International Ambassadors, American Biographical Institute

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

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

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

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

Thomas O. Powers — **Plant Pathology**
Fellow, Society of Nematologists

Wei Qiao — **Electrical Engineering**
2012 Best Paper Award, IEEE Transportation Electrification Conference and Expo, IEEE Power Electronics Society, IEEE Industry Applications Society, and IEEE Power & Energy Society

Petronela Radu — **Mathematics**
Fulbright Scholar, Fulbright Foundation

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

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

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

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

Julia E. Schleck — **English/ Medieval and Renaissance Studies**
Fellow, Folger Shakespeare Library

Franklin Research Award, American Philosophical Society

Mathias Schubert — **Electrical Engineering**
Fellow, American Physical Society

Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

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

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

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

Matthew L. Spangler — **Animal Science**
Member of 2011 Class of Top 10 Industry Leaders Under the Age of 40, *The Cattle Business Weekly*

Richard Stowell — **Biological Systems Engineering**

Educational Materials Award, Council for Agricultural Science and Technology

Blue Ribbon Award, American Society of Agricultural and Biological Engineers

2011 Outstanding Community of Practice, USDA-National Institute of Food and Agriculture

Susan Swearer — **Educational Psychology**

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

Maher Tadros — **Civil Engineering**

Ty Lin Award, American Society of Civil Engineers

Jonathan Templin — **Psychology**

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

Eric Thompson — **Economics**

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

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

Fellow, American Society of Mechanical Engineers

Christopher Y. Tuan — **Civil Engineering**

Honorary Fellow, Australian Institute of High Energetic Materials, Gladstone, Australia

Carlos Urrea Florez — **Panhandle Research and Extension Center**

Distinguished Achievement Award, The Bean Improvement Cooperative

Brandy VanDeWalle — **Southeast Research and Extension Center**

Outstanding Educational Aids Competition, American Society of Agricultural and Biological Engineers

David Varner — **Southeast Research and Extension Center**

Search for Excellence: Remote Sensing and Precision Agriculture Award, National Association of County Agricultural Agents

Ruth Vonderohe — **Northeast Research and Extension Center**

Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Lily M. Wang — **Durham School of Architectural Engineering and Construction**

Ralph G. Nevins Physiology and Human Environment Award, American Society of Heating, Refrigerating and Air Conditioning Engineers

Curtis L. Weller — **Biological Systems Engineering/ Food Science and Technology**

Jefferson Science Fellow, National Academies-U.S. State Department-U.S. Agency for International Development

Tessa Wright — **Special Education and Communication Disorders**

Outstanding Dissertation of the Year, Council of Exceptional Children, Division of Visual Impairments

Yan Xia — **Child, Youth and Family Studies**

Inducted into Phi Beta Delta Honor Society

Gary Zoubek — **Southeast Research and Extension Center**

Blue Ribbon Award, American Society of Agricultural and Biological Engineers

Superior Paper Award, American Society of Agricultural and Biological Engineers

2011 Communication Award, National Association of County Agricultural Agents

Glossary of Federal Agency Abbreviations

DHS Department of Homeland Security
- DNDO Domestic Nuclear Detection Office

DHHS Department of Health and Human Services
- ACF Administration for Children and Families

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
- AMR Army Medical Research
- ARO Army Research Office
- DTRA Defense Threat Reduction Agency
- MDA Missile Defense Agency
- MURI Multidisciplinary University Research initiative
- NGIA National Geospatial Intelligence Agency
- ONR Office of Naval Research
- USAMRAA United States Army Medical Research Acquisition Activity

DOE Department of Energy
- NREL National Renewable Energy Laboratory

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

DOJ Department of Justice

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

ED Department of Education
- GAANN Graduate Assistance in Areas of National Need
- 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
	NIA	National Institute on Aging
	NIAAA	National Institute on Alcohol Abuse and Alcoholism
	NIAID	National Institute on Allergy & Infectious Diseases
	NIBIB	National Institute of Biomedical Imaging and Bioengineering
	NICHD	National Institute of Child Health and Human Development
	NIDCD	National Institute on Deafness & Communication Disorders
	NIDDK	National Institute of Diabetes, Digestive & Kidney Disease
	NIDA	National Institute on Drug Abuse
	NIEHS	National Institute of Environmental Health Sciences
	NIGMS	National Institute on General Medical Sciences
	NIMH	National Institute of Mental Health
	NINDS	National Institute of Neurological Disorders and Stroke
	NLM	National Library of Medicine
NSF	National Science Foundation	
	EPSCoR	Experimental Program to Stimulate Competitive Research
USAID	United States Agency for International Development	
USDA	United States Department of Agriculture	
	AFRI	Agriculture and Food Research Initiative
	APHIS	Animal and Plant Health Inspection Service
	ARS	Agricultural Research Service
	CSREES	Cooperative State Research, Education & Extension Service
	FCIC	Federal Crop Insurance Corporation
	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
	RMA	Risk Management Agency

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Every effort has been made to verify the accuracy and completeness of submissions. Faculty, department chairs and heads and the deans were invited to submit entries online regarding published books, national and international recognitions, and creative works in fine and performing arts and architecture. Information on major sponsored program awards was gathered by the Office of Sponsored Programs. Reports on startups and license agreements were produced by NUtech Ventures.

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