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

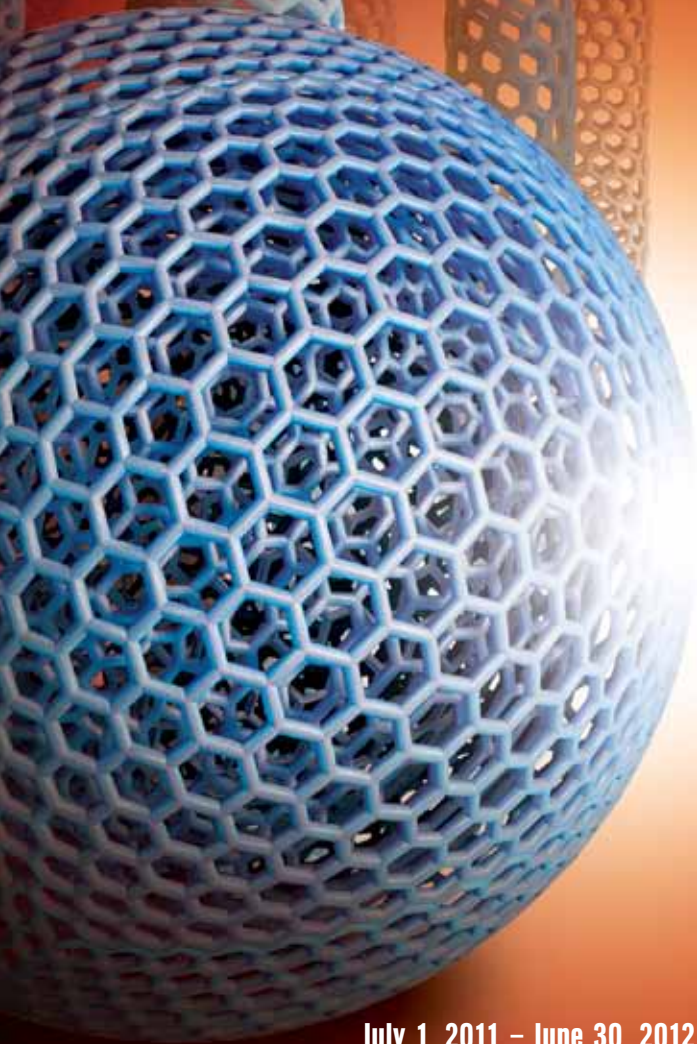
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Research and Creative Activity



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



3	Awards of \$3 million or more
24	Awards of \$1 million to \$2,999,999
35	Awards of \$200,000 to \$999,999
78	American Recovery and Reinvestment Act Awards
85	Early Career Awards
88	Arts and Humanities Awards of \$50,000 or more
95	Arts and Humanities Awards of \$5,000 to \$49,999
97	Startups
98	License Agreements
100	Option Agreements
102	Creative Activity
104	Books
110	Recognitions and Honors
118	Glossary

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 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 Building Cooperative Extension's 21st Century Network
\$6,626,640
9/1/11 – 8/31/15

eXtension

USDA-NIFA

National eXtension Project

\$16,870,000

10/1/04 – 12/31/15

Association of Public
and Land-Grant Universities

eXtension: The Transformation of Cooperative Extension

\$5,961,221

8/15/07 – 8/14/12

USDA-CSREES



Dan Cotton directs the eXtension Initiative, an Internet-based Cooperative Extension Service education and information system. UNL is the lead institution in this multi-year project, which partners with the University of Kentucky, North Carolina State University and Virginia Tech University. This is a

collaborative effort of the nation's 107 land-grant universities and the U.S. Department of Agriculture's Cooperative State Research, Education and Extension Service to develop content and technology for the eXtension project. eXtension is a virtual educational environment that provides science-based, objective information. Users may take advantage of learning opportunities and interact with the expertise available from the land-grant university system by visiting www.extension.org.

DiLillo, David

Sexual Revictimization: Emotional and Psychosocial Mechanisms

\$3,280,773

7/15/10 – 6/30/15

Hoffman, Lesa

Psychology

NIH-NICHD

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

victimimized 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

Biological Sciences

Morris, T. Jack

Electrical Engineering

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/

Agronomy and Horticulture/

Clemente, Thomas

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 (ANtartic 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
Special Education and
Communication Disorders

Nelson, J. Ron



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

Child Care and Youth Training and Technical Assistance Project

\$7,045,455

7/1/10 – 6/30/15

Durden, Tonia

Extension

USDA-NIFA

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

Multi-Energy Processing for Novel Coating Technologies

\$4,138,000

4/10/09 – 4/9/12

Electrical Engineering

DoD-ONR



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 Magneto-electronic,
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) magneto-electronic 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

NSF through UCLA

\$3,987,767

5/1/05 - 12/31/11

Bloom, Kenneth

Dominguez, Aaron

Physics and Astronomy

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

* Pharmacological Interventions
to Diminish Nicotine-Associated Responding
\$1,448,584

Psychology

NIH-NIDA

Black, Paul

Research for Developing Renewable Biofuels from Algae
\$1,903,000
Van Etten, James
Weeks, Donald

Biochemistry

DOE
Plant Pathology
Biochemistry

Bloom, Kenneth

* Transatlantic Networking
\$1,520,000
DOE-Fermi National Laboratory

Physics and Astronomy

* U.S. CMS Operations at the LHC
\$1,035,732
Dominguez, Aaron
Swanson, David
NSF through Princeton University
Physics and Astronomy
Computer Science and Engineering

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

Blum, Paul

Value-Added Products from Renewable Biofuels
\$1,968,000
Cassman, Kenneth

Biological Sciences

DOE
Agronomy and Horticulture

Bond, Alan

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

Biological Sciences**Bulling, Denise**

Nebraska Youth Suicide Prevention and Early Intervention
\$1,500,000
DHHS-SAMSHA through Nebraska
Department of Health and Human Services

Public Policy Center**Cassman, Kenneth**

* Global Yield Gap and Water Productivity Atlas
\$2,034,324
Grassini, Patricio
Bill & Melinda Gates Foundation
Agronomy and Horticulture

Agronomy and Horticulture**Chandra, Namas**

Effect of Protective Devices on Brain Trauma Mechanics
under Idealized Shock Wave Loading
\$2,530,894
Feng, Ruqiang
Gu, Linxia
Lim, Jung Yul
Negahban, Mehrdad
Nelson, Carl
Turner, Joseph
DoD-ARO
Mechanical & Materials Engineering
Mechanical & Materials Engineering
Mechanical & Materials Engineering
Mechanical & Materials Engineering
Mechanical & Materials Engineering
Mechanical & Materials Engineering

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

* 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

Agronomy and Horticulture**Heinrichs, Elvis**

Identification and Release of Brown Midrib (BMR) Sorghum
 Varieties to Producers in Central America and Haiti
 \$1,100,000 USAID

Entomology/INTSORMIL**Hygnstrom, Scott**

Development of Spatially Explicit Models of Wildlife Diseases
 \$1,220,184 USDA-APHIS

Natural Resources**Irmak, Suat**

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

Biological Systems Engineering**Johnson, Scott**

Technical Transfer and cGMP Production of a Trivalent Vaccine
 \$2,302,839 Industry client

Biological Process Development Facility

USAMRAA CGMP Production Contract #1
 \$2,164,301 DoD-AMR

Van Cott, Kevin	Chemical and Biomolecular Engineering
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Jones, David

Strengthening Transitions into Engineering Program
 \$1,993,942 NSF

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

Biological Systems Engineering**Knoche, Lisa**

Rural Language and Literacy Connections (Rural LLC)
 \$2,741,563 ED

Raikes, Helen	Child, Youth and Family Studies
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Nebraska Center for Research on Children, Youth, Families and Schools

Koszewski, Wanda

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

\$1,450,389

Anderson-Knott, Mindy
Carr, Timothy
De Guzman, Maria
Fischer, Jean
Takahashi, Shinya

Nutrition and Health Sciences

USDA-NIFA through
South Dakota State University
Statistics
Nutrition and Health Sciences
Child, Youth and Family Studies
Nutrition and Health Sciences
Nutrition and Health Sciences

Supplemental Nutrition Assistance Program (SNAP-ED)
\$1,809,238

Birnstihl, Elizabeth
Schnepf, Marilynn

USDA-FNS through Nebraska Department of
Health and Human Services
Extension
Nutrition and Health Sciences

Lee, Jaekwon

Mechanistic Insights into Cellular Metal Detoxification

\$1,414,177

Biochemistry

NIH-NIEHS

Li, Ming

Behavioral Mechanisms of Antipsychotic Action

\$1,435,910

Psychology

NIH-NIMH

Li, Qingsheng

The Early Events Determining SIV Rectal Transmission

\$1,368,245

Biological Sciences

NIH-NIDDK

Lou, Marjorie

Protein-Thiol Mixed Disulfide in Cataractogenesis

\$2,083,886

**Veterinary Medicine and
Biomedical Sciences**

NIH-NEI

Mackenzie, Sally

TRMS: An Integrative Study of Plant Mitochondrial Biology

\$1,420,753

Christensen, Alan
Elthon, Thomas
Wang, Dong

**Biological Sciences/
Agronomy and Horticulture/
Center for Plant Science Innovation**

NSF
Biological Sciences
Agronomy and Horticulture
Statistics

Marley, Tom

EMSW21-MCTP: Nebraska Mentoring
through Critical Transition Points

\$2,225,689

Walker, Judy
Donsig, Allan

Mathematics

NSF
Mathematics
Mathematics

McCutcheon, Allan

* Reducing Error in Computer Survey Data Collection

\$2,967,347

Belli, Robert
Olson, Kristin
Smyth, Jolene
Soh, Leen-Kiat

Gallup Research Center

NSF
Gallup Research Center/Psychology
Gallup Research Center/Sociology
Gallup Research Center/Sociology
Computer Science and Engineering

Mendoza-Gorham, Joan	Student Affairs
\$1,242,250	Classic Upward Bound ED
\$1,242,250	Upward Bound Math/Science Program ED
Oyler, George	Biochemistry
\$1,188,000	Consortium for Commercialization of Algae Biofuels and Biotechnology 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
\$1,194,387	UNL Science Scholars Program 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
\$1,848,542	* Homeostatic Regulation of Peripheral Oscillators via Autonomic Circuitry NIH-NINDS
Sollars, Patricia	Veterinary Medicine and Biomedical Sciences
Redepenning, Jody	Chemistry
\$1,358,000	Bioceramic Bones for Battlefield Traumas DoD-AMR
Robertson Jr., Vaughn	Student Affairs
\$2,104,080	UNL Educational Talent Search ED
Rutenbeck, Kathy	Student Affairs
\$1,449,278	Upward Bound-Northeast Nebraska ED
Schaefer, Matthew	Law
\$1,717,370	University of Nebraska College of Law Space & Telecommunications Law Program: Filling a National Need, Advancing the Field 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
Henninger, Scott
Jameson, Mary Liz
Moriyama, Etsuko

Computer Science and Engineering
Computer Science and Engineering
University of Nebraska State Museum
Biological Sciences/
Center for Plant Science Innovation

Sellmyer, David**Physics and Astronomy**

Beyond Rare Earth Magnets

\$1,197,462

DOE-Ames Laboratory

Shield, Jeffrey
Skomski, Ralph

Mechanical & Materials Engineering
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
Francis, Charles
Knezevic, Stevan
Schlegel, Vicki
Wright, Robert
Wortmann, Charles
Bernards, Mark
Hergert, Gary
Ferguson, Richard
Quinn, John
Lyon, Drew

Natural Resources
Agronomy and Horticulture
Northeast Research and Extension Center
Food Science and Technology
Entomology
Agronomy and Horticulture
Agronomy and Horticulture
Panhandle Research and Extension Center
Agronomy and Horticulture
Natural Resources
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
Glover, Todd

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

Kunz, Gina

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

Ihlo, Tanya

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

* Magnetolectric Coupling in Ferroelectric/Ferromagnetic
Heterostructures: Beyond Volume Effects

\$395,020

NSF

Ducharme, Stephen
Gruverman, Alexei

Physics and Astronomy
Physics and Astronomy

Albrecht, Julie

Nutrition and Health Sciences

Food Safety for Diverse Families with Young Children

\$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
ED through Duke University Medical Center
\$392,328

Billesbach, David**Biological Systems Engineering**

* SGP-Carbon Project
University of California-Berkeley National Lab
\$217,219

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
Springer, Paul
Reisbig, Allison
USDA-CSREES
Child, Youth and Family Studies
Child, Youth and Family Studies

Bloom, Kenneth**Physics and Astronomy**

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

Blum, Paul**Biological Sciences**

Uranium Mobilization by Extremely Thermoacidophilic Archaea
DoD-DTRA through North Carolina State University
\$513,000
REU Site: Integrated Development of Bioenergy Systems
\$279,592
Cerutti, Heriberto
NSF
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
Stone, JulieNSF
Biochemistry

* Center for Enhanced Camelina Oil (CECO)

\$555,698

DOE through Donald Danforth
Plant Science CenterDevelopment of Bio-Based Lubricants
in a Dedicated Industrial Oilseed Crop\$500,000
Clemente, ThomasUSDA-NIFA
Agronomy and Horticulture/
Center for Biotechnology/
Center for Plant Science InnovationProbing 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

Bloom, Kenneth

Center for Research

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

Epstein, Michael

NIH-NIMH

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

Clemente, Thomas

Biotechnology/Agronomy and Horticulture/
Center for Plant Science Innovation

DOE

Weeks, Donald

Biochemistry

Dwyer, Matthew**Computer Science and Engineering**CSR-EHS Predictable Adaptive Residual
Monitoring for Real-time Embedded Systems

\$515,950

Goddard, Stephen

Computer Science and Engineering

Elbaum, Sebastian

Computer Science and Engineering

NSF

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

Marvin, Chris

ED
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

Lodi, Kathleen**Extension**

Communicating Capacity Building: Supporting Military Children & Families: An Environmental Scan of Child Care Provider Training
 \$250,000
 Durden, Tonia

USDA-NIFA through Purdue University
 Child, Youth and Family Studies

Lu, Ying**Computer Science and Engineering**

CSR: Small: Energy Management
 for Heterogeneous MapReduce Data Centers
 \$432,932
 Swanson, David

NSF
 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

Black, Paul
 Chandra, Namas
 Ducharme, Stephen
 Pannier, Angela
 Zhou, You

NSF
 Biochemistry
 Mechanical & Materials Engineering
 Physics and Astronomy
 Biological Systems Engineering
 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

Azizinamini, Atorod

Modjeski and Masters
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

Pattnaik, Asit

USDA-NRICGP
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

Osorio, Fernando

USDA-NIFA
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
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Rack, Frank**Earth and Atmospheric Sciences/
Antarctic Geological Drilling Program**

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

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

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

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

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

* Evaluation of Early Steps to School Success

\$605,303	Save the Children
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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

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
Faller, Ron

Nebraska Department of Roads
Civil Engineering/
Midwest Roadside Safety Facility
Mechanical & Materials Engineering

Reid, John

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
USDA-CSREES through Kansas State University

\$359,211

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

Burson, Dennis

Ellis, Jason

USDA-CSREES

Animal Science

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

Bornstein, Brian

Herian, Mitch

Pytlik Zillig, Lisa

NSF

Psychology/Public Policy Center

Public Policy Center

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

Shield, Jeffrey

Brenco/Amsted Industries

Mechanical & Materials Engineering

Tyre, Richard

Natural Resources

Quantifying Uncertainty in Missouri River
Adaptive Management Processes

\$410,858

Allen, Craig

DOI-GS

Natural Resources

Uiterwaal, Cornelis

Physics and Astronomy

REU Site: Optics and Laser Physics

\$246,450

Batelaan, Herman

NSF

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**

Feamnox - 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
through 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
 Bloom, Kenneth Center for Research
 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
 Nebraska Public Service Commission
 Center for Applied Rural Innovation
 Agricultural Leadership,
 Education and Communication

\$2,472,652

Narjes, Charlotte

Terry, Roger

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

High-Power Laser Science Collaboratory

\$1,825,345

Chandra, Namas

Lu, Yongfeng

Umstadter, Donald

Wedige, Alan

Arts and Sciences

NSF

Mechanical & Materials Engineering

Electrical Engineering

Physics and Astronomy

Facilities Management

Nam, Yunwoo

Nebraska Rural Health and Primary Care

\$112,000

Scholz, Gordon

Community and Regional Planning

Nebraska Department of

Health and Human Services

Community and Regional Planning

Norton, Terri

City Owned Facility Assessment and Energy Audit Component

\$160,871

Schwer, Avery

City of Omaha

Durham School of Architectural

Engineering and Construction

**Durham School of Architectural
Engineering and Construction****Nowak, Andrzej**

IRES Poland: Experience in Civil Infrastructure Systems

\$144,108

Rilett, Laurence

Szerszen, Maria

Civil Engineering

NSF

Civil Engineering

Civil Engineering

Othman, ShadiRegenerative Elastography:
Monitoring Soft Tissue Reconstruction

\$144,900

NIH-NIBIB

Biological Sciences**Paul, Prem**

Construction of a Nanoscience Metrology Facility

\$6,904,993

Nebraska Center for Virology Facility Expansion

\$8,000,000

Wood, Charles

Research and Economic Development

DOC-NIST

NIH-NCRR

Biological Sciences/

Nebraska Center for Virology

Powers, RobertRevealing Functions
for Newly Discovered Proteins by FAST-NMR

\$375,670

Cerny, Ronald

Hage, David

Chemistry

NIH-NIAID

Chemistry

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 Modulation 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

9/1/10 – 8/31/11

National Historical Publications
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

7/1/09 – 8/31/12

Buffalo Bill Historical Center



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

Pytlík Zillig, Brian

Center for Digital Research in the Humanities

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

Winkle, Kenneth

History

Civil War Washington Collaborative Research

\$220,000

NEH

7/1/10 – 6/30/13

Lawrence, Susan

History

Price, Kenneth

English/Center for Digital Research in the Humanities



History professor Kenneth Winkle received a three-year, \$220,000 collaborative research grant from the National Endowment for the Humanities to expand digital research on Civil War-era Washington, D.C., especially its pivotal role in the antislavery and civil rights movements. The Civil War Washington

project examines the war’s impact on the nation’s capital. The grant received “We the People” designation, which recognizes projects that advance the study, teaching and understanding of American history and principles. The grant will enable researchers to study how race, slavery and emancipation changed the capital a century and a half ago. Researchers will investigate how African Americans living in Washington during the Civil War gained their freedom, won the fight for the Union and against slavery and achieved legal equality.

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

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

Weiss, Wendy

Textiles, Clothing and Design

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

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

Yoon, Hye Yung

Music

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

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



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

Stephen G. DiMagno, Haoran Sun, Chemistry

Technology: Anhydrous Fluoride Salts and Reagents and Methods for Their Production

Technology: Method and Agents for Preparation of 18F-Labeled Radiopharmaceuticals

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

Technology: Proactive Police Patrol Information (P3i)

Ravi F. Saraf, Gaurav Singh, Chemical and Biomolecular Engineering

Technology: Electro-Optical Apparatus to Measure Electrochemical Processes at High Sensitivity and Applications Thereof

2011-2012 INTELLECTUAL PROPERTY LICENSE AGREEMENTS

David J. Andrews, Agronomy and Horticulture

Technology: New Gene Which Intensifies Purple Plant Color in Pearl Millet (temporarily designated PP3)

David J. Andrews, John Rajewski, Ismail M. Dweikat, Alan Heng,
Agronomy and Horticulture

Technology: 26 Grain Sorghum Seed Parents N253-N278 and Their Respective Maintainers

David J. Andrews, John Rajewski, Ismail M. Dweikat, Agronomy
and Horticulture

Technology: 7 Late-Maturing Grain Sorghum Seed Parents N552-N558 and 20 Tall Restorer Germplasms N559R-N575R

P. Stephen Baenziger, Agronomy and Horticulture

Technology: NE01643 (Overland) Hard Red Winter Wheat

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

Technology: Intermediate-Stage Wheat Germplasm, generation F8 (2010), 4 lines: NE07409, NE07444, NE07486, NE07487

Technology: Wheat Experimental Line: NI08707

Judy Diamond, Angie Fox, University Museum; **Thomas Floyd**,
University Television; Ann Downer-Hazell and Martin Powell

Technology: "Confined!" Educational Graphic Novel

Technology: "Phantom Planet" Educational Graphic Novel

Judith Galeota, Alan R. Doster, Veterinary Medicine and
Biomedical Sciences

Technology: Porcine Circovirus-2b

George L. Graef, Leslie Korte, Dennis White, Agronomy and
Horticulture

Technology: Soybean Varieties U99-013032 and U97-307754

David S. Hage, Chemistry; Hai Xuan

Technology: Immobilization Method for Producing Active Alpha 1-Acid Glycoprotein (AGP)

David S. Hage, Chemistry; William Clarke

Technology: Sandwich Microcolumns

Technology: Microcolumn Displacement Immunoassay

Technology: Analysis of Free Drug and Hormone Fractions By Rapid Immunoextraction Using Sandwich Microcolumns

Dale T. Lindgren, Agronomy and Horticulture

Technology: Bluestem (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

Asit Pattnaik, **Fernando A. Osorio**, Veterinary and Biomedical

Sciences; Israrul H. Ansari

Technology: A Method for Significantly Enhancing the Production of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV)-Neutralizing Antibodies in Animals Inoculated/Vaccinated with PRRSV Strains of Varying Degrees of Attenuation

Donald Rundquist, **Bryan Leavitt**, School of Natural Resources

Technology: CALMIT Software

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

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

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

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

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

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

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

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

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

Haorong Li, Siu Kit Lau, Yanshun Yu, Durham School of Architectural Engineering and Construction; **Tian Zhang**, Civil Engineering

Technology: Novel Heat Pump System for Biomass Energy Recovery for Hot Water and Space Heating

George A. Oyler, Biochemistry; Julian Rosenberg, Synaptic Research LLC

Technology: Highly Selective Single-Chain Antibody Complexes for Immobilization and Harvesting of Microalgae

Jeyamkondan Subbiah, Biological Systems Engineering;

Harshavardhan Thippareddi, Food Science and Technology

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

Anuradha Subramanian, Hendrik J. Viljoen, Scott Whitney,

Chemical and Biomolecular Engineering

Technology: Detection of DNA Targets without a Nucleic Acid Amplification Step

Jens Walter, Robert Hutkins, Thomas E. Burkey, Food Science and Technology

Technology: Natural in vivo Selection of Prebiotic-Fermenting Bacteria from Animal and Human Gastrointestinal Tracts

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, Chongqing, 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*. Cincinnati, 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 Brunswick, 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 Shen. *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 Eiseley*. 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. Tsybal**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.

RECOGNITIONS AND HONORS

Faculty who have been elected to honor academies or who received national or international honors or awards, July 1, 2011-June 30, 2012

Submitted by faculty, chairs/heads or deans

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

National Academy of Sciences

William Splinter **Biological Systems Engineering, Emeritus/
Larsen Tractor Test and Power Museum**

National Academy of Engineers

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 Burkhardt-Kriesel**Panhandle Research and Extension Center**

Educational Technology Team Award, National Association of Community Development Extension Professionals

Dennis E. Burson**Animal Science**

Signal Service Award, American Meat Science Association

Roger Butters**Economics**

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

Chris R. Calkins**Animal Science**

Meat Research Award, American Society of Animal Science

Janet Carlson**Educational Psychology**

Fellow, American Psychological Association Division 12: Clinical Psychology

Leslie C. Carlson**Marketing**

Outstanding Article of the Year for 2011, *Journal of Marketing Education*

Ken Cassman**Agronomy and Horticulture**

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

Xun-Hong Chen**Natural Resources**

Fellow, The Geological Society of America

Lindsay Chichester**Southeast Research and Extension Center**

Resources/Environmental Ed Team Award, National Association of Extension 4-H Agents

Stephen Comfort**Natural Resources**

Fellow, International Union of Pure and Applied Chemistry

Scott Cotton**Panhandle Research and Extension Center**

Disaster Education Specialist Award, Extension Disaster Education Network

Sidnie W. Crawford**Classics and Religious Studies**

Chairman of the Board of Trustees, W. F. Albright Institute of Archaeological Research

John Creswell **Educational Psychology**
Fulbright Specialist Award 2007-2012, Council for the International Exchange of Scholars, Fulbright Commission

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

Kwame Dawes **English**
Fellow, John Simon Guggenheim Memorial Foundation

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

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

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

Richard Ferguson **Agronomy and Horticulture**
Fellow, American Society of Agronomy

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

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

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

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

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

Jill Heemstra **Northeast Research
and Extension Center**
Outstanding Community of Practice, National eXtension Initiative
Blue Ribbon Award, Educational Aids Competition (electronic delivery), American Society of Agricultural and Biological Engineers

John Hibbing**Political Science**

Fellow, American Association for the Advancement of Science

Tiffany Hogan**Special Education and
Communication Disorders**

Early Career Contributions in Research Award, American Speech-Language-Hearing Association

Mary Holland**Southeast Research
and Extension Center**

Distinguished Service Award, National Extension Association of Family and Consumer Sciences

Roger Hoy**Biological Systems Engineering**

Evelyn E. Rosentreter Standards Award, American Society of Agricultural and Biological Engineers

Thomas Hunt**Northeast Research
and Extension Center**

2011 Integrated Pest Management Team Award, European Corn Borer IPM Team, Entomological Foundation

Suat Irmak**Biological Systems Engineering**

2011 Educational Aids Blue Ribbon Award, American Society of Agricultural and Biological Engineers

2011 Superior Paper Award, American Society of Agricultural and Biological Engineers

Srikanth Iyengar**Mathematics**

Fellow, Simons Foundation

Margaret D. Jacobs**History**

Fellow, American Council of Learned Societies

Michael James**Textiles, Clothing and Design**

Luminaries Award for Lifetime Achievement, Fuller Craft Museum, Brockton, Massachusetts

Shripat Kamble**Entomology**

National Recognition Award in Urban Entomology, Entomological Foundation

Terry J. Klopfenstein**Animal Science**

Industry Leadership Award, Cattle Feeders Hall of Fame

American Feed Industry Association's New Frontiers in Animal Nutrition Award, Federation of Animal Science Societies

Stevan Knezevic**Northeast Research
and Extension Center**

Excellence in Web-Based Weed Control Tool, American Society of Agronomy

Jody Koenig Kellas**Communication Studies**

2011 Distinguished Article in Family Communication, Family Communication Division of the National Communication Association

Karen Kunc**Art and Art History**

Juror's Award (Juror: Professor Barbara Tetenbaum), *Un-Speak-Able*, Book Art Exhibition, The Arts Center Corvallis, Oregon

Karla Lechtenberg**Midwest Roadside Safety**

2012 Best Paper Award, Transportation Research Board Committee AFB20

Duane Lienemann**Southeast Research and Extension Center**

2011 Distinguished Service Award, National Association of County Agricultural Agents

Fred Luthans**Management**

2011 Citations of Excellence Award, Emerald Publishing

Gary Lynne**Agricultural Economics**

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

Drew J. Lyon**Agronomy and Horticulture**

Agronomic Extension Education Award, American Society of Agronomy

Stephen C. Mason**Agronomy and Horticulture**

Distinguished Service Award, American Society of Agronomy

Martin Massengale**Center for Grassland Studies**

One of the Top 100 Educators for 2011, Leading Scientists of the World, and Outstanding Intellectuals of the 21st Century; the International Biographical Center

Fellow, American Biographical Institute

Order of International Ambassadors, American Biographical Institute

Mario Mongiardini**Midwest Roadside Safety**

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

Glenn Nierman**School of Music**

Executive Board Member, International Society for Music Education

Sarah Polacek**Northeast Research and Extension Center**

Educational Technology Team Award - GIS Day, National Association of Extension 4-H Agents

Lisa Poppe**Southeast Research and Extension Center**

Excellence in 4-H Programming Award, National Association of County Agricultural Agents

Thomas O. Powers**Plant Pathology**

Fellow, Society of Nematologists

Wei Qiao **Electrical Engineering**
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
NIHES	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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