



**RESEARCH**

**Office of Research and Economic Development**

# **RESEARCH AND CREATIVE ACTIVITY**

**July 1, 2016 – June 30, 2017**

**Major Sponsored Programs and Faculty Awards  
for Research and Creative Activity**

University of Nebraska–Lincoln



## **Steve Goddard**

Interim Vice Chancellor for  
Research and Economic Development

This booklet highlights successes in research, scholarship and creative activity of the University of Nebraska–Lincoln faculty during the fiscal year July 1, 2016–June 30, 2017.

It lists investigators, project titles and funding sources on major grants and sponsored program awards received during the year; fellowships and other recognitions and honors bestowed on our faculty; books published by faculty; performances, exhibitions and other creative activity by our faculty; and intellectual property licenses and patents issued for the products of Nebraska research.

This booklet is an impressive list, but it is far from comprehensive. Nebraska faculty are contributing to the stature and funding of our research, scholarship and creative activity every day, in everything they do. These accomplishments are key measures of our success, but even more important is our faculty's impact on the world.

Our faculty are looking to the future: tackling complex issues, solving global challenges and addressing the needs of the nation and the people of Nebraska. Whether that work is a woodblock print that leads us to consider our role in shaping the natural world, an innovative program to train child care providers, or mentoring a generation of researchers to fight HIV in Africa, impact begins with the first idea, the first grant, the first publication.

This is why we continue to invest in new ideas, faculty, facilities and opportunities. These investments of time, energy, creativity and support are fueling our faculty's pursuit of excellence. I am pleased to present this record of their accomplishments.

A handwritten signature in black ink, appearing to read "Steve Goddard".

Steve Goddard

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“

Nebraska faculty are contributing to the stature and funding of our research, scholarship and creative activity every day, in everything they do.”

## Awards of \$5 Million or More

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

### Cahoon, Edgar

**Biochemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology**

R11 Track-1: Center for Root and Rhizobiome Innovation (CRR1)

\$10,000,000 ..... NSF-EPSCoR  
6/15/16 – 5/31/21

Adamec, Jiri ..... Biochemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Alfano, James ..... Plant Pathology/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Clemente, Thomas ..... Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Drijber, Rhae ..... Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Griep, Mark ..... Chemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Helikar, Tomas ..... Biochemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Herr, Joshua ..... Plant Pathology/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Moriyama, Etsuko .... Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Russo, Sabrina ..... Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Schachtman, Daniel ..... Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Schnable, James ..... Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

van Dijk, Karin ..... Biochemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Walia, Harkamal ..... Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Weber, Karrie ..... Biological Sciences/  
Earth and Atmospheric Sciences/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Yu, Bin ..... Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology

Zhang, Chi ..... Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology



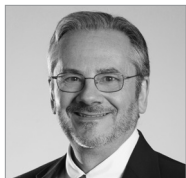
The University of Nebraska–Lincoln is leading a \$20 million, Nebraska-based research effort to improve crop productivity. Funded with a five-year award from the National Science Foundation’s Experimental Program to Stimulate Competitive Research, or EPSCoR, this project draws upon a range of expertise in Nebraska. The university is teaming with

scientists at the University of Nebraska Medical Center, University of Nebraska at Kearney and Doane University on the Center for Root and Rhizobiome Innovation. Project co-leaders are Edgar Cahoon, George W. Holmes Professor of Biochemistry and director of the Center for Plant Science Innovation, and James Alfano, Charles Bessey Professor of Plant Pathology. The research uses a holistic strategy to study root and soil microbe interactions and to develop new biological tools to enhance crop performance.

**Claes, Daniel****Physics and Astronomy**

U.S. CMS Phase-1 Upgrades

\$11,479,310 ..... NSF  
6/15/14 - 5/31/19



Physicist Daniel Claes leads a collaboration involving eight universities to upgrade the Compact Muon Solenoid particle detector, a key component of the world's largest physics experiment. With a five-year, nearly \$11.5 million grant from the National Science Foundation, the team is working to increase the effectiveness of a vital component of the

Large Hadron Collider at CERN laboratory in Switzerland, the supercollider that made discovery of the Higgs boson possible. The Nebraska team was part of the multi-institutional collaboration that built the original CMS experiment, one of two large particle detector experiments at the Large Hadron Collider. With this NSF grant, they now lead a large research partnership to upgrade the detector in stages through 2019. Their collaborators are at the University of Kansas, University of Illinois at Chicago, Rutgers University, Cornell University, SUNY Buffalo, Purdue University Calumet, Notre Dame University and Northeastern University.

**Dickey, Elbert****eXtension**

eXtension Building Cooperative Extension's 21st Century Network  
\$6,025,596 ..... USDA-NIFA  
9/1/11 - 8/31/16



The eXtension Initiative is an Internet-based Cooperative Extension Service education and information system. The University of Nebraska-Lincoln leads this multi-year project, which partners with the University of Kentucky, North Carolina State University and Virginia Tech University. This collaborative effort of the nation's 107 land-grant universities and the U.S.

Department of Agriculture's Cooperative State Research, Education and Extension Service develops content and technology for the eXtension project. eXtension is a virtual educational environment that provides science-based, objective information. Users may take advantage of learning opportunities and interact with the expertise available from the land-grant university system by visiting [www.extension.org](http://www.extension.org).

**Dussault, Patrick****Chemistry**

Building Infrastructure in Nanohybrid Materials and Algal Biology Research

\$12,233,538 ..... NSF-EPSCoR  
10/01/10 - 09/30/16

Bailey, Cheryl ..... Biochemistry  
Bartelt-Hunt, Shannon ..... Civil Engineering  
Black, Paul ..... Biochemistry  
Cahoon, Edgar ..... Biochemistry/  
Center for Plant Science Innovation/  
Cerutti, Heriberto ..... Biological Sciences/  
Center for Plant Science Innovation  
Clemente, Thomas ..... Agronomy and Horticulture/  
Center for Plant Science Innovation  
DiRusso, Concetta ..... Biochemistry/Nutrition and Health Sciences  
Hage, David ..... Chemistry  
Han, Ming ..... Electrical and Computer Engineering  
Hudgins, Jerry ..... Electrical and Computer Engineering  
Ianno, Natale ..... Electrical and Computer Engineering  
Lai, Rebecca ..... Chemistry  
Li, Yusong ..... Civil Engineering  
Lu, Yongfeng ..... Electrical and Computer Engineering  
Markham, Jonathan ..... Biochemistry  
Nickerson, Kenneth ..... Biological Sciences  
Pannier, Angela ..... Biological Systems Engineering  
Riekhof, Wayne ..... Biological Sciences  
Schubert, Eva ..... Electrical and Computer Engineering  
Schubert, Mathias ..... Electrical and Computer Engineering  
Takacs, James ..... Chemistry  
Van Dijk, Karin ..... Biochemistry  
Van Etten, James ..... Plant Pathology



Nebraska's Center for Nanohybrid Functional Materials combines the efforts of chemists, engineers and biologists to develop fundamental new science related to sensing and separation of targets ranging from small molecules to toxins. The center is led by Patrick Dussault, Charles Bessey Professor of Chemistry, and Mathias Schubert, associate

professor of electrical and computer engineering. The center brings together investigators from two broad areas of science. One group has experience in creating highly ordered nanostructures, such as tiny silicon spirals that have unique characteristics in terms of how they appear under certain frequencies of light. Other center members are experts in using chemical and biochemical agents such as RNA or antibodies to bind a particular target such as a drug or a virus.

The funding award is the major part of a five-year, \$20 million Nebraska EPSCoR grant involving faculty from four other universities: University of Nebraska Medical Center, University of Nebraska at Kearney, Creighton University and Doane College.

**Goddard, Steve**      **Office of Research and Economic Development**  
 Nebraska Center for Energy Sciences Research  
 \$6,250,000 ..... Nebraska Public Power District  
 4/1/16 – 3/31/21

The Nebraska Center for Energy Sciences Research is a collaboration between the university 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 Nebraska 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.

**Graef, Michelle**      **Center on Children, Families and the Law**  
 \*Quality Improvement Center for Workforce Development  
 \$15,000,000 ..... DHHS-ACF  
 09/30/16 – 09/29/21

Ells, Mark ..... Center on Children, Families and the Law  
 Paul, Megan ..... Center on Children, Families and the Law  
 Stephenson, Kate ..... Center on Children, Families and the Law



The University of Nebraska–Lincoln has launched the Quality Improvement Center for Workforce Development with a five-year, \$15 million grant to the Center on Children, Families and the Law from the U.S. Department of Health and Human Services Administration for Children and Families-Children’s Bureau.

Under the leadership of Michelle Graef, research associate professor in the Center on Children, Families and the Law, this multidisciplinary project will study and test promising strategies to help child welfare agencies recruit and retain staff workers. Nebraska will collaborate with three national child welfare consultants and researchers at the University of Colorado, Denver; University of Louisville; and University of Tennessee, Knoxville. The center will draw on a range of expertise, including social work, industrial organizational psychology, human resource management, educational psychology, implementation science and the law.

**Heng-Moss, Tiffany**      **College of Agricultural Sciences and Natural Resources**  
 Developing the Next Generation of Rwandan Agricultural Leaders  
 \$47,492,836 ..... Various Associations/Foundations  
 7/1/15 – 5/31/23  
 Davis, Joshua ..... Global Engagement  
 Waller, Steven ..... Center for Grassland Studies



With grants totaling more than \$47,000,000, the College of Agricultural Sciences and Natural Resources (CASNR) at the University of Nebraska–Lincoln is partnering with various associations and foundations to provide educational opportunities for Rwandan students to participate in the Undergraduate Scholars Program (CUSP). In support of a

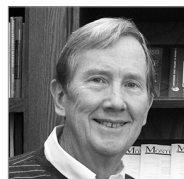
Practical Agriculture Institute in Rwanda, Rwandan students are identified and selected to participate in CUSP to pursue a Bachelor of Science degree in Integrated Science – an individualized program of study focused on conservation agriculture, entrepreneurship, leadership and innovative thinking. The students’ degree programs are specifically designed to be relevant to Rwandan agricultural production and the country’s goal of building resilience into its agricultural ecosystems. CASNR interim dean Tiffany Heng-Moss leads this effort.

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

NebraskaMATH: Strengthening the OPS-UNL Partnership  
 \$6,178,948 ..... The Sherwood Foundation®/Lozier Foundation  
 5/1/13 – 8/31/17

Heaton, Ruth ..... Teaching, Learning and Teacher Education/  
 Center for Science, Mathematics  
 and Computer Education

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



A grant from The Sherwood Foundation® and the Lozier Foundation supports a three-year partnership between Omaha Public Schools and Nebraska’s Center for Science, Mathematics and Computer Education to fund the NebraskaMATH Omaha Public Schools Teacher Leader Academy. Led by Jim Lewis, Douglas Professor of Mathematics, the

program gives a community of OPS mathematics teachers from grades K-12 access to continuing education and graduate coursework centered on math education. The goals of the OPS initiative are to strengthen mathematics learning in Omaha classrooms, narrow student achievement gaps between different populations and conduct research that continues to inform school improvement efforts.

**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

\$24,808,592 ..... USDA-AFRI  
1/1/12 – 12/31/17  
Thippareddi, Harshavardhan ..... Food Science and Technology



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.

**Rilett, Laurence**

**Civil Engineering/  
Nebraska Transportation Center**

\*University Transportation Centers Open Competition 2016

\$13,000,000 ..... DOT  
12/5/16 – 9/30/22



The Mid-America Transportation Center, a consortium of academic institutions led by the University of Nebraska–Lincoln, will lead a five-year, \$13 million research center, funded by the U.S. Department of Transportation through the Fixing America’s Surface Transportation Act, to improve transportation safety in Nebraska and neighboring states. The center,

which emphasizes challenges facing rural areas and underserved communities, was designated the University Transportation Center of its four-state region after a competitive review. Laurence Rilett, MATC director and the Keith W. Klaasmeyer Chair in Engineering, leads the new research center. Funding enables MATC to leverage its track record of success in transportation research and education to improve safety in the four Region 7 states: Nebraska, Iowa, Kansas and Missouri. MATC is housed in the university’s College of Engineering. Its partner institutions include the University of Nebraska at Omaha, University of Nebraska Medical Center, University of Iowa, University of Kansas, University of Kansas Medical Center, Missouri University of

Science and Technology, Lincoln University and Nebraska Indian Community College. The consortium also has partnerships with several private- and public-sector entities, including a longstanding relationship with the Nebraska Department of Transportation

Region 7 University Transportation Center

\$6,897,600 ..... DOT-RITA  
1/1/12 – 1/31/17

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

**Schachtman, Daniel**

**Agronomy and Horticulture/  
Center for Plant Science Innovation/  
Center for Biotechnology**

Systems Analysis of the Physiological and Molecular Mechanisms  
of Sorghum Nitrogen Use Efficiency, Water Use Efficiency  
and Interactions with the Soil Microbiome

\$13,460,684 ..... DOE  
8/15/15 – 8/31/20

Dweikat, Ismail ..... Center for Plant Science Innovation/  
Agronomy and Horticulture  
Ge, Yufeng ..... Biological Systems Engineering  
Zygielbaum, Arthur ..... Center for Plant Science Innovation/  
Natural Resources



Daniel Schachtman, professor of agronomy and horticulture and director of the university’s Center for Biotechnology, leads a \$13.5 million, multi-institutional research effort to improve sorghum as a sustainable source for biofuel production. A five-year grant from the U.S. Department of Energy funds this highly collaborative project that takes a comprehensive approach to understanding how plants and microbes interact and to learn which sorghum germplasm can grow with less water and nitrogen. The University of Nebraska–Lincoln is



collaborating with scientists at Danforth Plant Science Center, Washington State University; University of North Carolina-Chapel Hill; Boyce Thompson Institute, Clemson University; Iowa State University; Colorado State University and the DOE-Joint Genome Institute.

**Takacs, James**

**Chemistry/Nebraska Center for Integrated Biomolecular Communication**

\*Nebraska Center for Integrated Biomolecular Communication (NCIBC)

\$11,271,372 .....NIH-NIGMS  
 8/15/16 - 7/31/21  
 Becker, Donald ..... Biochemistry/NCIBC  
 Buan Murphy, Nicole ..... Biochemistry/NCIBC  
 Cerny, Ronald ..... Chemistry/NCIBC  
 Clarke, Jennifer ..... Statistics/Food Science and Technology/NCIBC  
 DiRusso, Concetta ..... Biochemistry/NCIBC  
 Dodds, Eric ..... Chemistry/NCIBC  
 Hage, David ..... Chemistry/NCIBC  
 Harris, Edward ..... Biochemistry/NCIBC  
 Kidambi, Srivatsan ..... Chemical and Biomolecular Engineering/NCIBC  
 Lee, Jaekwon ..... Biochemistry/NCIBC  
 Morton, Martha ..... Chemistry/NCIBC  
 Powers, Robert ..... Chemistry/NCIBC  
 Riethoven, Jean-Jack ..... Center for Biotechnology/ NCIBC  
 Simpson, Melanie ..... Biochemistry/ NCIBC  
 Stains, Clifford ..... Chemistry/NCIBC  
 Velander, William ..... Chemical and Biomolecular Engineering/NCIBC  
 Zhou, You ..... Center for Biotechnology/NCIBC



With a five-year, \$11.3 million grant from the National Institutes of Health, the University of Nebraska-Lincoln has established a research center focused on investigating cellular-level miscommunications that contribute to complex diseases like cancer, diabetes and chronic liver disease. The NCIBC serves as a hub for interdisciplinary collaborations among

Nebraska’s biomedical researchers and involves faculty at the University of Nebraska Medical Center, as well. The center, directed by James Takacs, Charles J. Mach University Professor of Chemistry, fosters a systems approach, combining the research activities of chemists, biochemists, engineers and bioinformaticists. It connects researchers developing new molecular probes and analytical techniques with those unraveling molecular mechanisms of diseases.

**Tsymbal, Evgeny**

**Physics and Astronomy/  
 Nebraska Center for Materials and Nanoscience**

Center for NanoFerroic Devices

\$7,285,500 ..... DOC-NIST through Semiconductor Research Corp.-  
 Nanoelectronics Research Corp.

4/1/13 - 12/31/17



The University of Nebraska leads a \$7.125 million research collaboration involving six universities and an industry consortium to develop a new generation of electronic devices. Semiconductor Research Corp. and the National Institute of Standards and Technology have awarded a university physics team a five-year contract to lead the Center for

NanoFerroic Devices as part of the Nanoelectronics Research Initiative. The center is harnessing the significant advances the university and its Materials Research Science and Engineering Center (MRSEC) have made in exploring nanomaterials with unique properties that may prove the key to surpassing the limitations of current technology. Evgeny Tsymbal, George Holmes University Professor of Physics and MRSEC director, co-directs the Center for NanoFerroic Devices with physicist Peter Dowben. The university is partnering with researchers at the University of California, Irvine, University of Wisconsin-Madison, University at Buffalo, SUNY, University of Delaware and Oakland University. This joint research will help transform basic university discoveries and knowledge into actual devices, in collaboration with industry.

Materials Research Science & Engineering Center:  
 Polarization and Spin

\$9,600,000 .....NSF  
 11/1/14 - 10/31/20

Gruerman, Alexei ..... Physics and Astronomy

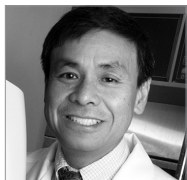
The Materials Research Science and Engineering Center (MRSEC) was established in 2002 with a grant from the National Science Foundation and involves scientists from the Departments of Physics and Astronomy, Chemistry and Mechanical & Materials Engineering, and the School of Biological Sciences. MRSEC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

**Wood, Charles**

**Biological Sciences/  
Nebraska Center for Virology**

Nebraska Center for Virology

\$5,499,715 .....NIH-NIGMS  
9/16/10 - 7/31/17



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: the University of Nebraska-Lincoln, the University of Nebraska Medical

Center and Creighton University. Center research addresses pathogenic and therapeutic aspects of some of the most devastating viral and neuroimmune disorders facing the global community, including AIDS, HIV-associated cancers, Alzheimer's disease and chronic infections caused by herpes viruses and a new class of infectious agents called prions.

**Kaposi's Sarcoma & Human Herpesvirus in Africa**

\$5,794,724 ..... NIH-NCI  
7/16/10 - 4/30/18  
West, John .....Nebraska Center for Virology

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.

**Zempleni, Janos**

**Nutrition and Health Sciences**

COBRE: Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules

\$11,306,520 .....NIH-NIGMS  
8/5/14 - 5/31/19

Chung, Soonkyu ..... Nutrition and Health Sciences  
Cui, Juan .....Computer Science and Engineering  
Fomenko, Dmitri .....Biochemistry  
Ramer-Tait, Amanda .....Food Science and Technology  
Su, Qiaozhu ..... Nutrition and Health Sciences



With the support of an \$11.3 million grant from the National Institutes of Health's Center of Biomedical Research Excellence (COBRE) program, the university has established the Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules. The center, under the leadership of Janos Zempleni, Willa Cather Professor of Molecular

Nutrition, focuses on understanding nutrition and obesity at the molecular level. Answering molecular-level questions regarding obesity and related diseases is a crucial first step toward curbing this national epidemic. The University of Nebraska Medical Center collaborates on the center, which aims to establish a community of nationally recognized researchers in nutrition, genetics, biochemistry, food science, immunology and computer science. The long-term goal is to become a leader in nutrient signaling and the prevention of obesity and obesity-related diseases, including non-alcoholic fatty liver disease, cardiovascular disease and Type 2 diabetes.

# Awards of \$1 Million to \$4,999,999

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

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

Improving Barley and Wheat Germplasm  
for Changing Environments

\$1,065,801 . . . . . USDA through University of California, Davis  
Lee, Donald . . . . . Agronomy and Horticulture  
Regassa, Teshome . . . . . Agronomy and Horticulture  
Waters, Brian . . . . . Agronomy and Horticulture

## **Balkir, Sina**                                      **Electrical and Computer Engineering**

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

\$1,385,150 . . . . . DoD-DTRA  
Bauer, Mark . . . . . Electrical and Computer Engineering  
Hoffman, Michael . . . . . Electrical and Computer Engineering

## **Barlow, Steven**                                      **Special Education and Communication Disorders**

Somatosensory Modulation of Salivary Gene Expression  
and Oral Feeding in Preterm Infants

\$2,747,458 . . . . . NIH-NICHD

## **Becker, Donald**                                      **Biochemistry/ Nebraska Center for Redox Biology**

Redox Biology Center

\$4,305,466 . . . . . NIH-NIGMS

Molecular Mechanisms of Disease

\$1,078,105 . . . . . NIH-NIGMS  
Black, Paul . . . . . Biochemistry

Mechanistic Studies of Functional Switching  
in the PutA Flavoprotein

\$1,244,730 . . . . . NIH-NIGMS

## **Bellows, Laurie**                                      **Graduate Studies**

TRIO – Ronald E. McNair Postbaccalaureate Achievement Program

\$1,095,094 . . . . . 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

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

\$1,194,259 . . . . . NIH-NIGMS  
Peterson, Daniel . . . . . Food Science and Technology

## **Bevins, Rick**    **Psychology**

Pharmacological Interventions  
to Diminish Nicotine-Associated Responding

\$1,429,752 . . . . . NIH-NIDA

## **Bilder, Christopher**                                      **Statistics**

Group Testing for Infectious Disease Detection:  
Multiplex Assays and Back-End Screening

\$1,137,836 . . . . . NIH-NIAID

## **Bloom, Kenneth**                                      **Physics and Astronomy**

Experimental Particle Physics at the Energy and Cosmic Frontiers

\$2,055,000 . . . . . NSF  
Claes, Daniel . . . . . Physics and Astronomy  
Kravchenko, Ilya . . . . . Physics and Astronomy  
Snow, Gregory . . . . . Physics and Astronomy

U.S. CMS Operations at the LHC

\$4,209,412 . . . . . NSF through Princeton University  
Dominguez, Aaron . . . . . Physics and Astronomy  
Swanson, David . . . . . Computer Science and Engineering

## **Bobaru, Florin**    **Mechanical & Materials Engineering**

MURI Center for Material Failure  
Prediction through Peridynamics

\$1,003,134 . . . . . DoD-AFOSR through University of Arizona

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

SI2-SSI Data Intensive Analysis for  
High Energy Physics (DIANA/HEP)

\$1,001,324 . . . . . NSF

**Boeckner, Linda** **Extension**

Innovation and Collaboration: Creating a Transdisciplinary  
Childhood Obesity Prevention Graduate Program  
\$1,450,389 . . . . . USDA-NIFA through South Dakota State University  
Anderson-Knott, Mindy . . . . . Statistics  
De Guzman, Maria . . . . . Child, Youth and Family Studies  
Fischer, Jean . . . . . Nutrition and Health Sciences  
Takahashi, Shinya . . . . . Nutrition and Health Sciences

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

Biochemical Genomics:  
Deciphering the Chemical Factories of Oilseeds  
\$1,315,031 . . . . . NSF through Washington State University  
Moriyama, Etsuko . . . . . Biological Sciences/  
Center for Plant Science Innovation

**Ciobanu, Daniel** **Animal Science**

Translational Genomics for Improving  
Sow Reproductive Longevity  
\$1,166,650 . . . . . USDA-AFRI  
Kachman, Stephen . . . . . Statistics  
Riethoven, Jean-Jack . . . . . Biotechnology  
Spangler, Matthew . . . . . Animal Science

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

Biology of Human: Understanding Ourselves  
through the Lens of Current Biomedical Research  
\$1,386,925 . . . . . NIH-NCRR  
Angeletti, Anisa . . . . . Biological Sciences  
Bailey, Cheryl . . . . . Biochemistry  
McQuillan, Julia . . . . . Sociology  
Wood, Charles . . . . . Biological Sciences/  
Nebraska Center for Virology

**Dickey, Elbert** **eXtension**

eXtension Military Families Learning Network  
\$2,240,454 . . . . . USDA-NIFA

**Dombrowski, Kirk** **Sociology**

Measuring Social Behavior via Dynamic Network Interaction  
\$1,224,423 . . . . . NIH-NIGMS  
Khan, Bilal . . . . . Sociology  
Maerlender, Arthur . . . . . Center for Brain, Biology and Behavior  
Swearer, Susan . . . . . Educational Psychology

Injection Risk Networks in Rural Puerto Rico  
\$2,970,743 . . . . . NIH-NIDA  
Welch-Lazoritz, Melissa . . . . . Bureau of Sociological Research/  
Sociology

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

Parent Connectors: An Efficacy Study of Peer Support  
for Parents of Middle-School Youth with Emotional Disturbance  
\$3,206,013 . . . . . ED-IES  
Torkelson-Trout, Alexandra . . . . . Special Education and  
Communication Disorders

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

Optimal Stent Selection for the Femoropopliteal Artery  
\$1,028,824 . . . . . NIH-NHLBI through UNMC  
Desyatova, Anastasia . . . . . Mechanical & Materials Engineering

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

\*NRI: Enabling Unmanned Aerial Systems (UAS) Fire Ignitions  
in Complex Firefighting Contexts  
\$1,003,270 . . . . . NSF  
Allen, Craig . . . . . Natural Resources  
Bradley, Justin . . . . . Computer Science and Engineering  
Detweiler, Carrick . . . . . Computer Science and Engineering  
Duncan, Brittany . . . . . Computer Science and Engineering  
Pytlík Zillig, Lisa . . . . . Public Policy Center  
Twidwell, Dirac . . . . . Agronomy and Horticulture

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

Indigenous Roots Teacher Education Program  
\$1,174,067 . . . . . ED

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

Robotic Tele-Surgery Research  
\$2,084,873 . . . . . DoD-Army-TATRC through UNMC  
Nelson, Carl . . . . . Mechanical & Materials Engineering  
Terry, Benjamin . . . . . Mechanical & Materials Engineering

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

Supplemental Nutrition Assistance Program (SNAP-ED)  
\$1,639,728 . . . . . USDA-FNS through  
Nebraska Department of Health and Human Services  
Behrends, Donna . . . . . Nutrition and Health Sciences  
Boeckner, Linda . . . . . Extension  
Carr, Timothy . . . . . Nutrition and Health Sciences  
Hartline, Morgan . . . . . Nutrition and Health Sciences  
Sehi, Natalie . . . . . Nutrition and Health Sciences

**Fontaine, Joseph** **Natural Resources**

Use and Satisfaction of Public Hunting Opportunities  
\$1,771,671 ..... DOI-GS through  
Nebraska Game and Parks Commission  
Martin, Dustin ..... Natural Resources

**Forbes, Cory** **Natural Resources**

\*DRK-12 High School Students Climate Literacy  
through Epistemology of Scientific Modeling  
\$1,126,375 ..... NSF

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

Nebraska Local Technical Assistance Program FY 2016  
\$1,118,920 ..... DOT-FHWA through  
Nebraska Department of Transportation

**Garcia Ruiz, Hernan** **Plant Pathology/  
Nebraska Center for Virology**

\*Recognition and Recruitment of RNA Viruses  
into RNA Silencing Pathways  
\$1,312,105 ..... NIH-NIGMS

**Gaussoin, Roch** **Agronomy and Horticulture**

ConAgra Popcorn Breeding Maintenance  
\$1,695,945 ..... ConAgra  
McAndrew, Thomas ..... Agronomy and Horticulture  
Rodriguez, Oscar ..... Agronomy and Horticulture

**Gruverman, Alexei** **Physics and Astronomy**

Nanoscale Resistive Switching Behavior  
of Ferroelectric and Multiferroic Tunnel Junctions  
\$1,500,000 ..... DOE  
Tsymbal, Evgeny ..... Physics and Astronomy

**Guo, Jiantao** **Chemistry**

Improve the Safety of an Efficacious Live-Attenuated  
HIV-1 Vaccine through Unnatural Amino Acid-Mediated Suppression  
of Blank Codon  
\$1,919,552 ..... NIH-NIAID  
Li, Qingsheng ..... Biological Sciences  
Niu, Wei ..... Chemistry

**Guretzky, John** **Agronomy and Horticulture**

Agro-Ecosystem Approach to Sustainable Biofuels Production  
\$1,916,143 ..... USDA-NIFA through Iowa State University  
Baxendale, Fred ..... Entomology  
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

**Hage, David** **Chemistry**

Chromatographic Studies of Functional Proteomics  
\$1,075,264 ..... NIH-NIDDK

**Harris, Edward** **Biochemistry**

Liver-Mediated Clearance of Low Molecular Weight Heparins  
\$1,464,325 ..... NIH-NHLBI  
Dodds, Eric ..... Chemistry

**Hayes, Michael** **Natural Resources**

Providing Drought Information Services for the Nation:  
The National Drought Mitigation Center  
\$2,443,222 ..... DOC-NOAA  
Bathke, Deborah ..... Earth and Atmospheric Sciences  
Fuchs, Brian ..... Natural Resources  
Knutson, Cody ..... Natural Resources  
Svoboda, Mark ..... Natural Resources  
Tadesse, Tsegaye ..... Natural Resources

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

A Predictive Model to Increase Adoption of IPM  
of a Mite-Virus Disease Complex in Wheat  
\$3,375,000 ..... USDA-AFRI  
Anderson-Knott, Mindy ..... Sociology  
Bradshaw, Jeffrey ..... Panhandle Research and Extension Center  
Golick, Douglas ..... Entomology  
Wegulo, Stephen ..... Plant Pathology  
Zygielbaum, Arthur ..... School of Natural Resources

**Helikar, Tomas** **Biochemistry**

\*A Predictive Multi-scale Model of the Immune System:  
An Integrated Resource for Interdisciplinary Applications  
\$1,780,567 .....NIH-NIGMS

An Innovative Computational Modeling Intervention  
to Facilitate Learning of Biology Using  
Simulation and Dynamical Systems Approaches  
\$2,321,012 .....NSF  
Brassil, Chad .....Biological Sciences  
Dauer, Joseph ..... Natural Resources  
Harris, Steven .....Plant Pathology

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

RII Track-2 FEC: Unmanned Aircraft System  
for Atmospheric Physics  
\$1,454,757 .....NSF through Oklahoma State University  
Detweiler, Carrick ..... Computer Science and Engineering  
Pytlík Zillig, Lisa ..... Public Policy Center  
Van Den Broeke, Matthew ..... Earth and Atmospheric Sciences

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

Developing Efficient Perovskite/Silicon Tandem Devices  
\$1,211,076 ..... DOE  
High-efficiency Low-cost Nanocomposite for Radiation Detection  
Enabled by Charge-Triggered Secondary Charge Injection  
\$1,050,000 .....DoD-DTRA

**Irmak, Suat** **Biological Systems Engineering**

Measurement of Growing Season Actual Crop  
Evapotranspiration and Crop Coefficients, and Dormant  
Season Evaporative Losses for Key Vegetation Surfaces  
in the Central Platte Natural Resources District  
\$1,409,675 ..... Central Platte NRD  
Kilic, Ayse .....Civil Engineering/Natural Resources  
Martin, Derrel ..... Biological Systems Engineering  
van Donk, Simon ..... Biological Systems Engineering  
Verma, Shashi ..... Natural Resources

**Johnson, Matthew** **Psychology/  
Center for Brain, Biology and Behavior**

\*RII Track-2 FEC: Neural Networks Underlying the Integration  
of Knowledge and Perception  
\$1,187,503 ..... NSF through University of Delaware  
Dodd, Michael .....Psychology/  
Center for Brain, Biology and Behavior

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

Process Research, Development and  
Manufacturing of 5P12 RANTES  
\$4,186,468 ..... Mintaka Foundation for Medical Research  
Buchholz, Wallace ..... Biological Process Development Facility

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

Cooperative Forestry Program  
\$1,080,067 ..... USDA-FS

**Khalimonchuk, Oleh** **Biochemistry**

Mechanisms of Mitochondrial Quality Control and Protection  
\$1,421,695 .....NIH-NIGMS

**Kravchenko, Ilya** **Physics and Astronomy**

Particle Physics Research with the CMS Experiment at the LHC  
\$2,070,000 .....NSF  
Bloom, Kenneth ..... Physics and Astronomy  
Claes, Daniel ..... Physics and Astronomy  
Snow, Gregory ..... Physics and Astronomy

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

School Psychology Specialization in Toddlers  
with Autism Spectrum Disorders  
\$1,249,730 .....ED

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

UNL Science Scholars Program  
\$1,194,387 .....NSF  
Bonnstetter, Ron .....Teaching, Learning and Teacher Education  
Claes, Daniel ..... Physics and Astronomy  
Gosselin, David ..... Natural Resources  
Heng-Moss, Tiffany ..... Entomology  
Pedersen, Jon .....Teaching, Learning and Teacher Education/  
Center for Science, Mathematics  
and Computer Education  
Swidler, Stephen .....Teaching, Learning and Teacher Education

**Li, Ming** **Psychology**

Serotonin, Maternal Behavior and Postpartum Depression  
\$1,468,032 .....NIH-NIMH

**Li, Xu** **Civil Engineering**  
 \*Mitigating the Risk of Antibiotic Resistance at Critical Control Points  
 in the Beef Cattle Manure Management Systems  
 \$1,200,000 ..... USDA-NIFA  
 Bartelt-Hunt, Shannon ..... Civil Engineering  
 Erickson, Galen ..... Animal Science  
 Schmidt, Amy ..... Animal Science/Biological Systems Engineering  
 Wang, Bing ..... Food Science and Technology

**Lodi, Kathleen** **Extension**  
 Child Care and Youth Training and Technical Assistance Project  
 \$3,390,000 ..... USDA-NIFA  
 Click2Science  
 \$1,016,500 ..... Noyce Foundation through  
 University of San Diego - CEPAL

**Lu, Yongfeng** **Electrical and Computer Engineering**  
 Portable Fiber Laser System and Method to Remove Pits  
 and Cracks on Sensitized Surfaces of Aluminum Alloys  
 \$1,025,000 ..... DoD-ONR

**Lubben, Bradley** **Agricultural Economics**  
 North Central Risk Management Education Center  
 \$3,253,008 ..... USDA-NIFA

**Mackenzie, Sally** **Agronomy and Horticulture/  
 Biological Sciences**  
 Epigenetic Breeding in Crops  
 \$2,996,073 ..... Bill & Melinda Gates Foundation

**Mendoza-Gorham, Joan** **Student Affairs**  
 Lincoln Upward Bound  
 \$1,351,875 ..... ED  
 Upward Bound Math/Science Program  
 \$1,306,646 ..... ED

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

**Napolitano, Scott** **Educational Psychology/  
 Center for Brain, Biology and Behavior/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools**  
 \*School Psychology Specialization in Concussion/  
 Mild Traumatic Brain Injury (mTBI)  
 \$1,191,884 ..... ED  
 Maerlender, Arthur ..... Center for Brain, Biology and Behavior/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools

**Olson, Kristin** **Sociology/Gallup Research Center**  
 Reducing Error in Computer Survey Data Collection  
 \$3,484,525 ..... NSF  
 Belli, Robert ..... Psychology/Gallup Research Center  
 Smyth, Jolene ..... Sociology/Gallup Research Center  
 Soh, Leen-Kiat ..... Computer Science and Engineering

**Pegg, Mark** **Natural Resources**  
 Missouri River Sportfish Ecology and Management  
 \$1,324,787 ..... Nebraska Game and Parks Commission  
 Hamel, Martin ..... Natural Resources

**Pérez, Lance** **Academic Affairs**  
 WIDER: Adopting Research-Based Instructional Strategies  
 for Enhancing STEM Education  
 \$1,990,279 ..... NSF  
 Arthurs, Leilani ..... Earth and Atmospheric Studies  
 Couch, Brian ..... Biological Sciences  
 Golick, Douglas ..... Entomology  
 Heaton, Ruth ..... Teaching, Learning and Teacher Education  
 Lee, Kevin ..... Center for Science, Mathematics and  
 Computer Education/Physics and Astronomy  
 Spiegel, Amy ..... Educational Psychology  
 Stains, Marilyn ..... Chemistry

**Pickard, Gary** **Veterinary Medicine and  
 Biomedical Sciences**  
 Homeostatic Regulation  
 of Peripheral Oscillators via Autonomic Circuitry  
 \$1,761,617 ..... NIH-NINDS  
 Sollars, Patricia ..... Veterinary Medicine and Biomedical Sciences

**Pope, Kevin** **Natural Resources**  
 Human Dimensions of Nebraska's Fisheries  
 \$2,165,236 ..... Nebraska Game and Parks Commission  
 Chizinski, Christopher ..... Natural Resources

**Qiao, Wei** **Electrical and Computer Engineering**

An Online Intelligent Prognostic Health Monitoring System for Wind Turbines

\$1,499,981 ..... DOE  
Hudgins, Jerry ..... Electrical and Computer Engineering  
Qu, Liyan ..... Electrical and Computer Engineering

**Rajca, Andrzej** **Chemistry**

Synthesis of Metal-Free Magnetic Resonance Imaging Contrast Agents

\$1,208,299 ..... NIH-NIBIB  
Rajca, Suchada ..... Chemistry

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

Autoimmunity in the Mediation of Infectious Myocarditis

\$1,365,031 ..... NIH-NHLBI  
Riethoven, Jean-Jack ..... Biotechnology  
Steffen, David ..... Veterinary Medicine and Biomedical Sciences

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

Midwest States Regional Pooled Fund Program

\$1,095,000 ..... Nebraska Department of Transportation  
Bielenberg, Robert ..... Midwest Roadside Safety Facility  
Faller, Ronald ..... Midwest Roadside Safety Facility

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

Traffic Calming Elements for Entry Control Facility Threat Delay and Containment

\$3,706,933 ..... National Strategic Research Institute  
Faller, Ronald ..... Civil Engineering/ Nebraska Transportation Center  
Reid, John ..... Mechanical & Materials Engineering/ Nebraska Transportation Center

Transportation Infrastructure - Visualizations & ITS Laboratory  
\$3,171,651 ..... DOT-FHWA through Nebraska Department of Transportation  
Faller, Ronald ..... Civil Engineering/Midwest Roadside Safety Facility

UTC Tier 1 with University of Texas Pan American  
\$1,262,880 ..... DOT-FHWA through University of Texas-Pan-American  
Khattak, Aemal ..... Civil Engineering

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

UNL Educational Talent Search

\$2,085,174 ..... ED

**Savaiano, Mackenzie** **Special Education and Communication Disorders**

\*Mid-Plains Professional Upgrade Partnership - Sensory Disabilities  
\$1,082,718 ..... ED  
Thomas, Anne ..... Special Education and Communication Disorders

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

Nebraska Nanoscale Facility of NNCI

\$3,494,096 ..... NSF  
Binek, Christian ..... Physics and Astronomy/Nebraska Center for Materials and Nanoscience  
Lai, Rebecca ..... Chemistry/Nebraska Center for Materials and Nanoscience  
Liou, Sy-Hwang ..... Physics and Astronomy/Nebraska Center for Materials and Nanoscience  
Shield, Jeffrey ..... Mechanical & Materials Engineering/ Nebraska Center for Materials and Nanoscience

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

**Sheridan, Susan** **Educational Psychology/ Nebraska Center for Research on Children, Youth, Families and Schools/ Buffett Early Childhood Institute**

Early Learning Contexts in Rural and Urban Nebraska

\$4,499,878 ..... ED-IES  
Bovaird, James ..... Educational Psychology/ Nebraska Center for Research on Children, Youth, Families and Schools/ Buffett Early Childhood Institute  
DeKraai, Mark ..... Public Policy Center/ Nebraska Center for Research on Children, Youth, Families and Schools/ Buffett Early Childhood Institute  
Iruka Thompson, Iheoma ..... Buffett Early Childhood Institute/ Nebraska Center for Research on Children, Youth, Families and Schools  
Knoche, Lisa ..... Nebraska Center for Research on Children, Youth, Families and Schools/ Buffett Early Childhood Institute



A Randomized Trial of Conjoint Behavioral Consultation (CBC)  
with Latino Students: A Replication Study  
\$3,499,987 ..... ED-IES  
Bovaird, James ..... Educational Psychology  
Wheeler, Lorey ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Witte, Amanda ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

Early Learning Network Lead  
\$1,999,987 ..... ED  
Knoche, Lisa ..... 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  
Bovaird, James ..... Educational Psychology/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Clarke, Brandy ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Edwards, Carolyn ..... Child, Youth and Family Studies/Psychology  
Knoche, Lisa ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Marvin, Christine ..... Special Education and  
Communication Disorders

**Shulski, Martha** **Natural Resources**  
Regional Climate Services Support in the High Plains Region  
\$2,232,265 ..... DOC-NOAA  
Umphlett, Natalie ..... Natural Resources

**Smith, Wendy** **Mathematics/Center for Science,  
Mathematics and Computer Education**  
\*Nebraska Partnership TEAMS  
(Teaching to Enhance Achievement in Mathematics and Science)  
\$1,062,400 ..... ED through Nebraska Department of Education  
Arthurs, Leilani ..... Center for Science, Mathematics  
and Computer Education/  
Earth and Atmospheric Sciences  
Heaton, Ruth ..... Teaching, Learning and Teacher Education  
Homp, Michelle ..... Center for Science, Mathematics  
and Computer Education  
Lai, Yvonne ..... Center for Science, Mathematics  
and Computer Education/Mathematics  
Lewis, Elizabeth ..... Teaching, Learning and Teacher Education  
Males, Lorraine ..... Teaching, Learning and Teacher Education

Searls, Mindi ..... Center for Science, Mathematics  
and Computer Education/  
Earth and Atmospheric Sciences  
Thomas, Amanda ..... Teaching, Learning and Teacher Education  
Thomas, Julie ..... Center for Science, Mathematics  
and Computer Education/  
Teaching, Learning and Teacher Education

Nebraska NOYCE: NSF Mathematics Teaching  
and Master Teaching Fellows Program  
\$3,000,000 ..... NSF  
Fowler, David ..... Teaching, Learning and Teacher Education  
Kauffman, Douglas ..... Educational Psychology  
Papick, Ira ..... Mathematics/Center for Science,  
Mathematics and Computer Education  
Swidler, Stephen ..... Teaching, Learning and Teacher Education

**Stains, Clifford** **Chemistry**  
\*Chemical Approaches for Interrogating  
Fundamental Biomedical Processes  
\$1,610,142 ..... NIH-NIGMS

**Starace, Anthony** **Physics and Astronomy**  
Imaging and Controlling Ultrafast Dynamics  
of Atoms, Molecules, and Nanostructures  
\$2,451,966 ..... NSF-EPSCoR  
Batelaan, Herman ..... Physics and Astronomy  
Centurion, Martin ..... Physics and Astronomy  
Fabrikant, Ilya ..... Physics and Astronomy  
Fuchs, Matthias ..... Physics and Astronomy  
Gay, Timothy ..... Physics and Astronomy  
Lu, Yongfeng ..... Electrical and Computer Engineering  
Schubert, Eva ..... Electrical and Computer Engineering  
Shadwick, Bradley ..... Physics and Astronomy  
Swanson, David ..... Holland Computing Center  
Uiterwaal, Cornelis ..... Physics and Astronomy  
Umstadter, Donald ..... Physics and Astronomy

Dynamics of Few-Body Atomic Processes  
\$2,565,804 ..... DOE

**Steadman, James** **Plant Pathology**  
Genetic Approaches to Reducing Fungal and Oomycete Soilborne  
Problems of Common Bean in Eastern and Southern Africa  
\$1,100,000 ..... USDA-NIFA  
Urrea Florez, Carlos ..... Panhandle Research and Extension Center

**Storz, Jay** **Biological Sciences**

Mutational Pleiotropy, Epistasis, and the Adaptive Evolution of Hemoglobin Function

\$1,386,044 ..... NIH-NHLBI  
Moriyama, Hideaki ..... Biological Sciences/Center for Biotechnology

**Stowell, Richard** **Biological Systems Engineering**

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

\$4,295,536 ..... USDA-NIFA  
Heemstra, Jill ..... Northeast Research and Extension Center

**Svoboda, Mark** **Natural Resources**

Development of the MENA Regional Drought Management System

\$1,025,440 ..... USAID through  
International Center for Biosaline Agriculture  
Knutson, Cody ..... Natural Resources  
Neale, Christopher..... Robert B. Daugherty Water for Food Institute  
Wardlow, Brian ..... Natural Resources  
Wilhite, Donald ..... Natural Resources

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

Open Science Grid Consortium

\$1,423,000 ..... NSF through University of Wisconsin-Madison

**Thomas, Anne** **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

**Torkelson-Trout, Alexandra** **Special Education and Communication Disorders/  
Academy for Child and Family Wellbeing**

A Missing Link to a Better Tomorrow:  
Developing Health Literacy in Transition-Age Youth  
with High Incidence Disabilities

\$1,499,994 ..... ED  
Duppung Hurley, Kristin ..... Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing  
Lambert, Matthew ..... Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing

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  
Duppung Hurley, Kristin ..... Special Education and  
Communication Disorders

**Umphlett, Natalie** **Natural Resources**

High Plains Regional Climate Center

\$1,218,437 ..... DOC-NOAA  
Sorensen, William ..... Natural Resources  
Stiles, Crystal ..... Natural Resources

**Umstadter, Donald** **Physics and Astronomy**

Low Dose Tomographic System Based on a  
Novel Narrowband, Tunable, Multi-MeV X-Ray Source

\$2,677,409 ..... National Strategic Research Institute  
Banerjee, Sudeep ..... Physics and Astronomy  
Chen, Shouyuan ..... Physics and Astronomy

Relativistic Optics: Interactions of Electrons with  
Laser Light at Highly Relativistic Intensities

\$1,499,867 ..... DoD-AFOSR  
Banerjee, Sudeep ..... Physics and Astronomy  
Chen, Shouyuan ..... Physics and Astronomy  
Fuchs, Matthias ..... Physics and Astronomy  
Shadwick, Bradley ..... Physics and Astronomy  
Starace, Anthony ..... Physics and Astronomy

Laser Produced Coherent X-Ray Sources

\$1,994,997 ..... 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

**Viesca, Kara** **Teaching, Learning and Teacher Education**

\*International Consortium for Multilingual Excellence in Education

\$2,739,661 ..... ED  
Gatti, Lauren ..... Teaching, Learning and Teacher Education  
Johnson, Aaron ..... Teaching, Learning and Teacher Education  
Kiramba, Lydia ..... Teaching, Learning and Teacher Education

**Walia, Harkamal** **Agronomy and Horticulture**  
 Physiological and Genetic Mechanisms Underlying Salt Tolerance in  
 Rice across Developmental Stages  
 \$2,035,509 .....NSF  
 Lorenz, Aaron ..... Agronomy and Horticulture  
 Samal, Ashok ..... Computer Science and Engineering  
 Wang, Dong ..... Computer Science and Engineering

**Wardlow, Brian** **Natural Resources**  
 The Quick Drought Response Index (QuickDRI):  
 An Integrated Approach to Maximizing the Use of NASA Data Sets  
 for Rapid Response Drought Monitoring  
 \$1,150,701 ..... NASA  
 Fuchs, Brian ..... Natural Resources  
 Hayes, Michael ..... Natural Resources  
 Svoboda, Mark ..... Natural Resources  
 Tadesse, Tsegaye ..... Natural Resources

**Weller, Curtis** **Extension/Biological Systems Engineering/  
 Food Science and Technology**  
 Manufacturing Extension Partnership Center for Nebraska  
 \$1,547,991 ..... DOC-NIST  
 Faller, Ronald ..... Midwest Roadside Safety Facility  
 Wei, Timothy ..... Engineering

**Whitbeck, Les** **Sociology**  
 A RCT of a Family-Centered Ojibwe Substance Abuse Prevention  
 \$3,560,784 ..... NIH-NIDA  
 Crawford, Devan ..... Sociology

**Wiebe, Matthew** **Veterinary Medicine and  
 Biomedical Sciences**  
 Mechanism of the Antiviral Activity of  
 BAF against Poxvirus and HSV-1 Infection  
 \$1,838,387 ..... NIH-NIAID

**Williams, Robert** **Mechanical & Materials Engineering**  
 \*Nebraska Industrial Assessment Center (NIAC)  
 \$1,439,589 ..... DOE  
 Dvorak, Bruce ..... Civil Engineering  
 Gogos, George ..... Mechanical & Materials Engineering

**Wilson, Mark** **Biochemistry/  
 Nebraska Center for Redox Biology**  
 Redox Regulation of DJ-1 Function  
 \$1,330,374 ..... NIH-NIGMS

**Wood, Charles** **Biological Sciences/Biochemistry/  
 Nebraska Center for Virology**  
 AIDS Malignancies Training and Research  
 International Program (AMTRIP)  
 \$1,482,515 ..... NIH-FIC

Cancer Research International Training  
 and Intervention Consortium (CRITIC)  
 \$3,745,745 ..... NIH-NCI  
 Angeletti, Peter ..... Biological Sciences  
 Minhas, Veenu ..... Nebraska Center for Virology  
 West, John ..... Nebraska Center for Virology

Neuropathogenesis and Neuroinvasiveness  
 of Subtype C Human Immunodeficiency Virus-1  
 \$1,712,314 ..... DHHS-NINDS  
 Programs in HIV & AIDS Assoc Diseases/Malignancies  
 \$2,713,284 ..... NIH-FIC

**Yamamoto, Catherine** **Student Affairs**  
 Student Support Services Program  
 \$2,495,403 ..... ED

**Zempleni, Janos** **Nutrition and Health Sciences/  
 Nebraska Center for the Prevention of  
 Obesity Diseases through Dietary Molecules**  
 Molecular Signatures of New Bioactive Compounds in Humans:  
 Cows Milk MicroRNAs  
 \$1,785,715 ..... USDA-NIFA  
 Adamec, Jiri ..... Biochemistry/  
 Nebraska Center for the Prevention of  
 Obesity Diseases through Dietary Molecules  
 Cui, Juan ..... Computer Science and Engineering/  
 Nebraska Center for the Prevention of  
 Obesity Diseases through Dietary Molecules

## Awards of \$250,000 to \$999,999

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

### **Adamec, Jiri** **Biochemistry**

Genetic & Genomic Approaches to Understanding  
Long-Distance Transport and Carbon Partitioning in Plants  
\$399,249 ..... NSF through University of Missouri

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

Strain Driven Dynamics of Phase Transitions  
in Oxide Antiferromagnets  
\$550,000 ..... NSF  
Binek, Christian ..... Physics and Astronomy  
Hong, Xia ..... Physics and Astronomy

### **Ahn, Changbum** **Durham School of Architectural Engineering and Construction**

Revealing Hidden Safety Hazards Using Workers'  
Collective Bodily and Behavioral Response Patterns  
\$427,999 ..... NSF  
Stentz, Terry ..... Durham School of Architectural  
Engineering and Construction  
Vuran, Mehmet ..... Computer Science and Engineering

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

Growing Healthy Kids through Healthy Communities  
\$947,093 ..... USDA-AFRI  
Bergman, Gary ..... Southeast Research and Extension Center  
Food Safety for Diverse Families with Young Children  
\$554,302 ..... USDA-NIFA

### **Alexander, Dennis** **Electrical and Computer Engineering**

\*Instrumentation for Understanding and Controlling Surface  
Chemistry during Femtosecond Laser Surface Processing  
\$961,830 ..... DoD-ONR-DURIP  
Ianno, Natale ..... Electrical and Computer Engineering  
Zuhlke, Craig ..... Electrical and Computer Engineering

\*Tunable Laser Source for Advanced Surface Functionalization  
\$480,616 ..... DoD-ONR-DURIP

Functionalized Metallic Surfaces for Enhanced Heat Transfer,  
Drag Reduction, and Novel Power Sources  
\$468,213 ..... National Strategic Research Institute  
Anderson, Troy ..... Electrical and Computer Engineering  
Gogos, George ..... Mechanical & Materials Engineering  
Ianno, Natale ..... Electrical and Computer Engineering  
Ndao, Sidy ..... Mechanical & Materials Engineering

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

EAGER: The Involvement of Blue Light in Plant Immunity  
\$264,899 ..... NSF  
The *Pseudomonas Syringae* Type 3 Translocon  
and the Injection of Bacterial Effectors  
across the Plant Cell Wall and Plasma Membrane  
\$499,778 ..... USDA-NIFA

### **Allen, Craig** **Natural Resources**

\*Global Change, Vulnerability and Resilience:  
Management Options for an Uncertain Future  
\$771,345 ..... DoD-SERDP  
Twidwell, Dirac ..... Agronomy and Horticulture  
Monitoring, Mapping, Risk Assessment and  
Management of Invasive Species in Nebraska  
\$350,000 ..... DOI-FWS through  
Nebraska Game and Parks Commission  
Zach, Allison ..... Natural Resources

NGPC Coordination, Mapping, Monitoring, Risk Assessment and  
Data Management of Wind Development in Nebraska  
\$438,664 ..... Nebraska Game and Parks Commission  
Fontaine, Joseph ..... Natural Resources

### **Amundsen, Keenan** **Agronomy and Horticulture**

Buffalograss Breeding, Evaluation and  
Management for Golf Course  
\$450,000 ..... U.S. Golf Association

### **Atkin, Audrey** **Biological Sciences**

Mechanisms that Protect Transcripts  
from Nonsense-Mediated mRNA Decay  
\$620,647 ..... NSF

**Avalos, George** **Mathematics**  
 Analysis and Control Theory for  
 Moving Boundary and Nonlinear Phenomena  
 in Interactive Partial Differential Equations  
 \$328,901 .....NSF  
 Toundykov, Daniel .....Mathematics

Analysis and Control of Evolutionary Plates and Elastic Structures  
 \$292,773 .....NSF  
 Toundykov, Daniel .....Mathematics

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

**Avramova, Zoya** **Biological Sciences**  
 Memory of a Drought:  
 Training Arabidopsis Plants to Withstand Dehydration Stress  
 \$763,929 .....NSF  
 Riethoven, Jean-Jack .....Center for Biotechnology

**Baenziger, P. Stephen** **Agronomy and Horticulture**  
 \*Developing the Tools and Germplasm for Hybrid Wheat  
 \$975,000 .....USDA-NIFA

**Banerjee, Simanti** **Agricultural Economics**  
 The Impacts of Conservation Auction Design on  
 Auction Performance and Community Welfare:  
 Evidence from Lab and Artefactual Experiments  
 \$498,641 .....USDA-NIFA

**Barker, Bradley** **4-H Youth Development**  
 Nebraska Wearable Technologies  
 \$984,189 .....NSF  
 Keshwani, Jennifer .....Biological Systems Engineering  
 Krehbiel, Michelle .....4-H Youth Development  
 Nelson, Carl .....Mechanical & Materials Engineering  
 Nugent Gwen .....Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Weiss, Wendy .....Textiles, Merchandising and Fashion Design

**Barletta, Raul** **Veterinary Medicine and Biomedical Sciences**  
 Genome Wide Analysis of *M. Paratuberculosis* Pathogenesis  
 \$499,981 .....USDA-NIFA

**Bartelt-Hunt, Shannon** **Civil Engineering**  
 \*REU Site: Sustainability of Horizontal Civil Networks in Rural Areas  
 \$352,698 .....NSF  
 Jones, Elizabeth .....Nebraska Transportation Center  
 Kim, Yong Rak .....Civil Engineering  
 Li, Xu .....Civil Engineering  
 Li, Yusong .....Civil Engineering  
 Linzell, Daniel .....Civil Engineering  
 Sangster, John .....Civil Engineering  
 Steelman, Joshua .....Nebraska Transportation Center

WSC Category 1: Influence of Climate and Agricultural Clustering  
 on Groundwater Contamination by Trace Organics  
 \$599,663 .....USDA-NIFA  
 Gates, John .....Earth and Atmospheric Sciences  
 Li, Xu .....Civil Engineering  
 Li, Yusong .....Civil Engineering  
 Rosenbaum, David .....Economics  
 Snow, Daniel .....Water Center  
 Tang, Zhenghong .....Community and Regional Planning Program  
 Thompson, Eric .....Bureau of Business Research

**Bashford, Gregory** **Biological Systems Engineering**  
 \*REU Site: Undergraduate Research Opportunities in  
 Biomedical Devices at the University of Nebraska–Lincoln  
 \$364,006 .....NSF  
 Nelson, Carl .....Mechanical & Materials Engineering

Neurological Consequences of Emboli Burden  
 during Cardiopulmonary Bypass  
 \$278,242 .....Gerber Foundation

**Basolo, Alexandra** **Biological Sciences**  
 The Consistency of Behavioral Plasticity  
 Across Different Selective Contexts  
 \$512,998 .....NSF

**Batelaan, Herman** **Physics and Astronomy**  
 Coherent Electron Control  
 \$398,442 .....NSF

**Becker, Donald** **Biochemistry/  
Nebraska Center for Redox Biology**

\*Coordination of Functions by Proline Metabolic Proteins  
\$273,218 . . . . . NIH-NIGMS through University of Missouri-Columbia

REU Site: Training in Redox Biology  
\$262,914 . . . . . NSF  
Stone, Julie . . . . . Biochemistry/Center for Plant Science Innovation

**Belashchenko, Kirill** **Physics and Astronomy**

First-Principles Studies of Relativistic  
Spin Interactions and Torques  
\$258,646 . . . . . NSF

**Belli, Robert** **Psychology/Gallup Research Center**

Central Plains Census Research Data Center  
\$300,000 . . . . . NSF  
Anderson, John . . . . . Economics  
Thompson, Eric . . . . . Bureau of Business Research

**Benson, John** **Natural Resources**

\*Assessment of Adult Female and Neonatal Mule Deer (*Odocoileus  
hemionus*) Survival, Movements and Habitat Use in Nebraska  
\$504,000 . . . . . Nebraska Game and Parks Commission

**Berkowitz, David** **Chemistry**

New Approaches to Catalyst Screening and Development  
\$573,522 . . . . . NSF

**Bianchini Huebner, Andreia** **Food Science and Technology**

\*Alliance for Food Security through Reduction of  
Postharvest Loss and Food Waste  
\$707,273 . . . . . USAID through Kansas State University  
Flores, Rolando . . . . . Food Science and Technology  
Hallen-Adams, Heather . . . . . Food Science and Technology  
Weller, Curtis . . . . . Biological Systems Engineering

**Billesbach, David** **Biological Systems Engineering**

The AmeriFlux Network Management Project  
\$419,578 . . . . . DOE through  
University of California-Berkeley National Lab  
SGP-Carbon Project  
\$449,800 . . . . . University of California-Berkeley National Lab

**Binek, Christian** **Physics and Astronomy/Nebraska Center  
for Materials and Nanoscience**

\*Magnetoelectrics and Spinorbitronics in  
Topological Heterostructures and Superlattices  
\$516,500 . . . . . DoD-ONR through  
University of California, Los Angeles

**Blanco, Humberto** **Agronomy and Horticulture**

\*Assessing Innovative Strategies to Maximize Cover Crop Yields  
for Biofuel across Precipitation Gradient  
\$500,000 . . . . . USDA-NIFA  
Creech, Cody . . . . . Panhandle Research and Extension Center  
Elmore, Roger . . . . . Agronomy and Horticulture  
Francis, Charles . . . . . Agronomy and Horticulture  
Koehler-Cole, Katja . . . . . Agronomy and Horticulture  
Parsons, Jay . . . . . Agricultural Economics  
Ruis, Sabrina . . . . . Agronomy and Horticulture  
Shaver, Tim . . . . . West Central Research and Extension Center  
Yang, Haishun . . . . . Agronomy and Horticulture

**Blum, Paul** **Biological Sciences**

Chromatin Modification in Archaea and  
Its Role in Gene Expression  
\$379,675 . . . . . NSF  
Van Cott, Kevin . . . . . Chemical and Biomolecular Engineering  
REU Site: Integrated Development of Bioenergy Systems  
\$416,464 . . . . . NSF  
Cerutti, Heriberto . . . . . Biological Sciences/  
Center for Plant Science Innovation

**Bobaru, Florin** **Mechanical & Materials Engineering**

Stress Corrosion Cracking: The Importance of  
Damage Evolution in the Layer Affected by Corrosion  
\$596,188 . . . . . DoD-ONR  
Tan, Li . . . . . Mechanical & Materials Engineering

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

\*Efficacy of the START-Play Program for  
Infants with Neuromotor Disorders  
\$355,392 . . . . . ED-IES through Duquesne University  
Sheridan, Susan . . . . . Educational Psychology/Nebraska Center for  
Research on Children, Youth, Families and Schools

**Brown, Deborah** **Biological Sciences/  
Nebraska Center for Virology**

\*Nebraska Research Network in Functional Genomics  
\$352,833 ..... NIH-NIGMS through UNMC  
Wood, Charles ..... Biological Sciences/Biochemistry/  
Nebraska Center for Virology

**Buan Murphy, Nicole** **Biochemistry**

EAGER: Coupling Electron Transport and  
Metabolism using Biological Routers  
\$299,615 ..... NSF

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

\*Cyber-Bio-Security:  
Securing the Emerging Domain of Biomanufacturing  
\$706,373 ..... National Strategic Research Institute

Transfer of the Ricin RTA (RVEc)  
Drug Substance Manufacturing Process  
\$291,964 ..... DoD-Army Medical Research-JVAP through  
Battelle Memorial Institute  
Johnson, Scott ..... Biological Process Development Facility

Manufacture of Recombinant Vaccine  
for Phase Clinical Trial and Toxicity Testing  
\$894,832 ..... National Strategic Research Institute  
Johnson, Scott ..... Biological Process Development Facility

**Bulling, Denise** **Public Policy Center**

\*Drought Planning Using Community Threat  
and Hazard Identification and Risk Assessment  
\$284,588 ..... DOC-NOAA  
Abdel-Monem, Tarik ..... Public Policy Center  
Bathke, Deborah ..... Natural Resources  
Bernadt, Tonya ..... Natural Resources  
Fuchs, Brian ..... Natural Resources  
Pytlik Zillig, Lisa ..... Public Policy Center  
Shank, Nancy ..... Public Policy Center  
Stiles, Crystal ..... Natural Resources  
Wall, Nicole ..... Natural Resources

Developing Nebraska's Homeland Security Planning Capacity  
\$300,000 ..... DHS through Nebraska Military Department-NEMA  
DeKraai, Mark ..... Psychology/Public Policy Center  
Speck, Kathryn ..... Public Policy Center

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

Overcoming Metabolic Bottlenecks for  
Enhanced Vitamin E Production in Crop Plants  
\$490,000 ..... USDA-NIFA

Sustainable Biofuel from the Great Plains to the Semi-Arid West:  
Improved Germplasm for Camelina Oilseed  
\$373,976 ..... DOE through Colorado State University

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

Center for Enhanced Camelina Oil (CECO)  
\$901,129 ..... DOE through Donald Danforth Plant Science Center

**Carroll, John** **Natural Resources**

Wildlife Management and Human Dimensions  
\$255,000 ..... DOI-FWS through  
Nebraska Game and Parks Commission

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

**Centurion, Martin** **Physics and Astronomy**

\*OP: Diffractive Imaging of Complex Isolated Molecules  
\$345,704 ..... NSF

Ultrafast Electron Diffraction from Aligned Molecules  
\$451,097 ..... DOE

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

Mechanisms of Small RNA-Mediated Translation Repression  
in *Chlamydomonas*  
\$560,000 ..... NSF

**Cheung, Chin Li** **Chemistry**

Defect Chemistry of Metal Oxides for  
Catalytic Reactive Oxygen Species Generation  
\$406,283 ..... NSF

**Chizinski, Christopher** **Natural Resources**

Comprehensive Evaluation of the Nebraska Outdoor Enthusiast  
\$288,371 .....DOI-FWS through  
Nebraska Game and Parks Commission  
Fontaine, Joseph ..... Natural Resources  
Pope, Kevin ..... Natural Resources

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

RI: Small: Harnessing the Power of Constraint Propagation  
by Controlling Consistency Levels and Synthesizing Constraints  
\$468,000 .....NSF

**Christensen, Alan** **Biological Sciences**

Novel Mechanisms of Plant Mitochondrial DNA Repair  
\$660,788 .....NSF

**Chung, Soonkyu** **Nutrition and Health Sciences/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules**

\*Epigenetic Regulation of Obesity and Metainflammation by  
Red Raspberry Ellagic Acid and its Microbiota-derived Metabolites,  
the Urolithins  
\$469,949 ..... USDA-NIFA  
Ramer-Tait, Amanda ..... Food Science and Technology/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules

**Ciobanu, Daniel** **Animal Science**

\*Investigation of Host Genetic Role in PCV2 and PRRSV Susceptibility  
\$459,200 ..... USDA-NIFA  
Kachman, Stephen ..... Statistics  
Vu, Hiep .....Nebraska Center for Virology

**Claes, Daniel** **Physics and Astronomy**

Strategies: Action at a Distance  
\$550,000 .....NSF  
Pedersen, Jon ..... Teaching, Learning and Teacher Education/  
Center for Science, Mathematics  
and Computer Education  
Snow, Gregory ..... Physics and Astronomy  
Welch, Greg ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

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

ATD: Statistical Ensembles  
for the Identification of Bacterial Genomes  
\$495,318 .....NSF  
Clarke, Bertrand ..... Statistics

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

\*Novel Technologies to Solve the Water Use Problem of  
High Yielding C4 Bioenergy and Bioproduct Feedstocks  
\$477,321 .....DOE through  
University of Illinois at Urbana-Champaign

A Resource for Functional Genomics to  
Support Soybean Genetics and Breeding  
\$267,240 ..... NSF through University of Georgia

Testing Replacement of Fishmeal and Fish Oil  
in *Seriola Rivoliiana* (Kampachi) Diet  
with Soy-Based Protein and Oil  
\$276,179 .....United Soybean Board/Smith/Bucklin

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

II-NEW: COMET: A Web Infrastructure for Research and  
Experimentation in User Interactive Event-Driven Testing  
\$332,104 .....NSF

SHF: Medium: Regression Testing Techniques  
for Real-World Software Systems  
\$332,333 .....NSF

**Comfort, Steven** **Natural Resources**

\*STTR: Improving the Treatment of Contaminated Aquifers by  
Developing Direct Push Slow-release Oxidant Candles with  
Pneumatic Circulators  
\$395,641 ..... NIH-NIEHS  
Li, Yusong .....Civil Engineering

**Cornelius, Christopher** **Chemical and Biomolecular Engineering**

Nanomanufacturing of Multicomponent Inorganic Functional  
Coatings and Fibers Using Sol-Gel Processing  
\$297,543 .....NSF



**Couch, Brian** **Biological Sciences**

\*Cultivating Active Learners by Enabling Instructors to Monitor and Enhance Student Buy-in and Utilization of Research-based Instructional Strategies  
\$299,920 .....NSF  
Brassil, Chad .....Biological Sciences

Impact of the Summer Institution on Faculty Teaching and Student Achievement  
\$393,068 ..... NSF through University of Colorado

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

STTR: Infant Assessment of Early Communication Risk Factors: The ECBS  
\$600,123 .....NIH-NIDCD through Brookes Publishing Company

**Cui, Bai** **Mechanical & Materials Engineering**

Mechanisms of Toughening Structural Ceramics by Thermal Engineered Laser Shock Peening  
\$348,336 .....NSF  
Lu, Yongfeng ..... Electrical and Computer Engineering  
Nastasi, Michael .... Nebraska Center for Energy Sciences Research

**Cupp, Andrea** **Animal Science**

Causes and Consequences of Androgen Excess on Oocyte Quality  
\$499,994 ..... USDA-NIFA  
Wood, Jennifer ..... Animal Science

**DeLong, John** **Biological Sciences**

\*Understanding the Consequences of Body Size Evolution in Ecological Communities  
\$450,000 ..... James S. McDonnell Foundation

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

\*At the Water's Edge:  
Installation and Optimization of Robotic Sensing Systems  
\$759,400 ..... USDA-NIFA  
Bradley, Justin .....Computer Science and Engineering

Co-Aerial-Ecologist:  
Robotic Water Sampling and Sensing in the Wild  
\$956,210 ..... USDA-NIFA  
Burgin, Amy ..... Natural Resources  
Elbaum, Sebastian ..... Computer Science and Engineering  
Waite, Matthew ..... Journalism and Mass Communications

CSR: Small: Adaptive and Autonomous Energy Management on a Sensor Network Using Aerial Robots  
\$390,000 .....NSF

**DiRusso, Concetta** **Biochemistry**

Activators of Lipid Accumulation in Algae  
\$550,000 .....NSF  
Adamec, Jiri ..... Biochemistry  
Cerny, Ronald ..... Chemistry

**Dodd, Michael** **Psychology**

Task Switching and Visual Behavior  
\$581,696 .....NIH-NEI  
Hoffman, Lesa .....Psychology

**Dodds, Eric** **Chemistry**

Gas-Phase Structural Analysis of Metal Cationized Carbohydrates  
\$360,000 .....NSF

**Dombrowski, Kirk** **Sociology**

REU Site: Social Network Analysis for Solving Minority Health Disparities  
\$349,996 .....NSF  
Anderson-Knott, Mindy ..... Statistics

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

\*Spin and Dipole Ordering at Molecular Film Interfaces  
\$442,944 .....NSF

\*Doped Boron Carbide Polymers: Fundamental Studies of a Novel Class of Materials for Enhanced Radiation Detection  
\$363,250 .....DoD-DTRA

Voltage-Controlled, Low-Power Nonvolatile Spintronic Memory  
\$899,830 ..... Semiconductor Research Corp. through University of Minnesota  
Binek, Christian ..... Physics and Astronomy

**Du, Liangcheng** **Chemistry**

Discovering New Anti-Infective Agents from *Lyso bacter*  
\$838,922 .....NIH-NIAID

**Duncan, Daniel** **Nebraska Innovation Campus**

Biotech Connector  
\$750,000 .....DOC-ED

**Duppong Hurley, Kristin** **Special Education and Communication Disorders**  
 University of Nebraska's Post-Doctoral Program  
 in Emotional Disturbance  
 \$643,776 .....ED  
 Torkelson-Trout, Alexandra ..... Special Education and Communication Disorders

Randomized Clinical Trial of the Boys Town In-Home Program  
 \$706,989 ..... Father Flanagan's Boys' Home

**Dussault, Patrick** **Chemistry**  
 A New Paradigm for Ether Synthesis  
 \$390,000 .....NSF

Effect of Composition and Particle Size in Oxidation Catalysis  
 by Metal Oxide Solid Solution Nanoparticles  
 \$560,358 .....NSF

**Dvorak, Bruce** **Civil Engineering**  
 Water Innovation Network for  
 Sustainable Small Systems (WINSSS)  
 \$338,160 ..... EPA through University of Massachusetts-Amherst  
 Lai, Rebecca ..... Chemistry  
 Ray, Chittaranjan ..... Civil Engineering

**Dwyer, Matthew** **Computer Science and Engineering**  
 SHF: Small: Measurable Program Analysis  
 \$507,653 .....NSF

**Dzenis, Yuris** **Mechanical & Materials Engineering**  
 Bulk Nanostructured Materials  
 for Navy Applications  
 \$702,271 ..... DoD-ONR

Biomimetic Nanostructured Materials  
 Based on Synthetic Spider Silk  
 \$300,000 .....NSF

GOALI: Nanomanufacturing of Ultrahigh-Performance Continuous  
 Carbon Nanofibers and Assemblies  
 \$299,947 .....NSF  
 Papkov, Dimitry ..... Mechanical & Materials Engineering

**Elbaum, Sebastian** **Computer Science and Engineering**  
 SHF: Small: Testing in the Presence of Continuous Change  
 \$425,000 .....NSF  
 Rothermel, Gregg ..... Computer Science and Engineering

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

**Elkins, Lynne** **Earth and Atmospheric Sciences**  
 \*Assessing Segment-scale Compositional Control over  
 Slow-spreading Ridge Morphology  
 \$259,150 .....NSF

**Enders, Axel** **Physics and Astronomy**  
 UNO-NASA Space Grant Consortium:  
 Neutron Voltaics for Deep Space Missions  
 \$546,569 ..... NASA through UNO  
 Dowben, Peter ..... Physics and Astronomy/Nebraska  
 Center for Materials and Nanoscience  
 Ianno, Natale ..... Electrical and Computer Engineering

**Erickson, Galen** **Animal Science**  
 \*Evaluation of Algal Biomass as Potential Cattle Feed  
 \$284,091 .....Evonik Industries  
 Brodersen, Bruce ..... Veterinary Medicine and Biomedical Sciences  
 Loy, J. Dustin ..... Veterinary Medicine and Biomedical Sciences  
 Watson, Andrea ..... Animal Science

**Eskridge, Kent** **Statistics**  
 GAANN Fellowship Program for Statistics  
 \$887,202 .....ED

**Espy, Kimberly** **Psychology**  
 Neurocognitive Mechanisms of Developing  
 Executive Control and Risk for ADHD in Preschool  
 \$415,250 .....NIH-NIMH  
 Garza, John ..... Research and Economic Development  
 James, Tiffany ..... Research and Economic Development  
 Molfese, Dennis ..... Psychology  
 Nelson, Jennifer ..... Research and Economic Development

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

\*MASH TL-4 Steel-tube Bridge Rail and Guardrail Transition  
 \$926,851 ..... DOT-IL DOT/OH DOT through  
 Nebraska Department of Transportation  
 Bielenberg, Robert ..... Midwest Roadside Safety Facility  
 Rosenbaugh, Scott ..... Midwest Roadside Safety Facility  
 Schmidt, Jennifer ..... Midwest Roadside Safety Facility

\*Test Level 3 Dynamic Testing and Evaluation of  
 MnDOT's Noise Wall System under AASHTO MASH 2016  
 \$305,115 ..... DOT-MN DOT through  
 Nebraska Department of Transportation  
 Holloway, James ..... Midwest Roadside Safety Facility  
 Lechtenberg, Karla ..... Midwest Roadside Safety Facility  
 Rosenbaugh, Scott ..... Midwest Roadside Safety Facility  
 Schmidt, Jennifer ..... Midwest Roadside Safety Facility

\*Dynamic Testing and Evaluation of a New York DOT  
 Prototype Box Beam Guardrail End Terminal System  
 under AASHTO MASH 2016 TL-3 Guidelines  
 \$265,250 ..... New York State Department of Transportation  
 through Nebraska Department of Transportation  
 Lechtenberg, Karla ..... Midwest Roadside Safety Facility  
 Reid, John ..... Mechanical & Materials Engineering  
 Schmidt, Jennifer ..... Midwest Roadside Safety Facility

Evaluation of New Jersey TCB Performance under MASH TL-3  
 \$702,369 ..... DOT-FHWA through  
 Nebraska Department of Transportation  
 Bielenberg, Robert ..... Midwest Roadside Safety Facility  
 Lechtenberg, Karla ..... Midwest Roadside Safety Facility  
 Reid, John ..... Mechanical & Materials Engineering  
 Rosenbaum, Scott ..... Midwest Roadside Safety Facility

Guidelines for Placement of Breakaway Light Poles  
 behind Midwest Guardrail System  
 \$262,603 ..... DOT-FHWA through  
 Nebraska Department of Transportation  
 Bielenberg, Robert ..... Midwest Roadside Safety Facility  
 Reid, John ..... Mechanical & Materials Engineering

Iowa DOT Combination Bridge Separation  
 Barrier with Bicycle Railing  
 \$254,445 ..... DOT-FHWA through  
 Nebraska Department of Transportation  
 Bielenberg, Robert ..... Midwest Roadside Safety Facility  
 Reid, John ..... Mechanical & Materials Engineering  
 Rosenbaugh, Scott ..... Midwest Roadside Safety Facility

Development of Concrete Bridge Rails, Median Barriers,  
 and Roadside Barriers for Test Level 5 of  
 AASHTO MASH in Manitoba, Canada  
 \$297,890 ..... Government of Manitoba-  
 Infrastructure & Transportation  
 Rosenbaugh, Scott ..... Midwest Roadside Safety Facility  
 Schmidt, Jennifer ..... Midwest Roadside Safety Facility

Phase II Conceptual Development of an Impact  
 Attenuation System for Intersecting Roadways  
 \$256,184 ..... DOT-FHWA through  
 Nebraska Department of Transportation  
 Bielenberg, Robert ..... Midwest Roadside Safety Facility  
 Reid, John ..... Mechanical & Materials Engineering

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

**Fernando, Samodha****Animal Science**

\*Improving Air Quality by Reducing Methane Emissions from Cattle  
 \$348,298 ..... Nebraska Environmental Trust  
 Erickson, Galen ..... Animal Science  
 Kononoff, Paul ..... Animal Science

Dietary Intervention and Microbial Community Analysis  
 toward Methane Mitigation  
 \$749,941 ..... USDA-AFRI  
 Erickson, Galen ..... Animal Science  
 Jenkins, Karla ..... Panhandle Research and Extension Center  
 Klopfenstein, Terry ..... Animal Science  
 Luebbe, Matthew ..... Panhandle Research and Extension Center  
 Rasby, Richard ..... Animal Science

**Fielding, Christopher****Earth and Atmospheric Sciences**

ELT Collaborative Research:  
 Causes and Effects of the Permian-Triassic Biotic Crisis  
 Inferred from Continental Margin Sections and Modeling  
 \$400,157 ..... NSF  
 Frank, Tracy ..... Earth and Atmospheric Sciences

**Fontaine, Joseph** **Natural Resources**

Climatic Constraints on Bobwhite Quail  
Populations along Their Northern Extent  
\$424,913 ..... DOI-FWS through  
Nebraska Game and Parks Commission  
Bachman, Gwendolyn ..... Biological Sciences

Assessing the Effects of Habitat Incentive Programs and  
Public Access Programs on Pheasant Population  
Dynamics and Hunter Harvest  
\$818,704 ..... Nebraska Game and Parks Commission  
Powell, Larkin ..... Natural Resources

**Forbes, Cory** **Natural Resources/  
Robert B. Daugherty Water for Food Institute**

IUSE: Fostering Undergraduate Students'  
Disciplinary Learning and Water Literacy  
\$299,018 ..... NSF  
Brozovic, Nicholas ..... Agricultural Economics/  
Robert B. Daugherty Water for Food Institute  
Franz, Trenton ..... Natural Resources/  
Robert B. Daugherty Water for Food Institute

Modeling Hydrologic Systems in Elementary Science  
\$327,537 ..... NSF

**Francisco, Joseph** **Chemistry**

Radical Chemistry on Cloud and Aerosol Surfaces  
\$269,915 ..... NSF

**Franzen-Castle, Lisa** **Nutrition and Health Sciences**

\*iCook: A 4-H Program to Promote Culinary Skills and  
Family Meals for Obesity Prevention  
\$332,321 ..... USDA-NIFA through University of Maine  
Krehbiel, Michelle ..... Extension

Voices for Food  
\$618,314 ..... USDA-NIFA through South Dakota State University  
Kroupa, Michelle ..... Northeast Research and Extension Center  
Sale, Brenda ..... Northeast Research and Extension Center

**Fritz, Sherilyn** **Earth and Atmospheric Sciences/  
Biological Sciences**

\*FESD Type 1: The Dynamics of Mountains, Landscapes,  
and Climate in the Distribution and Generation of  
Biodiversity of the Amazon/Andean Forest  
\$378,847 ..... NSF through Duke University

**Fuchs, Brian** **Natural Resources**

\*Drought Information Services for Agriculture  
across the United States  
\$827,501 ..... USDA-OCE  
Bathke, Deborah ..... Natural Resources  
Svoboda, Mark ..... Natural Resources  
Tadesse, Tsegaye ..... Natural Resources

**Fuchs, Matthias** **Physics and Astronomy**

\*Nonlinear X-Ray Optics  
\$594,760 ..... DOE

**Gamon, John** **Natural Resources**

Evaluating Growing Season Length and Productivity across the  
ABoVE Domain Using Novel Satellite Indices and a Ground Sensor  
\$665,893 ..... NASA  
Billesbach, David ..... Biological Systems Engineering

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

CSBR: Natural History: Securing and Digitizing Data for  
Parasite Biodiversity Specimens in the Manter Laboratory  
\$499,991 ..... NSF  
Racz, Gabor ..... University of Nebraska State Museum

**Gaussoin, Roch** **Agronomy and Horticulture**

Development of Quality Protein Popcorn as a Non-GMO  
Approach to Enhanced Nutritional Quality,  
Pop Volume and Flavor Profile  
\$694,200 ..... ConAgra  
Holding, David ..... Agronomy and Horticulture  
Rodriguez, Oscar ..... Agronomy and Horticulture  
Rose, Devin ..... Food Science and Technology

**Gay, Timothy** **Physics and Astronomy**

\*Accurate Electron Spin Optical Polarimetry (AESOP)  
\$565,000 ..... NSF  
Polarized Electron Physics  
\$642,714 ..... NSF

<b>Ge, Yufeng</b>	<b>Biological Systems Engineering</b>
*VisNIR-Based Multi-sensing Penetrometer for in situ High-resolution Depth Sensing of Soils	
\$499,896	USDA-NIFA
*PAPM EAGER: Transitioning to the Next-generation Plant Phenotyping Robots	
\$285,000	USDA-NIFA
Pitla, Santosh	Biological Systems Engineering
Schnable, James	Biological Systems Engineering
IDBR: Type A: Multispectral Laser 3D Ranging and Imaging System for Plant Phenotyping	
\$534,194	NSF
Walia, Harkamal	Agronomy and Horticulture
Yu, Hongfeng	Computer Science and Engineering
<b>Gibson, Robert</b>	<b>Biological Sciences</b>
GAANN Integrative Ecology and Evolution	
\$544,420	ED
<b>Gogos, George</b>	<b>Mechanical &amp; Materials Engineering</b>
Highly Permanent Biomimetic Micro/Nanostructured Surfaces by Femtosecond Laser Surface Processing for Thermal Management Systems	
\$563,131	NASA-EPSCoR through UNO
Alexander, Dennis	Electrical and Computer Engineering
Anderson, Troy	Electrical and Computer Engineering
Ianno, Natale	Electrical and Computer Engineering
Ndao, Sidy	Mechanical & Materials Engineering
Shield, Jeffrey	Mechanical & Materials Engineering
<b>Golick, Douglas</b>	<b>Entomology</b>
*Community as Habitat: Nebraska Communities Supporting Pollinators and Landscape Diversity through Native Waterwise Plant Habitats	
\$364,520	Nebraska Environmental Trust
Evertson, Justin	Nebraska State Forest Service
<b>Goosby, Bridget</b>	<b>Sociology</b>
Intergenerational Transmission of Race Disparities in Health	
\$546,345	NIH-NICHD
<b>Graef, George</b>	<b>Agronomy and Horticulture</b>
Soybean Breeding and Genetic Studies for Nebraska	
\$266,813	Nebraska Soybean Board

<b>Grassini, Patricio</b>	<b>Agronomy and Horticulture</b>
Benchmarking Soybean Production Systems in the North-Central USA	
\$872,920	North Central Soybean Research Program
<b>Griep, Mark</b>	<b>Chemistry</b>
Framing the Chemistry Curriculum	
\$749,285	NSF
REU Site: Research Experiences for Undergraduates in Chemical Assembly at the University of Nebraska	
\$270,000	NSF
<b>Grosskopf, Kevin</b>	<b>Durham School of Architectural Engineering and Construction</b>
IMPACT - Trade Adjustment Assistance Grant	
\$725,842	DOL through Central Community College
Harms, Peter	Management
Luthans, Fred	Management
Shen, Zhigang	Durham School of Architectural Engineering and Construction
Stentz, Terry	Durham School of Architectural Engineering and Construction
Torraco, Richard	Educational Administration
<b>Gruverman, Alexei</b>	<b>Physics and Astronomy/ Nebraska Center for Materials and Nanoscience</b>
*Domain Wall Engineering for Novel Nanoelectronics	
\$338,422	NSF
<b>Guo, Jiantao</b>	<b>Chemistry</b>
Mechanistic Study of Cellulosome through Reprogramming Its Assembly	
\$312,541	NSF
Niu, Wei	Chemistry
<b>Guretzky, John</b>	<b>Agronomy and Horticulture</b>
Developing Research and Extension Skills of Students in Integrated Agronomic Systems	
\$275,667	USDA-NIFA
Blanco, Humberto	Agronomy and Horticulture
Elmore, Roger	Agronomy and Horticulture
Howell Smith, Michelle	Nebraska Center for Research on Children, Youth, Families and Schools
Redfearn, Daren	Agronomy and Horticulture

**Hage, David**

Instrumentation Development:  
Label-Free and Rapid 3D-Nanostructure  
Ultrathin-Layer Imaging Chromatography  
\$402,483 .....NSF

Chromatographic Automation of Immunoassays  
\$809,387 .....NIH-NIGMS

**Han, Ming****Electrical and Computer Engineering**

\*Mechanically Durable and Thermally Stable  
Fiber Bragg Gratings for Sensing Applications  
\$300,872 ..... DoD-ONR

Femtosecond Laser System for Fiber-Optic Sensor Fabrication  
\$329,117 ..... DoD-ONR-DURIP

Adaptive and Sensitive Fiber-Optic Sensor Systems for  
Detection of Acoustic Emissions in Vibrational Environment  
\$300,810 ..... DoD-ONR

Multiplexed Fiber-Ring Laser Acoustic Emission  
Sensors for Structural Health Monitoring  
\$300,270 ..... DoD-ONR

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

Integrating Multiple Analyses to  
Understand Gene Regulatory Networks  
\$496,000 .....NSF

**Harwood, David****Earth and Atmospheric Sciences/  
Antarctic Drilling Program**

\*Subglacial Antarctic Lakes Scientific Access (SALSA):  
Integrated Study of Carbon Cycling in  
Hydrologically Active Subglacial Environments  
\$299,175 .....NSF  
McManis, James ..... Engineering/Antarctic Drilling Program

SALSA Project Hot Water Drill Operations with  
WISSARD Main Drill and Parts of UNL Roving Drill (Prime Mover)  
\$356,894 ..... NSF through Dartmouth College  
McManis, James ..... Engineering

Developing New Science and Technology for Subglacial Studies  
of the Whillans Ice Plain and West Antarctic Ice Sheet  
\$616,775 .....NSF

**Chemistry**

SIMPLE: Sub-Ice Investigation of Marine  
and Planetary-Analog Ecosystems  
\$383,297 .....NASA through University of Texas at Austin

**Hauptman, Kelli****Center on Children, Families and the Law**

Court Improvement Project Infant/Toddler Program  
\$655,843 ..... The Sherwood Foundation®  
Cole-Mossman, Jennie ..... Center on Children, Families and the Law

**Hayes, Michael****Natural Resources**

Drought Information Services for  
Agriculture across the United States  
\$839,442 ..... USDA-OCE  
Fuchs, Brian ..... Natural Resources  
Svoboda, Mark ..... Natural Resources

Drought Risk Management for the United States  
\$693,696 ..... DOC-NOAA through University of Oklahoma  
Bathke, Deborah ..... Earth and Atmospheric Sciences  
Fuchs, Brian ..... Natural Resources  
Knutson, Cody ..... Natural Resources  
Svoboda, Mark ..... Natural Resources  
Tadesse, Tsegaye ..... Natural Resources

**Heaton, Ruth****Teaching, Learning and Teacher Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools/  
Center for Science, Mathematics  
and Computer Education**

Math Early On II  
\$662,227 ..... Buffett Early Childhood Fund  
Leeper Miller, Jennifer ..... Child, Youth and Family Studies  
Molfese, Victoria ..... Child, Youth and Family Studies/  
Nebraska Center for Research on  
Children, Youth, Families and Schools/  
Center for Science, Mathematics  
and Computer Education

**Hebert, Michael****Special Education and  
Communication Disorders**

Structures: Improving the Reading Comprehension  
of Struggling Readers in the 4th Grade through  
Expository Text Structure and Writing  
\$399,073 .....ED  
Nelson, J. Ron ..... Special Education and  
Communication Disorders

**Hebets, Eileen** **Biological Sciences**  
 A Comparative Systems Approach to Complex Animal Signaling  
 \$645,000 .....NSF

Navigation and the Neural Integration of  
 Multimodal Sensory Information in the Brain of an Arthropod  
 \$285,215 .....NSF

**Heng-Moss, Tiffany** **Entomology**  
 Mitigating Insect Herbivory of Warm-Season Bioenergy Grasses –  
 Getting Ahead of the Curve  
 \$277,435 .....USDA-ARS  
 Bradshaw, Jeffrey .....Entomology  
 Lagrimini, Mark .....Agronomy and Horticulture

**Hermiller, Susan** **Mathematics**  
 Topology and Geometry of Cayley Graphs for Groups  
 \$251,096 .....NSF

**Holding, David** **Agronomy and Horticulture**  
 A Novel Functional Genomics Platform  
 for Dissecting Maize Kernel Maturation and Protein Quality  
 \$412,985 .....USDA-NIFA  
 Zhang, Chi .....Biological Sciences

**Hong, Xia** **Physics and Astronomy/  
 Nebraska Center for Materials and Nanoscience**  
 \*Nanoscale Ferroelectric Control of Novel Electronic States in  
 Layered Two-dimensional Materials  
 \$750,262 .....DOE

**Hope, Debra** **Psychology**  
 \*Community Partnership to Identify Intervention Targets  
 to Improve Mental Health Services to Transgender Individuals  
 in Underserved Areas  
 \$399,418 .....NIH-NIMH

**Houston, Adam** **Earth and Atmospheric Sciences**  
 \*Investigating Soil Moisture-Convective Precipitation Feedbacks  
 with Soil Moisture Active Passive  
 \$402,364 .....NASA through The Ohio State University

NRI: Targeted Observation of Severe Local Storms  
 Using Aerial Robots  
 \$425,652 .....NSF

**Huang, Jinsong** **Mechanical & Materials Engineering**  
 RII Track-2 FEC: Low-Cost, Efficient Next-Generation Solar Cells  
 for the Coming Clean Energy Revolution  
 \$654,000 .....NSF through Brown University  
 Hong, Xia .....Physics and Astronomy  
 Zeng, Xiao .....Chemistry

Combined Macroscopic and Nanoscopic Studies of the  
 Photovoltaic Behavior of Organic Perovskite Solar Cells  
 \$480,000 .....NSF  
 Gruerman, Alexei .....Physics and Astronomy

ARI-MA: Trap-Triggered Organic Field Effect Transistor  
 as Low-Cost, Uncooled, Highly Sensitive Solid-State  
 Photodetector for Radiation Sensing  
 \$450,000 .....NSF

Room-Temperature Operation Single-Photon Detectors Based  
 on Nanoparticle Super-Gated Organic Field Effect Transistors  
 \$305,000 .....NSF

**Hunt, Thomas** **Northeast Research and Extension Center**  
 \*Evaluating the Efficacy of Insect Resistance Management Plans for  
 Delaying the Onset of *Bacillus Thuringiensis* Toxin Resistance  
 in Western Bean Cutworm Populations  
 \$492,497 .....USDA-NIFA  
 Peterson, Julie .....West Central Research and Extension Center

**Hunt, William** **Anthropology**  
 Pilot Project: A Multidisciplinary Exploratory Study  
 of Alpine Cairns, Baranof Island, Southeast Alaska  
 \$290,992 .....NSF  
 Hartley, Ralph .....Anthropology

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

**Ianno, Natale** **Electrical and Computer Engineering**  
 REU Site: Research Experience for Undergraduates in  
 Nanohybrid Functional Materials  
 \$306,032 .....NSF

**Ihlo, Tanya** **Nebraska Center for Research on Children, Youth, Families and Schools**  
 Nebraska Multi-Tiered System of Support Implementation Support Team  
 \$600,270 ..... ED through Nebraska Department of Education

**Irmak, Suat** **Biological Systems Engineering**  
 Continuous Evapotranspiration and Consumptive Water Use Measurements of Various Cropping Systems and Natural Ecosystems  
 \$355,956 ..... Nebraska Environmental Trust

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

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

**Iyengar, Srikanth** **Mathematics**  
 Commutative Algebra: Homological and Homotopical Aspects  
 \$435,785 ..... NSF

**Jackson-Ziems, Tamra** **Plant Pathology**  
 Uncovering the Genetic Basis of Tolerance to Goss's Wilt in North American Maize  
 \$293,431 ..... Dow AgroSciences

**Jhala, Amitkumar** **Agronomy and Horticulture**  
 Pollen-Mediated Gene Flow from Acetolactate Synthase-Inhibiting Herbicide-Resistant Sorghum to Johnsongrass  
 \$296,286 ..... E. I. Dupont  
 Lindquist, John ..... Agronomy and Horticulture

**Josiah, Scott** **Nebraska State Forest Service**  
 \*Community Adjacent Fuels Award  
 \$572,654 ..... USDA-FS

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

Hazardous Mitigation Treatments on Non-Federal Lands  
 \$431,970 ..... USDA-FS

Conservation and Stewardship Education for Nebraska Educators and Youth  
 \$295,781 ..... USDA-FS

**Kelling, Clayton** **Veterinary Medicine and Biomedical Sciences**  
 \*Establishing One Health Best Practices for Range Bison Herds  
 \$400,000 ..... DHHS-CDC-NIOSH

**Khan, Bilal** **Sociology**  
 \*Applying Behavioral Ecological Network Models to Enhance Distributed Spectrum Access in Cognitive Radio  
 \$296,969 ..... NSF  
 Dombrowski, Kirk ..... Sociology

**Kilic, Ayse** **Civil Engineering/Natural Resources**  
 Developing and Enhancing Landsat Derived Evapotranspiration and Surface Energy Products  
 \$309,900 ..... DOI-GS through University of Idaho

CPNRD Mapping Evapotranspiration with High Resolution Satellite Data  
 \$585,832 ..... Central Platte NRD

**Kim, Yong Rak** **Civil Engineering/Nebraska Transportation Center**  
 \*Identification and Modeling of Interphase in Cementitious Mixtures through Integrated Experimental-Computational Multiscale Approach  
 \$275,362 ..... NSF  
 Turner, Joseph ..... Mechanical & Materials Engineering/Nebraska Transportation Center



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

Getting Ready 0-3 (GR03): Supporting the Development of Infants/Toddlers through an Integrated Parent-Teacher Relationship-Based Approach  
 \$999,208 ..... DHHS-ACF  
 Hawley, Leslie ..... Nebraska Center for Research on Children, Youth, Families and Schools  
 Marvin, Christine ..... Special Education and Communication Disorders/ Nebraska Center for Research on Children, Youth, Families and Schools  
 Raikes, Helen ..... Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools  
 Sheridan, Susan ..... Nebraska Center for Research on Children, Youth, Families and Schools

**Knutson, Cody** **Natural Resources**

\*The Wind River Indian Reservation's Vulnerability to the Impacts of Drought and the Development of Decision Tools to Support Drought Preparedness  
 \$253,547 ..... DOI-GS through Colorado State University Svoboda, Mark ..... Natural Resources  
 Drought Impacts: Vulnerability Thresholds in Monitoring and Early Warning Research  
 \$542,073 ..... NSF  
 Svoboda, Mark ..... Natural Resources  
 Transforming Climate Variability and Change Information for Cereal Crop Producers  
 \$284,468 ..... USDA-NIFA through Purdue University Shulski, Martha ..... Natural Resources

**Koelsch, Richard** **Extension**

Nebraska Extension Implementation Program  
 \$716,100 ..... USDA-NIFA  
 Bradshaw, Jeffrey ..... Panhandle Research and Extension Center  
 Cortinas, Manuel ..... Veterinary Medicine and Biomedical Sciences  
 Glewen, Keith ..... Southeast Research and Extension Center  
 Jackson-Ziems, Tamra ..... Plant Pathology  
 Jhala, Amitkumar ..... Agronomy and Horticulture  
 Kamble, Shripat ..... Entomology  
 Ogg, Clyde ..... Agronomy and Horticulture  
 Wright, Robert ..... Entomology

**Korus, Jesse** **Natural Resources**

\*Nebraska GeoCloud: An Integrated Bedrock Mapping and Hydrogeologic Framework Database and Map Viewer  
 \$264,014 ..... Nebraska Department of Natural Resources through Lower Platte South NRD  
 Cameron, Kathleen ..... Natural Resources  
 Joekel, Matt ..... Natural Resources

**Kovalev, Alexey** **Physics and Astronomy**

Statistical Mechanics of Non-Local Disordered Models with Associated Quantum LDPC Codes  
 \$255,000 ..... NSF

**Krehbiel, Michelle** **Extension**

Nebraska CYFAR Sustainable Community Project  
 \$673,750 ..... USDA-NIFA  
 Chai, Weiwen ..... Nutrition and Health Sciences  
 Fischer, Jean ..... Nutrition and Health Sciences  
 Franzen-Castle, Lisa ..... Nutrition and Health Sciences  
 Jones, Georgia ..... Nutrition and Health Sciences

**Lackey, Susan** **Natural Resources**

Developing Hydrogeologic Databases to Assist in Water Resources Management  
 \$539,100 ..... Lower Elkhorn NRD

**Lee, Jaekwon** **Biochemistry**

Mechanistic Insights into Copper Metabolism  
 \$834,761 ..... NIH-NIDDK  
 Kim, Heejeong ..... Biochemistry

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

Longitudinal Evaluation of Noyce Science Teachers to Determine Sources of Effective Teaching  
 \$799,890 ..... NSF  
 Claes, Daniel ..... Physics and Astronomy  
 Harwood, David ..... Earth and Atmospheric Sciences  
 Heng-Moss, Tiffany ..... College of Agricultural Sciences and Natural Resources

**Lewis, Jim** **Mathematics/Center for Science,  
Mathematics and Computer Education**  
UNL-LPS Title I Mathematics  
Professional Development Partnership  
\$553,196 ..... Lincoln Public Schools  
Homp, Michelle ..... Center for Science, Mathematics  
and Computer Education  
Smith, Wendy ..... Center for Science, Mathematics  
and Computer Education

**Lewis, Ronald** **Animal Science**  
\*Understanding Parasite Resistance in Organic Livestock  
and Using a Systems Approach for Control  
\$291,478 ..... USDA-ARS

**Li, Qingsheng** **Biological Sciences/  
Nebraska Center for Virology**  
Early Innate/IgA Anti-HIV/SIV Response in Exposed Uninfected  
\$417,151 ..... NIH-NIAID through Wistar Institute

**Lodi, Kathleen** **Extension**  
Living Soil: A New Exhibit at Raising Nebraska  
\$250,000 ..... Nebraska Environmental Trust

**Loecke, Terrance** **Natural Resources**  
Can Improving Predictions of Soil Oxygen Dynamics Increase  
Understanding of Greenhouse Gas Hotspots and Hot Moments  
\$699,254 ..... NSF  
Bernadt, Tonya ..... Natural Resources  
Burgin, Amy ..... Natural Resources  
Franz, Trenton ..... Natural Resources  
Pathak, Tapan ..... Natural Resources

**Lou, Marjorie** **Veterinary Medicine and Biomedical Sciences**  
Protein-Thiol Mixed Disulfide in Cataractogenesis  
\$409,259 ..... NIH-NEI  
Wu, Hong Li ..... Veterinary Medicine and Biomedical Sciences

**Lu, Yongfeng** **Electrical and Computer Engineering**  
\*Radar 2021  
\$356,105 ..... Honeywell FM & T  
  
\*High-power Laser System for Repairing Al-Mg Alloy Ship Plates  
\$349,506 ..... DoD-ONR-DURIP

Post-Detonation Radiological and Nuclear Forensics  
Using Laser-Assisted Mass Spectrometry in Open Air  
\$750,000 ..... DoD-DTRA

Vertically Aligned Carbon-Nanotubes Embedded  
in Ceramic Matrices for Hot Electrode Applications  
\$400,000 ..... DOE-NETL

Ultrafast Fiber Laser Sampling and Plasma-Enhanced Laser Induced  
Breakdown Spectroscopy to Combat WMD  
\$488,000 ..... DoD-DTRA through University of Pittsburgh

Diamond Coating Adaptive to Substrate Materials  
Using a Diamond-Composite Buffer Layer  
\$793,342 ..... DoD-MDA

Fast Growth of Large Diamond Crystals in Open Air  
\$275,195 ..... NSF

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

**Luck, Joe** **Biological Systems Engineering**  
\*Using Precision Technology in On-farm Field Trials  
to Enable Data-intensive Fertilizer Management  
\$513,798 ..... USDA-NIFA through  
University of Illinois at Urbana-Champaign  
Ferguson, Richard ..... Agronomy and Horticulture  
Glewen, Keith ..... Agronomy and Horticulture  
Mieno, Taro ..... Agricultural Economics  
Thompson, Laura ..... Agronomy and Horticulture

\*Next-generation Spray Drift Mitigation via  
Field-deployable, Real-time Weather Monitoring and  
Novel Spray Nozzle Control Technologies  
\$499,916 ..... USDA-NIFA  
Kruger, Greg ..... West Central Research and Extension Center  
Pitla, Santosh ..... Biological Systems Engineering

**Mamo, Martha** **Agronomy and Horticulture**

\*Fostering the Next Generation of Agricultural and Natural Resources Professionals through Experiential Learning in Research, Education and Extension  
\$281,475 ..... USDA-NIFA  
Keshwani, Jennifer ..... Biological Systems Engineering  
Lambe, David ..... Agronomy and Horticulture  
Lee, Donald ..... Agronomy and Horticulture  
Matkin, Gina ..... Agricultural Leadership, Education and Communication  
Sandall, Leah ..... Agronomy and Horticulture  
Schacht, Walter ..... Agronomy and Horticulture  
Speth, Carol ..... Agronomy and Horticulture

Grazing Management Effect on Micro- and Macro-Scale Fate of Carbon and Nitrogen in Rangelands  
\$497,000 ..... USDA-NIFA  
Bradshaw, Jeffrey ..... Panhandle Research and Extension Center  
Eskridge, Kent ..... Statistics  
Ferguson, Richard ..... Agronomy and Horticulture  
Guretzky, John ..... Agronomy and Horticulture  
Jenkins, Karla ..... Panhandle Research and Extension Center  
Schacht, Walter ..... Agronomy and Horticulture  
Volesky, Jerry ..... West Central Research and Extension Center  
Whipple, Sean ..... Panhandle Research and Extension Center  
Wingeyer, Ana ..... Agronomy and Horticulture  
Yang, Haishun ..... Agronomy and Horticulture

**Markham, Jonathan** **Biochemistry**

Plant Sphingolipids: New Targets for Engineering Cold-Tolerance in Crops  
\$408,000 ..... USDA-NIFA  
Cahoon, Edgar ..... Biochemistry

**McMahon, Patrice** **Political Science**

Study of the U.S. Institute on Civic Engagement  
\$687,445 ..... DOS-BECA  
Major, Linda ..... Student Affairs  
Pfister, Damien ..... Communication Studies

**Meinke, Lance** **Entomology**

Characterizing Resistance Evolution to Pyrethroid Insecticides  
\$528,340 ..... Monsanto  
Miller, Nicholas ..... Entomology

**Miller, Nicholas** **Entomology**

The Genetics of Emerging Resistance to Cry3Bb1 Corn  
\$500,000 ..... Monsanto  
Meinke, Lance ..... Entomology

**Mitra, Amit** **Plant Pathology**

Development of Transgenic Beans for Broad-Spectrum Resistance against Fungal Diseases  
\$250,000 ..... USDA-NIFA  
Steadman, James ..... Plant Pathology  
Urrea Florez, Carlos ..... Panhandle Research and Extension Center

**Moreau, Regis** **Nutrition and Health Sciences**

Bioactivity of Curcumin and Gut Inflammation  
\$480,214 ..... USDA-NIFA  
Hage, David ..... Chemistry

**Mower, Jeffrey** **Agronomy and Horticulture**

Tracing Processes of Genome Evolution using Plantaginaceae  
\$594,190 ..... NSF

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

Radiation Tolerance and Mechanical Properties of Advanced Ceramic/Metal Composites  
\$994,292 ..... DOE

**Neale, Christopher** **Biological Systems Engineering/  
Robert B. Daugherty Water for Food Institute**

\*Improving Variable Rate Irrigation Efficiency using a Real-time Soil Water Adaptive Control Model Informed by Sensors Deployed on Unmanned Aircraft Systems  
\$499,978 ..... USDA-NIFA  
Ge, Yufeng ..... Biological Systems Engineering  
Heeren, Derek ..... Biological Systems Engineering  
Luck, Joe ..... Biological Systems Engineering  
Meyer, George ..... Biological Systems Engineering  
Woldt, Wayne ..... Biological Systems Engineering

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

Multifunction Robotic Tools for Natural Orifice  
and Single-Incision Surgery

\$395,905 ..... NIH-NIBIB  
Farritor, Shane ..... Mechanical & Materials Engineering

A Novel Pediatric Gait Rehabilitation Device

\$394,911 ..... NIH-NICHD

REU Site: Undergraduate Research Opportunities  
in Biomedical Devices at the University of Nebraska-Lincoln

\$303,265 ..... NSF  
Bashford, Gregory ..... Biological Systems Engineering

**Nelson, Timothy** **Psychology/  
Center for Brain, Biology and Behavior**

\*Role of Executive Control in Adolescent Substance Use  
and Co-occurring Problems

\$339,115 ..... NIH-NIDA through  
Boys Town National Research Institute

Espy, Kimberly ..... Psychology/  
Center for Brain, Biology and Behavior

Nelson, Jennifer ..... Psychology/  
Center for Brain, Biology and Behavior

**Nguyen, Lim** **Durham School of Architectural  
Engineering and Construction**

\*Development of HPC+ Components for

MIL-STD 188-125-1 Compliant Shotcrete Dome Facility

\$325,052 ..... American Business Continuity Domes, Inc  
Tuan, Christopher ..... Civil Engineering

**Niu, Wei** **Chemistry**

SusChEM: Novel 1,2-Propanediol Biosynthesis from  
Renewable Feedstocks through Enzyme Discovery

\$317,611 ..... NSF  
Guo, Jiantao ..... Chemistry

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

\*Analysis of Effective Science Coaching: What, Why and How

\$699,584 ..... NSF  
Houston, James ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

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

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

Program to Strengthen Institutional Capacity to  
Better Assess Climate Impacts  
in Latin America and the Caribbean (LAC)

\$307,000 ..... Inter-American Development Bank  
Rowe, Clinton ..... Earth and Atmospheric Sciences

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

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

\$500,000 ..... USDA-AFRI  
Pattnaik, Asit ..... Veterinary Medicine and Biomedical Sciences

**Pannier, Angela** **Biological Systems Engineering**

\*Understanding Molecular Factors that  
Regulate Initiation of Porcine Embryo Elongation

\$465,000 ..... USDA-NIFA

**Pérez, Lance** **Electrical and Computer Engineering**

Spatial Visualization Skills and Engineering Problem Solving

\$645,943 ..... NSF

A Chautauqua Program for the 21st Century

\$448,603 ..... NSF

**Piepenbrink, Kurt** **Food Science and Technology**

\*Structural Basis of Type IV Pilus-Induced  
*Clostridium difficile* Microcolony Formation

\$259,560 ..... NIH-NIAID

**Pierobon, Massimiliano** **Computer Science and Engineering**

MCB EAGER: TelePathy: Telecommunication Systems Modeling and  
Engineering of Cell Communication Pathways

\$307,700 ..... NSF  
Buan Murphy, Nicole ..... Biochemistry

**Powell, Larkin** **Natural Resources**

Management of Private Grazing Lands in Nebraska:  
Do Differences in Ranch Management and Landowner  
Characteristics Affect Conservation Impacts

\$344,521 ..... Nebraska Game and Parks Commission  
Schacht, Walter ..... Agronomy and Horticulture

Persistent Effects of Wind-Power Development  
on Prairie Grouse in Nebraska  
\$717,487 ..... Nebraska Game and Parks Commission  
Brown, Mary ..... Natural Resources  
Fontaine, Joseph ..... Natural Resources

**Powers, Robert** **Chemistry**  
\*ABI Innovation: A Metabolomics Toolkit  
for NMR and Mass Spectrometry  
\$695,000 ..... NSF

**Proctor, Christopher** **Agronomy and Horticulture**  
\*Optimizing Cropping Systems for Resilience to Stress:  
The Role of Maturity Group Selection and Cover Crops  
on Yield, Weeds, Insects and Microbes  
\$461,187 ..... USDA-NIFA  
Drewnoski, Mary ..... Animal Science  
Elmore, Roger ..... Agronomy and Horticulture  
Everhart, Sydney ..... Plant Pathology  
McMechan, Anthony ..... Eastern Nebraska Research  
and Extension Center  
Parsons, Jay ..... Agricultural Economics  
Redfearn, Daren ..... Agronomy and Horticulture  
Werle, Rodrigo ..... West Central Research and Extension Center

**Qian, Yi** **Electrical and Computer Engineering**  
Spectrum and Energy Efficient Radio Resource Access in  
Wireless Networks with Densely Deployed Underlay Devices  
\$300,000 ..... NSF  
Sharif-Kashani, Hamid ..... Electrical and Computer Engineering

**Qiao, Wei** **Electrical and Computer Engineering**  
\*Online Nonintrusive Identification and Monitoring of Internal Weak  
Points of Electro-energy Devices Using Package Surface Temperature  
\$337,897 ..... NSF

Cognitive Prediction-Enabled Online Intelligent Fault Diagnosis  
and Prognosis for Wind Energy Systems  
\$359,852 ..... NSF

**Qu, Liyan** **Electrical and Computer Engineering**  
\*Voltage and Frequency Power Converter  
Based on Electromagnetic Induction  
\$493,349 ..... DOE-ARPA-E

**Raikes, Helen** **Child, Youth and Family Studies**  
Evaluation of Early Steps to School Success  
\$679,993 ..... Save the Children

**Rajca, Andrzej** **Chemistry**  
Nitrogen-Centered Radicals  
\$480,000 ..... NSF

**Ramamurthy, Byravamurthy** **Computer Science and Engineering**  
CC\*DNI Integration: Innovating Network Cyberinfrastructure  
through Openflow and Content Centric Networking in Nebraska  
\$572,112 ..... NSF  
Bockelman, Brian ..... Computer Science and Engineering  
Swanson, David ..... Computer Science and Engineering

**Ray, Chittaranjan** **Water Center/Civil Engineering/  
Robert B. Daugherty Water for Food Institute**  
\*Sustaining Agriculture through Adaptive Management Resilient to  
a Declining Ogallala Aquifer and Changing Climate  
\$945,567 ..... USDA-NIFA through Colorado State University  
Rudnick, Daran ..... West Central Research and Extension Center/  
Robert B. Daugherty Water for Food Institute  
Schoengold, Karina .... Agricultural Economics/Robert B. Daugherty  
Water for Food Institute  
Shaver, Tim ..... West Central Research and Extension Center/  
Robert B. Daugherty Water for Food Institute

\*Integrating the Vadose Zone for Improved Management  
of Nebraska Ground Water Quality  
\$276,813 ..... Nebraska Environmental Trust  
Snow, Daniel ..... Water Center/  
Robert B. Daugherty Water for Food Institute

**Rebarber, Richard** **Mathematics**  
Nebraska Math Scholars  
\$599,996 ..... NSF  
Curto, Carina ..... Mathematics  
Hartke, Stephen ..... Mathematics  
Williams, Amber ..... Student Affairs  
Woodward, Gordon ..... Mathematics

**Riley, Mark** **Biological Systems Engineering**  
Nebraska AgrAbility  
\$729,000 ..... USDA-NIFA  
Frecks, Nancy ..... West Central Research and Extension Center  
Nielsen, Sharon ..... West Central Research and Extension Center

**Rosenbaugh, Scott** **Midwest Roadside Safety Facility**

\*Cost-efficient, TL-2 Bridge Rail for Low-volume Roads  
\$309,141 ..... DOT-FHWA through  
Nebraska Department of Transportation  
Bielenberg, Robert ..... Midwest Roadside Safety Facility  
Faller, Ronald ..... Midwest Roadside Safety Facility

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

Speech Movement Classification for Diagnosing and Treating ALS  
\$256,061 ..... NIH-NIDCD through  
MGH Institute of Health Professions  
Marx, David ..... Statistics

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

\*High Specificity MicroRNA Microarray Analysis without  
PCR for Cancer Screening and Research  
\$490,048 ..... NIH-NCI

**Scalora, Mario** **Public Policy Center/Psychology**

\*The Influence of Subjective and Objective Rural School Security  
on Law Enforcement Engagement Models  
\$645,952 ..... DOJ-NIJ  
Bulling, Denise ..... Public Policy Center  
DeKraai, Mark ..... Public Policy Center

**Schacht, Walter** **Agronomy and Horticulture**

Demonstrating Grazing Land Resilience to Drought  
in the Central and Northern Great Plains  
\$363,120 ..... USDA-NRCS through South Dakota State University  
Knutson, Cody ..... Natural Resources  
Stockton, Matthew ..... West Central Research and Extension Center  
Volesky, Jerry ..... West Central Research and Extension Center

**Schnable, James** **Agronomy and Horticulture/  
Center for Plant Science Innovation**

Identifying Mechanisms Conferring Low Temperature Tolerance  
in Maize, Sorghum, and Frost-tolerant Relatives  
\$455,000 ..... USDA-NIFA  
Roston, Rebecca ..... Biochemistry/  
Center for Plant Science Innovation

**Schubert, Eva** **Electrical and Computer Engineering**

MRI: Development of an Ion-Beam-Assisted Glancing Angle  
Deposition Tool (iGLAD) for 3D Nanostructure Thin Film Preparation  
with in situ Ellipsometry Control  
\$411,501 ..... NSF  
Bartelt-Hunt, Shannon ..... Civil Engineering  
Hage, David ..... Chemistry  
Hofmann, Tino ..... Electrical and Computer Engineering  
Ianno, Natale ..... Electrical and Computer Engineering  
Korlacki, Rafal ..... Electrical and Computer Engineering  
Lai, Rebecca ..... Chemistry  
Pannier, Angela ..... Biological Systems Engineering  
Schmidt, Daniel ..... Electrical and Computer Engineering  
Schubert, Mathias ..... Electrical and Computer Engineering  
Sinitskii, Alexander ..... Chemistry

**Searls, Mindi** **Earth and Atmospheric Sciences/  
Center for Science, Mathematics and  
Computer Education**

GP-IMPACT: Building a Comprehensive  
Geoscience Learning Experience  
\$400,075 ..... NSF  
Arthurs, Leilani ..... Earth and Atmospheric Sciences/  
Center for Science, Mathematics and  
Computer Education  
Bathke, Deborah ..... Earth and Atmospheric Sciences  
Harwood, David ..... Earth and Atmospheric Sciences

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

Development of Radically Enhanced alnico Magnets (DREaM)  
\$600,000 ..... DOE-Ames Laboratory  
Shield, Jeff ..... Mechanical & Materials Engineering  
Skomski, Ralph ..... Physics and Astronomy

DMREF: Design and Synthesis of Novel Magnetic Materials  
\$461,154 ..... NSF  
Xu, Xiaoshan ..... Physics and Astronomy

**Shadwick, Bradley** **Physics and Astronomy**

\*High Fidelity Modeling of Laser-Plasma Accelerators  
\$450,000 ..... NSF  
Kalmykov, Serge ..... Physics and Astronomy  
  
Theory and Modeling of Petawatt Laser Pulse  
Propagation in Low Density Plasmas  
\$419,999 ..... DOE  
Kalmykov, Serge ..... Physics and Astronomy

**Shield, Jeffrey** **Mechanical & Materials Engineering/  
Nebraska Center for Materials and Nanoscience**

\*Grain and Interface Engineering for  
High-efficiency Hybrid Perovskite Solar Cells  
\$450,000 .....DoD-AFOSR

Development of Textured High Energy Nanocomposite  
Permanent Magnets for Electric Motors and Generators  
\$347,726 .....National Oilwell Varco

MPPR Sauce Fluid Dynamic Study for Perfect Dispense System  
\$550,000 ..... ConAgra  
Zhang, Zhaoyan ..... Mechanical & Materials Engineering

**Sinitskii, Alexander** **Chemistry**

\*Extended Atomically Precise Graphene Nanoribbons and  
Nanostructures with Improved Electrical Conductivity  
\$768,496 ..... DoD-ONR  
Enders, Axel ..... Physics and Astronomy

Polarization-Mediated Modulation of Electronic Properties  
of Hybrid Ferroelectric Based Heterostructures  
\$409,996 .....NSF  
Gruverman, Alexei ..... Physics and Astronomy

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

\*Student Engagement in Mathematics through  
an Institutional Network for Active Learning  
\$332,442 .....NSF  
Donsig, Allan .....Mathematics  
Wakefield, Nathan .....Mathematics

NebraskaNOYCE Phase II:  
Investigating the Impact in High-Need Districts  
\$299,878 .....NSF  
Lai, Yuan-Juang ..... Mathematics/Center for Science,  
Mathematics and Computer Education  
Lewis, Jim ..... Mathematics/Center for Science,  
Mathematics and Computer Education  
Males, Lorraine .....Teaching, Learning and Teacher Education

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

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

**Smyth, Jolene** **Sociology/  
Survey Research and Methodology**

\*Using Statistical and Survey Methodology Research to Improve  
or Redesign Surveys Related to Science and Engineering  
\$345,000 ..... USDA-NASS  
Olson, Kristen ..... Sociology/Survey Research and Methodology

**Snow, Daniel** **Water Center/  
Robert B. Daugherty Water for Food Institute**

Vadose Zone Nitrate Study for the City of Hastings, NE: 2015  
\$299,982 .....City of Hastings, NE  
Ray, Chittaranjan .....Water Center/  
Robert B. Daugherty Water for Food Institute

**Snow, Gregory** **Physics and Astronomy**

GAANN Fellowships for Physics at UNL  
\$408,315 .....ED  
Adenwalla, Shireen..... Physics and Astronomy  
Batelaan, Herman ..... Physics and Astronomy  
Claes, Daniel..... Physics and Astronomy  
Dominguez, Aaron..... Physics and Astronomy  
Gay, Timothy..... Physics and Astronomy  
Uiterwaal, Cornelis ..... Physics and Astronomy

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

Computational Creativity to Improve Computer Science Education for  
CS and non-CS Undergraduates  
\$873,250 .....NSF  
Ingraham, Elizabeth ..... Art, Art History and Design  
Moore, Brian ..... Music  
Ramsay, Stephen ..... English  
Shell, Duane ..... Educational Psychology

**Sokolov, Andrei** **Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**

Robust Room Temperature Electric Field Control  
of Structural Magnetic and Transport Properties  
of Ultra-Thin Shape Memory Heusler Alloys Films  
\$364,567 .....NSF

**Spangler, Matthew** **Animal Science**

National Program for Genetic Improvement  
of Feed Efficiency in Beef Cattle  
\$488,959 ..... USDA-NIFA through University of Missouri

**Starace, Anthony** **Physics and Astronomy**

Strong Field & Ultrafast Atomic and Molecular Processes  
\$270,000 .....NSF

**Steadman, James** **Plant Pathology**

Feed the Future Innovation Lab for  
Collaborative Research on Grain Legumes  
\$392,749 .....AID through Michigan State University  
Urrea Florez, Carlos ..... Panhandle Research and Extension Center

**Stevens, Jeffrey** **Psychology/  
Center for Brain, Biology and Behavior**

\*Similarity as a Process Model of Intertemporal Choice  
\$655,376 .....NSF  
Soh, Leen-Kiat ..... Computer Science and Engineering/  
Center for Brain, Biology and Behavior

**Storz, Jay** **Biological Sciences**

Causes of Parallel Molecular Evolution:  
Insights from Protein Engineering  
\$262,752 .....NSF  
Moriyama, Hideaki ..... Biological Sciences

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

\*Immersive Educational Game Simulations to Enhance  
Understanding of Corn-Water Ethanol-Beef System Nexus  
\$999,644 .....NSF  
Chen, Jiajia ..... Food Science and Technology  
Guru, Ashu ..... Extension  
Keshwani, Deepak ..... Biological Systems Engineering  
Keshwani, Jenny ..... Biological Systems Engineering  
Koelsch, Richard ..... Biological Systems Engineering  
Rosenbaum, David ..... Bureau of Business Research  
Thompson, Eric ..... Bureau of Business Research

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

**Sutter, Eli** **Mechanical & Materials Engineering**

\*In-situ Electron Microscopy of DNA-guided Self-assembly  
and Reconfiguration of 3D Nanocrystal Superlattices  
\$534,231 .....DoD-ARO  
Sutter, Peter ..... Electrical and Computer Engineering

Hybrid Materials by Integration of  
Semiconductor Nanowires and Layered Crystals:  
Chemical Transformations and Functional Properties  
\$500,000 NSF  
Sutter, Peter ..... Electrical and Computer Engineering

**Sutter, Peter** **Electrical and Computer Engineering**

\*Exploring and Embracing Heterogeneity  
in Atomically Thin Energy Materials  
\$600,000 ..... DOE  
Sutter, Eli ..... Mechanical & Materials Engineering

**Tadesse, Tsegaye** **Natural Resources**

Seasonal Prediction of Hydro-Climatic Extremes  
in the Greater Horn of Africa under Evolving Climate Conditions  
to Support Adaptation Strategies  
\$987,767 ..... NASA  
Baigorria, Guillermo ..... Agronomy and Horticulture/  
Natural Resources  
Beyene, Shimelis ..... Anthropology  
Hayes, Michael ..... Natural Resources  
Wardlow, Brian ..... Natural Resources

**Takacs, James** **Chemistry**

Catalytic Asymmetric Hydroboration:  
Uncapping the Potential with Two-Point Binding Substrates  
\$900,114 .....NIH-NIGMS



**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

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

**Terry, Benjamin** **Mechanical & Materials Engineering**  
 \*En Route Care Patient Viability Technology Development  
 \$308,015 ..... National Strategic Research Institute  
 Oxygen Microbubble Peritoneal Ventilation Treatment for Acute Respiratory Distress Syndrome  
 \$405,929 ..... NIH-NHLBI

**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

**Trainin, Guy** **Teaching, Learning and Teacher Education**  
 NEA Foundation Grant Evaluation OPS  
 \$336,008 ..... National Education Association Foundation through Omaha Public Schools  
 Hamann, Edmund ..... Teaching, Learning and Teacher Education

**Tuan, Christopher** **Civil Engineering**  
 Conductive Concrete for Airfield Heated Pavement Construction  
 \$276,649 ..... DOT-FAA  
 Nguyen, Lim ..... Electrical and Computer Engineering

**Tucker, Shane** **University of Nebraska State Museum**  
 Highway Paleontology Program  
 \$765,766 ..... DOT-FHWA through Nebraska Department of Transportation

**Turner, Joseph** **Mechanical & Materials Engineering**  
 \*An Integrated Experimental and Computational Approach to Discover Biomechanical Mechanisms of Leaf Epidermal Morphogenesis  
 \$385,927 ..... NSF  
 Development of Improved Product Performance through Optimization and Modeling of Engineering Materials, Processing, and Function  
 \$428,963 ..... Amsted Industries

**Twidwell, Dirac Jr.** **Agronomy and Horticulture**  
 Juniper Invasions and Landscape Intervention Potential: A Statewide Assessment  
 \$433,136 ..... DOI-FWS through Nebraska Game and Parks Commission  
 Allen, Craig ..... Natural Resources

**Tyler, Kimberly** **Sociology**  
 Stressors, Protective Factors, and Substance Use among Homeless Youth and Young Adults  
 \$408,768 ..... NIH-NIDA  
 Olson, Kristen ..... Sociology/Survey Research and Methodology

**Umstadter, Donald** **Physics and Astronomy**  
 \*Ultra-low Emittance Electron Beams from Laser-Plasma Photo-cathodes  
 \$314,998 ..... NSF  
 Banerjee, Sudeep ..... Physics and Astronomy  
 Chen, Shouyuan ..... Physics and Astronomy

**Van Den Broeke, Matthew** **Earth and Atmospheric Sciences**  
 Aeroecology as a Test-Bed for Interdisciplinary STEM Training  
 \$391,463 ..... NSF through University of Oklahoma  
 Quantifying the Relative Roles of Progressive Land Use Change, Irrigation, and Remote Forcing in Southern Great Plains Precipitation Variability  
 \$446,697 ..... NSF  
 Hu, Qi ..... Natural Resources  
 Oglesby, Robert ..... Earth and Atmospheric Sciences/  
 Natural Resources

**van Dijk, Karin** **Biochemistry**  
 \*Engaging the Next Generation of Biochemists  
 \$599,096 ..... NSF  
 Couch, Brian ..... Biological Sciences  
 Helikar, Tomas ..... Biochemistry  
 Roston, Rebecca ..... Biochemistry

**Van Ethen, James** **Plant Pathology**  
 Evaluation of the Natural History of Algal Viruses Associated  
 with Patients Diagnosed with Human Psychiatric Disorders  
 \$397,147 ..... Stanley Medical Research Institute

**Vu, Hiep** **Nebraska Center for Virology**  
 Determine the Correlates of Protection against Porcine Reproductive  
 and Respiratory Syndrome Viruses Infection  
 \$477,635 ..... USDA-NIFA  
 Ma, Fangrui ..... Center for Biotechnology/  
 Nebraska Center for Virology  
 Osorio, Fernando ..... Veterinary Medicine and Biomedical Sciences/  
 Nebraska Center for Virology

**Vuran, Mehmet Can** **Computer Science and Engineering**  
 \*NeTS: Small: 2G for UG: High Data-rate and Long-range  
 Communication Techniques for Wireless Underground Networks  
 \$450,000 ..... NSF  
 Irmak, Suat ..... Biological Systems Engineering

NeTS: Small: Advancing Time Synchronization  
 for Sustainable Wireless Networks  
 \$500,000 ..... NSF  
 Zhong, Ziguo ..... Computer Science and Engineering

CyberSEES: Type 1: Improving Crop Production Efficiency  
 Using Wireless Underground Sensor-Guided Irrigation Systems  
 \$300,000 ..... NSF  
 Irmak, Suat ..... Biological Systems Engineering

Cog-TV with Neighborhood Watch:  
 Business and Technical Aspects  
 of Cognitive Radio TV Sets for Enhanced Spectrum Access  
 \$283,879 ..... NSF  
 Batur, Demet ..... Management

**Walia, Harkamal** **Agronomy and Horticulture**  
 \*UNL-VBC Collaboration: Using Plant Phenomics  
 to Capture Dynamic Growth Responses in Maize  
 \$341,500 ..... Valent USA

ABI Innovation: A Computational Framework for Integrating Image  
 Informatics with Transcriptomics for Discovering Spatiotemporally  
 Resolved Regulatory Gene Networks in Plants  
 \$563,801 ..... NSF  
 Yu, Hongfeng ..... Computer Science and Engineering  
 Zhang, Chi ..... Biological Sciences  
 Zhang, Qi ..... Statistics

**Walker, Judy** **Mathematics/Center for Science,  
 Mathematics and Computer Education**  
 \*NSF INCLUDES: WATCH US --  
 Women Achieving Through Community Hubs in the United States  
 \$299,024 ..... NSF

**Walker, Mark** **Mathematics**  
 GAANN: Department of Mathematics  
 \$544,420 ..... ED  
 Bellows, Laurie ..... Graduate Studies  
 Hermiller, Susan ..... Mathematics  
 Lewis, Jim ..... Mathematics  
 Rebarber, Richard ..... Mathematics  
 Walker, Judy ..... Mathematics

**Walters, Cory** **Agricultural Economics**  
 Northern Plains Regional Farm Business Management  
 and Benchmarking Partnership  
 \$443,561 ..... USDA-NIFA  
 Banerjee, Simanti ..... Agricultural Economics  
 Lubben, Bradley ..... Agricultural Economics

**Wang, Jian** **Mechanical & Materials Engineering**  
 \*Computational and Experimental Characterization  
 of Twin-Twin Interactions in Hexagonal Metals  
 \$388,037 ..... NSF  
 \*Plasticity of High-strength Multiphase Metallic Composites  
 \$250,018 ..... DOE through University of Michigan

**Wang, Lily** **Durham School of Architectural Engineering and Construction**

Evidence-Based Interactions between Indoor Environmental Factors and Their Effects on K-12 Student Achievement  
 \$998,433 ..... EPA  
 Bovaird, James ..... Educational Psychology  
 Lau, Josephine ..... Durham School of Architectural Engineering and Construction  
 Waters, Clarence ..... Durham School of Architectural Engineering and Construction

**Waters, Brian** **Agronomy and Horticulture**

Discovering New Aspects of Iron Uptake Regulation Controlled by the *efe* Gene  
 \$452,000 ..... USDA-NIFA  
 Exploring Iron & Copper Cross-Talk in Iron Deficient *Arabidopsis Thaliana*  
 \$391,077 ..... NSF

**Weaver, Eric** **Biological Sciences/Nebraska Center for Virology**

Foundation Immunogens for Influenza Vaccines  
 \$629,370 ..... NIH-NIAID

**Whitbeck, Les** **Sociology**

\*Stress and Type 2 Diabetes among Indigenous Adults  
 \$260,343 ..... NIH-NIDDK through University of Minnesota Duluth  
 Crawford, Devan ..... Sociology  
 Hartshorn, Kelley ..... Sociology

**White, Brett** **Animal Science**

\*Role of GnRH-II and Its Receptor in Testicular Function of Swine  
 \$480,000 ..... USDA-NIFA

**Wiener, Richard** **Psychology**

Therapeutic Jurisprudence and Probationer Decision Making: A Social Cognitive Model  
 \$641,614 ..... DOJ-NIJ

**Wilson, Mark** **Biochemistry**

Biochemical Definition of LRRK2 Protein Complexes  
 \$409,704 ..... Michael J. Fox Foundation

**Wilson, Richard** **Plant Pathology**

IOS: Molecular Mechanisms Connecting Plant Defense Suppression with *Magnaporthe oryzae* Growth in Rice Cells  
 \$570,000 ..... NSF

Defining Mechanisms of Nutrient Adaptation to Host Rice Cells by the Blast Fungus  
 \$500,000 ..... USDA-NIFA

**Witt-Swanson, Lindsey** **Sociology/Bureau of Sociological Research**

Behavioral Risk Factor Surveillance Survey  
 \$559,234 ..... DHHS-CDC through Nebraska Department of Health and Human Services  
 Gohring, Nicole ..... Bureau of Sociological Research

2016-2017 Student Health and Risk Prevention Surveillance System  
 \$287,847 ..... DHHS-SAMHSA through Nebraska Department of Health  
 Meiergerd, Kimberly ..... Bureau of Sociological Research

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

\*Comparative Virology Research Training Program  
 \$830,930 ..... NIH-NIAID  
 Van Etten, James ..... Plant Pathology

Chronic HIV Infection and Aging in NeuroAIDS (CHAIN) Center  
 \$521,954 ..... NIH-NIMH through UNMC

**Wortmann, Charles** **Agronomy and Horticulture**

Developing and Fine-Tuning Fertilizer Recommendations within an Integrated Soil Fertility Management Framework  
 \$444,228 ..... Alliance for Green Revolution in Africa through CABI

**Wortman, Samuel** **Agronomy and Horticulture**

\*Leveraging Management to Speed Degradation of Bio-based Mulches in Soil  
 \$499,718 ..... USDA-NIFA  
 Drijber, Rhae ..... Agronomy and Horticulture

**Wragge, Annette** **Special Education and Communication Disorders**

Nebraska Autism Spectrum Disorders Network, State Coordinator Project  
 \$303,895 ..... ED through Nebraska Department of Education

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

\*NeTS: Small: Exploring the Design Space of Bandwidth Estimation Methods Using Packet Sequence Information  
\$498,878 .....NSF

NeTS: Small: Systematically and Scalably Testing Network Programs under Packet Dynamics  
\$499,810 .....NSF  
Elbaum, Sebastian .....Computer Science and Engineering

**Yu, Hongfeng** **Computer Science and Engineering**

EarthCube IA: Optimal Data Layout for Scalable Geophysical Analysis in a Data-Intensive Environment  
\$332,941 .....NSF

CGV: Small: A Scalable Visual Analytics Framework for Exascale Scientific Simulations  
\$405,378 .....NSF

**Yuen, Gary** **Plant Pathology**

\*Genetics and Genomics of Pathogen Resistance in Switchgrass  
\$297,152 .....USDA-ARS through DOE

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

Roles of Milk-Borne MicroRNAs in the Regulation of Gut Inflammation  
\$499,812 .....USDA-NIFA  
Ramer-Tait, Amanda .....Food Science and Technology

Assessment of the Role of microRNAs in Infant Formulas for Bone Health  
\$286,799 .....Gerber Foundation

**Zeng, Lirong** **Plant Pathology**

\*Role of Organelle-localized Lys63-linked Ubiquitination in Plant Immunity  
\$685,000 .....NSF

**Zera, Anthony** **Biological Sciences**

Nutritional Physiology of Life History Allocation Trade-Offs  
\$343,500 .....NSF

**Zhu, Jinying** **Civil Engineering**

\*Online Monitoring System for Concrete Structures Affected by Alkali-Silica Reaction (ASR)  
\$800,000 .....DOE

**Zygielbaum, Art** **Natural Resources**

Dimensions NASA: Linking Remotely Sensed Optical Diversity to Genetic, Phylogenetic and Functional Diversity to Predict Ecosystem Processes  
\$716,893 .....NSF

## Early Career Awards

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

### NSF CAREER Grants

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



#### **Bartelt-Hunt, Shannon**

Civil Engineering  
CAREER: The Influence of Soil Attachment  
on the Biologic Activity of Extracellular Proteins  
\$413,883 .....NSF



#### **Bassett, Gilles**

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



#### **Gu, Linxia**

Mechanical & Materials Engineering  
CAREER: Bridging Cellular-Level Changes  
to Vascular Tissue Response to Reveal Basic  
Mechanisms of Restenosis  
\$457,308 .....NSF



#### **Guo, Jiantao**

Chemistry  
CAREER: Quadruplet Codon Decoding:  
Mechanistic Studies and Application in  
Cellular Genetic Code Expansion  
\$622,320 .....NSF



#### **Hong, Xia**

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



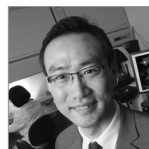
#### **Lai, Rebecca**

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



#### **Li, Xu**

Civil Engineering  
CAREER: Effects of Nutrients on  
Antimicrobial Resistance and Subsistence  
\$400,000 .....NSF



#### **Lim, Jung Yul**

Mechanical & Materials Engineering  
CAREER: Adipocytic Mechanotransduction  
for Obesity  
\$430,554 .....NSF



#### **Males, Lorraine**

Teaching, Learning and Teacher Education  
\*CAREER: Examining Prospective Secondary  
Mathematics Teachers Learning to Use Curriculum  
Materials to Plan and Enact Instruction  
\$628,995 .....NSF



#### **Montooth, Kristi**

Biological Sciences  
CAREER: The Physiology and Genetics of  
Adaptation in a Complex Environment  
\$683,365 .....NSF



#### **Morin, Stephen**

Chemistry/Nebraska Center for  
Materials and Nanoscience  
CAREER: Morphological Control of Crystalline  
Materials Using Deformations of Elastomeric  
Substrates and Fluid Flow for the Bottom-up  
Fabrication of Hybrid Materials  
\$649,474 .....NSF

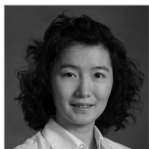


#### **Pannier, Angela**

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

**Qiao, Wei**

Electrical and Computer Engineering  
 CAREER: Stochastic Optimization and Coordinating Control for the Next-Generation Electric Power System with Significant Wind Penetration  
 \$407,999 .....NSF

**Qu, Liyan**

Electrical and Computer Engineering  
 CAREER: Adjustable-Voltage-Ratio Magnetolectric Transformer: A New Voltage Conversion and Control Device for Smart Grids  
 \$500,000 .....NSF

**Sinitskii, Alexander**

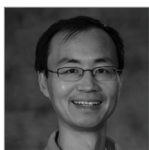
Chemistry  
 CAREER: Narrow Graphene Nanoribbons with Tunable Electronic Properties  
 \$538,477 .....NSF

**Stains, Marilyne**

Chemistry/Center for Science, Mathematics and Computer Education  
 CAREER: The Winding Roads to Effective Teaching: Characterizing the Progressions in Instructional Knowledge and Practices of STEM Faculty  
 \$959,849 .....NSF

**Vuran, Mehmet**

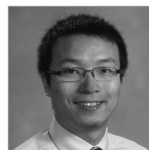
Computer Science and Engineering  
 CAREER: Bringing Wireless Sensor Networks Underground  
 \$418,760 .....NSF

**Xu, Xiaoshan**

Physics and Astronomy  
 CAREER: Hexagonal Ferrite Thin Films for the High-Temperature Magnetolectric Memory Effect  
 \$591,256 .....NSF

**Yu, Hongfeng**

Computer Science and Engineering  
 \*CAREER: Scalable Techniques for Visualizing Very Large Graphs  
 \$476,951 .....NSF

**Zhang, Jian**

Chemistry  
 CAREER: Tuning Photoredox Properties of Carbazolic Porous Organic Frameworks for Visible-Light-Mediated Catalysis  
 \$527,154 .....NSF

**Air Force Young Investigator Program**

YIP awards support scientists and engineers who have received Ph.D. or equivalent degrees in the last five years and show exceptional ability and promise for conducting basic research.

**Fuchs, Matthias**

Physics and Astronomy  
 YIP: Next-Generation X-Ray Lightsource and First Applications  
 \$369,422 .....DoD-AFOSR

**Department of Energy Early Career Research Program**

DOE's Early Career Research Program supports the development of individual research programs of outstanding scientists early in their careers and stimulates research careers in the disciplines supported by the DOE Office of Science.

**Kovalev, Alexey**

Physics and Astronomy  
 Non-Collinear Magnetism and Dynamic Effects in Dzyaloshinskii-Moriya Magnets  
 \$750,000 .....DOE

## Arts and Humanities Awards \$250,000 or More

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

### Heitman, Carolyn

### Anthropology/Center for Digital Research in the Humanities

Salmon Pueblo Archaeological Research Collection  
\$300,000 ..... NEH  
05/01/2015 – 10/31/2017  
Walter, Katherine ..... Center for Digital Research in the Humanities



With a \$300,000 National Endowment for the Humanities grant, anthropologist Carrie Heitman is part of a team of researchers who are digitizing about 1.5 million photographs, field notes and other records generated during 1970s and 1980s excavations of the 1,000-year-old Salmon Pueblo in northwestern New Mexico. The Chaco Research Archive,

which Heitman directs, will house the digitized records. Digital access will allow researchers to explore more fully this historically and culturally significant community. Collaborators are the Salmon Ruins Museum, Archaeology Southwest, Nebraska's Center for Digital Research in the Humanities and the University of Virginia's Institute for Advanced Technology in the Humanities, home to the Chaco Research Archive.

### Jewell, Andrew

### Center for Digital Research in the Humanities Complete Letters of Willa Cather

\$271,980 ..... NEH  
10/01/2014 – 09/30/2017  
Homestead, Melissa ..... English/Center for Digital  
Research in the Humanities



The National Endowment for the Humanities is supporting the work of Andrew Jewell, associate professor of libraries in the Center for Digital Research in the Humanities, to digitally publish the complete correspondence of Willa Cather on the open-access Willa Cather Archive ([cather.unl.edu](http://cather.unl.edu)). Publication on the archive will allow interoperation of the

edition with other Cather documents (photographs, texts, published scholarship and archival materials) and wide accessibility as data for

humanities scholars doing various kinds of research. When finished, *The Complete Letters of Willa Cather* will bring unprecedented access to the revealing personal voice of one of the most important figures in American literary history and will dramatically expand the body of Cather materials available to scholars, teachers, students and general readers.

### Kooser, Ted

### English

American Life in Poetry Project  
\$453,385 ..... Poetry Foundation  
1/1/05 – 12/31/17



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 English department, where the project office is located.

### Price, Kenneth

### English/Center for Digital Research in the Humanities

Walt Whitman as an Author before *Leaves of Grass*  
\$330,000 ..... NEH  
08/01/13 – 01/31/17



With a \$330,000 award from the National Endowment for the Humanities, the Walt Whitman Archive, a digital archive that makes Whitman's vast work easily and conveniently accessible to scholars, students, and general readers alike, is expanding its content to include Whitman-authored materials written before the 1855 edition of *Leaves of Grass*.

The Whitman Archive is gathering, editing and annotating these early materials for digital publication, offering a seamlessly integrated presentation of Whitman's literary contributions in the lead-up to his masterpiece, *Leaves of Grass*. This three-year project is led by Kenneth Price, Hillegass University Professor of English and co-director of the Center for Digital Research in the Humanities.

**Shear, Donna**

**University of Nebraska Press**

Recovering Languages and Literacies of the Americas:  
A Collaborative Initiative

\$781,900 ..... Andrew W. Mellon Foundation  
1/3/11 - 12/31/17



This \$781,900 grant from the Andrew W. Mellon Foundation gives the University of Nebraska Press, along with the University of Oklahoma Press and the University of Texas Press, resources to help linguistic scholars publish indigenous language grammars and dictionaries, literacy studies, ethnographies and other linguistic monographs. Twenty-seven

books - nine from each press - will be published on the grammar and literacy of endangered languages. The initiative also aims to generate broader interest in linguistic monographs and to find more efficient, cost-effective ways to produce monographs. These publications are important resources for academics in the fields of linguistics, indigenous studies and social sciences, and to communities wishing to preserve their language and culture, said Donna Shear, University of Nebraska Press director, who is leading this collaboration.

**Walter, Katherine**

**University Libraries/Center for Digital  
Research in the Humanities**

National Digital Newspaper Program: Nebraska

\$763,012 ..... NEH  
Mering, Margaret ..... University Libraries



The Nebraska Digital Newspaper Project selects, digitizes and provides access to historically significant Nebraska newspapers, as well as ethnic titles, representing geographic, political, and social breadth. These titles will be accessible through Chronicling America at the Library of Congress and through Nebraska Newspapers, our state newspaper site.

**Wisnicki, Adrian**

**English/Center for Digital  
Research in the Humanities**

The Livingstone Online Enrichment and Access Project (LEAP)

\$275,000 ..... NEH  
9/1/13 - 8/31/17  
Pytlík Zillig, Brian ..... University Libraries/Center for Digital  
Research in the Humanities



Adrian Wisnicki, assistant professor of English and spectral imaging specialist at the Center for Digital Research in the Humanities, leads Livingstone Online, <http://livingstoneonline.org>, a large multi-institutional project to update the digital home for Livingstone's manuscripts.

Wisnicki and colleagues are collaborating with more than 30 archives worldwide, developing a sustainable digital platform, and conducting scholarship and outreach activities. More than \$430,000 in grants from the National Endowment for the Humanities fund Wisnicki's Livingstone work.



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

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

### **Barker, Bradley** **Extension**

\*Library Innovation Studios: Transforming Rural Communities  
\$236,771 ..... IMLS through Nebraska Library Commission  
Boeckner, Linda ..... Extension  
Farritor, Shane ..... Mechanical & Materials Engineering  
Hancock, Connie ..... Panhandle Research and Extension Center  
Narjes, Charlotte ..... Agricultural Economics

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

Text Mining the Novel:  
Establishing the Foundations of a New Discipline  
\$112,524 ..... Government of Canada-SSHRC through  
McGill University

### **Lorang, Elizabeth** **Center for Digital Research in the Humanities**

\*Extending Image Analysis for Archival Discovery (Aida)  
\$462,317 ..... IMLS  
Soh, Leen-Kiat ..... Computer Science and Engineering

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

\*Unearthing the “Buried Masterpiece” of American Literature:  
A Digital Variorum of the 1855 *Leaves of Grass*  
\$300,000 ..... NEH

### **Richards-Rissetto, Heather** **Anthropology/ Center for Digital Research in the Humanities**

\*Keeping Data Alive: Supporting Reuse and  
Repurposing of 3D Data in the Humanities  
\$74,368 ..... NEH  
Walter, Katherine ..... Center for Digital Research in the Humanities

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

O Say Can You See:  
Early Washington, D.C., Law and Family Project  
\$200,000 ..... NEH

### **Walter, Katherine** **Center for Digital Research in the Humanities**

\*From Prairie to Palace: Buffalo Bill’s Wild West in Europe  
\$52,711 ..... NEH through Buffalo Bill Center of the West

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

Explorer David Livingstone’s 1870 Field Diary  
and Select 1871 Letters: A Multispectral Critical Edition  
\$158,605 ..... NEH  
Pytlik Zillig, Brian ..... University Libraries/Center for Digital  
Research in the Humanities

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

Active awards, July 1, 2016–June 30, 2017

\* Indicates new in 2016–2017

**Dombrowski, Kirk** **Sociology**  
\*Looking Past Skin: Nebraska Immigration Today and Yesterday  
\$6,500 ..... Humanities Nebraska  
Matthews, Kim ..... Sociology

**Engen-Wedin, Nancy** **Lied Center for Performing Arts**  
Heather Hensen's Flight, A Crane's Story  
\$15,000 ..... NEH

**Hoff, Michael** **Art, Art History and Design**  
\*Antiochia ad Cragum Excavations: 2017 Season  
\$30,000 ..... Merops Foundation

**James, Michael** **Textiles, Merchandising and Fashion Design**  
Robert Hillestad Textiles Gallery  
\$10,000 ..... Pearle Francis Finigan Foundation  
Historic Costume Collection  
\$6,000 ..... Friends of the Hillestad Textiles Gallery

**Price, Kenneth** **English/Center for Digital Research in the Humanities**  
\*Fame and Infamy: Walt Whitman's Old-Age Correspondence  
\$14,317 ..... National Historical Publications and Records Commission through University of Iowa  
Walt Whitman and Post-Reconstruction America  
\$16,451 ..... National Historical Publications and Records Commission through University of Iowa

**Schleck, Julia** **English**  
\*Beyond East and West: Exchanges and Interactions across the Early Modern World (1400-1800)  
\$21,074 ..... NEH through Indiana University

**Seaton, Melynda** **Center for Great Plains Studies**  
\*Contemporary Indigeneity 2016: Spiritual Borderlands  
\$8,000 ..... Woods Charitable Fund

**Shear, Donna** **University of Nebraska Press**  
Early American Regions  
\$30,100 ..... University of Georgia

**Smith, Harris** **Johnny Carson School of Theatre and Film**  
\*Nebraska Rep Relaunch  
\$7,500 ..... Cooper Foundation

**Walter, Katherine** **University Libraries/Center for Digital Research in the Humanities**  
Humanities without Walls  
\$43,188 ..... Andrew W. Mellon Foundation through University of Illinois-IPRH



Pioneering Partnerships for Innovation

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

## Patents Issued in 2016-2017

Recognition for faculty and other university personnel  
who received patents for their inventions  
July 1, 2016–June 30, 2017

**P. Stephen Baenziger, Jerry Bohlmann, Mitchell Montgomery,  
Greg Dorn, Richard Little, Chris Hoagland, Agronomy and Horticulture**  
*Title:* NE06545  
*Date:* 7/6/2016  
*Number:* 201400398  
*Country:* United States

**P. Stephen Baenziger, Jerry Bohlmann, Mitchell Montgomery,  
Greg Dorn, Richard Little, Agronomy and Horticulture**  
*Title:* NE05548  
*Date:* 7/6/2016  
*Number:* 201400410  
*Country:* United States

**Christian Binek, Physics and Astronomy**

*Title:* Refrigeration through Voltage-controlled Entropy Change  
*Date:* 2/21/2017  
*Number:* 9,574,802  
*Country:* United States

**Chin Li “Barry” Cheung, Neil J. Lawrence, Gonghua Wang, Chemistry**

*Title:* Cerium Oxide Having High Catalytic Performance  
*Date:* 2/7/2017  
*Number:* 9,561,491 B2  
*Country:* United States

**Carrick Detweiler, Sebastian Elbaum, John-Paul Ore, Computer  
Science; Baoliang Zhao, Mechanical & Materials Engineering**

*Title:* Aerial Water Sampler  
*Date:* 3/28/2017  
*Number:* 9,606,028  
*Country:* United States

**Stephen G. DiMagno, Chemistry**

*Title:* Fluorination of Aromatic Ring Systems  
*Date:* 12/2/2016  
*Number:* 6049804  
*Country:* Japan

*Title:* Processes and Reagents for Making Diaryliodonium Salts  
*Date:* 11/1/2016  
*Number:* 702736  
*Country:* New Zealand

**Peter A. Dowben, Bernard Doudin, Zhengzheng Zhang,  
Physics and Astronomy**

*Title:* Zwitterion Quinonoid Molecules as N-Type Organic  
Semiconductor and Hole Injection Enhancer for Organic  
Electronics Devices  
*Date:* 9/6/2016  
*Number:* JP,6002134,B  
*Country:* Japan

**Title:** Zwitterion Quinonoid Molecules as N-Type Organic Semiconductor and Hole Injection Enhancer for Organic Electronics Devices

**Date:** 12/27/2016

**Number:** 2,609,639

**Country:** France

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**Title:** Zwitterion Quinonoid Molecules as N-Type Organic Semiconductor and Hole Injection Enhancer for Organic Electronics Devices

**Date:** 12/27/2016

**Number:** 2,609,639

**Country:** Germany

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**Title:** Zwitterion Quinonoid Molecules as N-Type Organic Semiconductor and Hole Injection Enhancer for Organic Electronics Devices

**Date:** 12/27/2016

**Number:** 2,609,639

**Country:** United Kingdom

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**Patrick H. Dussault, Wantanee Sittiwong, Robert Powers, Chemistry; Raul Barletta, Veterinary and Biomedical Sciences**

**Title:** Amphiphilic Cyclobutenes and Cyclobutanes

**Date:** 3/24/2017

**Number:** 702154

**Country:** New Zealand

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**Shane M. Farritor, Mechanical & Materials Engineering**

**Title:** System for Imaging and Measuring Rail Deflection

**Date:** 4/18/2017

**Number:** 9,628,762

**Country:** United States

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**Ming Han, Electrical and Computer Engineering**

**Title:** Fiber-optic Sensors for Temperature Measurement from Cryogenic to Above 1000°C

**Date:** 6/13/2017

**Number:** 9,677,949

**Country:** United States

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**Milford A. Hanna, Pratik N. Bhandari, Biological Systems Engineering**

**Title:** Method for the Production of Substituted Polysaccharides Via Reactive Extrusion

**Date:** 5/2/2017

**Number:** 9,637,560

**Country:** United States

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**Tomas Helikar, Mathematics**

**Title:** System and Method for Dynamic Modeling of Biochemical Processes

**Date:** 8/2/2016

**Number:** 9,405,863

**Country:** United States

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**Jinsong Huang, Fawen Guo, Mechanical & Materials Engineering**

**Title:** Nanocomposite Photodetector

**Date:** 6/20/2017

**Number:** 9,685,567

**Country:** United States

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**Jinsong Huang, Qingfeng Dong, Rui Dong, Yuchuan Sao, Cheng Bi, Qi Wang, Zhengguo Xiao, Mechanical & Materials Engineering**

**Title:** Photovoltaic Perovskite Material and Method of Fabrication

**Date:** 7/12/2016

**Number:** 9,391,287

**Country:** United States

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**Jinsong Huang, Yuchuan Shao, Qingfeng Dong, Mechanical & Materials Engineering**

**Title:** Systems and Methods for Scalable Perovskite Device Fabrication

**Date:** 2/28/2017

**Number:** 9,583,724

**Country:** United States

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**Haorong Li, Yanshun Yu, Daihong Yu, Architectural Engineering**

**Title:** Gas Collection

**Date:** 6/20/2017

**Number:** 9,684,314

**Country:** United States

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**Sally Mackenzie, Roberto de la Rosa Santamaria, Agronomy and Horticulture**

*Title:* An Inducible Cytoplasmic Male Sterility and Fertility Restoration System for Hybrid Seed Production in Crops

*Date:* 10/25/2016

*Number:* 9,476,040

*Country:* United States

*Title:* Plants With Useful Traits and Related Methods

*Date:* 4/28/2017

*Number:* 6133275

*Country:* Japan

*Title:* Plants With Useful Traits and Related Methods

*Date:* 5/3/2017

*Number:* ZL201280031753.8

*Country:* China

**Nicole Buan Murphy, Jennifer Catlett, Biochemistry**

*Title:* Microbial Strains and Methods of Making and Using

*Date:* 3/21/2017

*Number:* 9,598,678

*Country:* United States

**Jody G. Redepenning, Alexander Sinitskii, Benjamin Wymore, Chemistry**

*Title:* Polymer on Graphene

*Date:* 1/31/2017

*Number:* 9,558,929

*Country:* United States

**Christopher Y. Tuan, Civil Engineering; Lim Nguyen, Electrical and Computer Engineering**

*Title:* Structural Concrete Mix for Construction for Electromagnetic Wave/Pulse Shielding

*Date:* 6/13/2017

*Number:* 9,681,592

*Country:* United States

**Donald P. Umstadter, Physics and Astronomy**

*Title:* Method of Aligning a Laser-Based Radiation Source

*Date:* 11/1/2016

*Number:* 9,485,847

*Country:* United States

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

*Title:* Antenna for Wireless Underground Communication

*Date:* 3/9/2017

*Number:* 2013292513

*Country:* Australia

**Yue Zhao, Wei Qiao, Electrical and Computer Engineering**

*Title:* Methods of Estimating a Position of a Rotor in a Motor Under Transient and Systems Thereof

*Date:* 2/21/2017

*Number:* 9,577,555

*Country:* United States

## 2016-2017 License Agreements

Recognition for faculty whose technologies formed the basis of licensing agreements with industry partners  
July 1, 2016–June 30, 2017

**P. Stephen Baenziger, Jerry Bohlmann, Mitchell Montgomery, Greg Dorn, Richard Little, Chris Hoagland**, Agronomy and Horticulture  
*Technology:* (5) Overland Wheat  
*Technology:* Multiple Wheat Varieties

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**Jie Cheng, F. Fred Choobineh**, Electrical and Computer Engineering  
*Technology:* System to Extend Wind Turbine Power Generation Capabilities

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**George Graef, Les Korte, Dennis White, Travis Wegner, James Specht**, Agronomy and Horticulture  
*Technology:* Soybean Varieties

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**Yuguo Lei**, Chemical and Biomolecular Engineering  
*Technology:* Large Scale Cell Manufacture System

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**Richard Moberly, Molly Brummond, Susan Poser, Marc Pearce**, College of Law  
*Technology:* Professional Skills Tracking Mobile App

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

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**Stephen Taylor, Joseph Baumert, Susan Hefle**, Food Science and Technology  
*Technology:* Allergen Kits – 4 licenses

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**Benjamin S. Terry**, Mechanical & Materials Engineering  
*Technology:* Extrapulmonary Ventilation Technology

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**Benjamin S. Terry, Pengbo Li, Wanchuan Xie, Alfred Tsubaki, Weston Lewis**, Mechanical & Materials Engineering  
*Technology:* Medical Sensor System

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**Carlos Urrea Florez**, Panhandle Research and Extension Center; **James Steadman**, Plant Pathology  
*Technology:* Great Northern Bean “Panhandle Pride”

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**Hiep Vu**, Animal Science; **Asit Pattnaik, Fernando Osorio**, Veterinary and Biomedical Sciences; **Fangrui Ma**, Biological Sciences  
*Technology:* PRRVS Vaccine

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**Daniel T. Walters, Haishun Yang, Patricio Grassini, Kenneth G. Cassman**, Agronomy and Horticulture; **Achim Dobermann**  
*Technology:* Hybrid Maize Software

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**Yiqi Yang**, Textiles, Merchandising and Fashion Design  
*Technology:* Methods of Enhancing Dyeability of Polymers

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**Sherif Yehia, Christopher Y. Tuan**, Civil Engineering; **Bing Chen, Lim Nguyen**, Electrical and Computer Engineering  
*Technology:* Conductive Concrete – 2 licenses

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## Creative Activity

Faculty who created, performed or produced works in the fine and performing arts and architecture, television and film, or digital/software design, nationally or internationally,

July 1, 2016–June 30, 2017

Submitted by faculty, chairs/heads or deans

### Scott L. Anderson

### Glenn Korff School of Music

Solo performer, trombone. "Obscurities from the Paris Conservatory Repertoire for Trombone." American Trombone Workshop, Fort Meade, Washington, DC.

### John R. Bailey

### Glenn Korff School of Music

Conductor. International Flute Orchestra concert tour of Ireland and Northern Ireland. Christ Church Cathedral, Dublin, Ireland; St. Anne's Cathedral, Belfast, Northern Ireland; Unionhall, Derry, Northern Ireland.

### Diane Barger

### Glenn Korff School of Music

Solo performer, clarinet. "Sonata." Board of Director's Recital, International Clarinet Association ClarinetFest, Lawrence, Kansas.

### Paul Barnes

### Glenn Korff School of Music

Solo performer, piano. "Philip Glass at 80: Exploring the Pedagogical Implications of the Études for Piano." Music Teachers National Association Conference, Baltimore, Maryland.

Solo performer, piano. Italian tour featuring his "Philip Glass Retrospective Recital." Il Tempietto Concerti, Marcello Theater, Rome, Italy.

Solo featured performer, piano. "New Generations: The Études of Philip Glass and Music of the Next Generation." WFMT's Impromptu, WFMT Studios, Chicago, Illinois.

### Wheeler Winston Dixon

### Film Studies

Video producer. "Life of Luxury," "An American Dream" and "Beat Box." Screenings at the Amos Emo Gallery Brooklyn, New York, and The Sla307 Art Space, New York, New York.

### Gwendolyn Audrey Foster

### English and Film Studies

Video producer. "Echo and Narcissus," "Mirror" and "Tenderness." Screenings at the Amos Emo Gallery Brooklyn, New York, and The Sla307 Art Space, New York, New York.

### Dana Fritz

### School of Art, Art History and Design

Sculptor. "(dis)similar articulations (series)." Dana Fritz Exhibition, Scottsdale Museum of Contemporary Art, Scottsdale, Arizona.

Photographer. "Views Removed." Dana Fritz Exhibition, Sioux City Art Center, Sioux City, Iowa.

### Carrie C. Heitman

### Anthropology/Center for Digital Research in the Humanities

Director. "Ohio Hopewell: Ancient Crossroads of the American Midwest." Web Exhibition, hopewell.unl.edu.

### Elizabeth Ingraham

### School of Art, Art History and Design

Quilt artist. "Regarding Nebraska." Elizabeth Ingraham Exhibition, International Quilt Study Center and Museum, Lincoln, Nebraska.

### Michael F. James

### Textiles, Merchandising and Fashion Design

Quilt artist. "Adrift," digitally and hand-fabricated wall quilt. Crossing Generations Exhibition, Hoffman Gallery, Oregon College of Arts and Crafts, Portland, Oregon.

Quilt artist. "Allegory," digitally and hand-fabricated wall quilt. Pushing the Surface 2017 Exhibition, Johnson-Humrickson House Museum, Coschocton, Ohio.

### Karen Kunc

### School of Art, Art History and Design

Print artist. "From the Sketch to the Block." Karen Kunc Solo Exhibition, Salón Cultural San Miguel, Arcos de la Frontera, Spain.

Print artist. "Rifts of Condensities." 3rd International Printmaking Triennial Exhibition, Art Pavilion Cvijeta Zuzoric, Belgrade, Serbia.

### Jamie Loizzo Agricultural Leadership, Education and Communication

Director. "Streaming Science." Podcast series, <https://streamingscience.com/>, Lincoln, Nebraska.

**JD Madsen****Johnny Carson School of Theatre and Film**

Scenic designer. "Little Mermaid." Weber Stage, Ogden, Utah.

Scenic designer. "The Addams Family." Centerpointe Legacy Theatre, Centerville, Utah.

Scenic designer. "Eurydice." Next Stop Theatre, Washington, DC.

Scenic designer. "Assassins." Next Stop Theatre, Washington, DC.

Scenic designer. "Ulysses: An American Mythology." Opéra Louisiane, Manship Theatre, Baton Rouge, Louisiana.

Scenic designer. "Sex with Strangers." Signature Theatre, Washington, DC.

Scenic designer. "Little Women." Catholic University, Washington, DC.

**Amanda Morales****Teaching, Learning and Teacher Education**

Film performer. "A Walk in My Shoes: Social Justice in Education," a documentary film. College of Education, Kansas State University, Manhattan, Kansas.

**Clark Potter****Glenn Korff School of Music**

Performer, viola and piano. "Sonata for Viola and Piano (1946) by Ernest Gold" (world premiere). Stage Music by Film Composers, Kimball Recital Hall, Lincoln, Nebraska.

**Guy J. Reynolds****English/Cather Project**

Director. "Prairie Songs: Remembering Antonia." Group performance featuring piano, voice, violin, Johnny Carson Theater, Lincoln, Nebraska.

**Laurel Shoemaker****Johnny Carson School of Theatre and Film**

Lighting designer. "Performing Practice: Stages of Staging Our Selves." Dance Gala 2016, University of Iowa, Space Place, Iowa City, Iowa.

Lighting designer. "Ulysses: An American Mythology." Opéra Louisiane, Manship Theatre, Baton Rouge, Louisiana.

**William Shomos****Glenn Korff School of Music**

Director. "Ulysses: An American Mythology." Opéra Louisiane, Manship Theatre, Baton Rouge, Louisiana.

**Hans Sturm****Glenn Korff School of Music**

Performer, bass. "Bass Meets Voice: Original Pieces for Jazz Voice and Bass." International Society of Bassists Biennial Convention, Ithaca College, Ithaca, New York.

Solo performer, bass. "Solo Works by François Rabbath." Instituto Superior de Arte, Havana, Cuba.

Performer, bass. "A Day In Paris: Original Pieces for Bass and Piano." BassEurope Congress, Prague, Czech Republic.

Solo performer, bass. "Solo Works by François Rabbath." Haute École du Musique, Geneva, Switzerland.

**Richard K. Sutton****Agronomy and Horticulture/  
Landscape Architecture Program**

Watercolor artist. "Havelock Elevator"; "Machine in the Garden." Collecting Nebraska Exhibition, Great Plains Art Museum, Lincoln, Nebraska.

**David von Kampen****Glenn Korff School of Music**

Composer. "Benediction." Sacred Songs, First Congregational Church, Los Angeles, California.



## Books

Faculty who wrote or edited books published July 1, 2016–June 30, 2017

Submitted by faculty, chairs/heads or deans

### Jonis Agee English

Author. *The Bones of Paradise*. New York, NY: William Morrow.

### J. Clark Archer Geography (w/Anthropology)

Author, with Richard Edwards, Leslie Howard, Fred Shelley, Donald Wilhite, David Wishart. *Atlas of Nebraska*. Lincoln, NE: University of Nebraska Press.

### Grace Bauer English

Author. *MEAN/TIME*. Albuquerque, NM: University of New Mexico Press.

### Florin Bobaru Mechanical & Materials Engineering

Editor, with John T. Foster, Philippe H. Geubelle, Stewart A. Silling. *Handbook of Peridynamic Modeling*. Boca Raton, FL: Chapman and Hall/CRC Press, Taylor and Francis Group.

### Kelsy Burke Sociology

Author. *Christians under Covers: Evangelicals and Sexual Pleasure on the Internet*. Berkeley, CA: University of California Press.

### Janet F. Carlson Buros Center for Testing/ Educational Psychology

Editor, with Kurt F. Geisinger, Jessica L. Jonson. *The Twentieth Mental Measurements Yearbook*. Lincoln, NE: Buros Center for Testing.

### Timothy P. Carr Nutrition and Health Sciences

Author, with Sareen S. Gropper, Jack L. Smith. *Advanced Nutrition and Human Metabolism (7th Ed.)*. Boston, MA: Cengage Learning.

### Matt Cohen English

Author. *Whitman's Drift: Imagining Literary Distribution*. Iowa City, IA: University of Iowa Press.

### Joel T. Cramer Nutrition and Health Sciences

Author, with Terry J. Housh, Joseph P. Weir, Travis W. Beck, Glen O. Johnson. *Laboratory Manual for Exercise Physiology, Exercise Testing, and Physical Fitness*. Scottsdale, AZ: Holcomb Hathaway Publishers, Inc. (now Taylor Francis Publishers).

### Kwame Dawes English

Author. *City of Bones*. Evanston, IL: Northwestern University Press.

### Robert Denicola Law

Author, with Ralph Brown. *Copyright, Unfair Competition, and Related Topics Bearing on the Protection of Works of Authorship (12th Ed.)*. St. Paul, MN: Foundation Press.

### Robert F. Diffendal, Jr. (emeritus) Geology

Author. *Great Plains Geology*, Discover the Great Plains Series. Lincoln, NE: University of Nebraska Press.

### Wheeler Winston Dixon English

Author, with Richard Graham. *A Brief History of Comic Book Movies*. Cham, Switzerland: Palgrave Macmillan.

### Cheryl D. Dunn Agronomy and Horticulture

Author, with Mitchell B. Stephenson, James Stubbendieck. *Common Grasses of Nebraska: Rangeland, Prairie, Pasture (Including Grass-Like Plants)*. Lincoln, NE: University Printing.

Editor, with Mitchell B. Stephenson, James Stubbendieck. *Common Forbs and Shrubs of Nebraska: Rangeland, Prairie, and Pasture*. Lincoln, NE: University Printing.

### Richard Edwards Center for Great Plains Studies/Economics

Author, with Jacob K. Friefeld and Rebecca S. Wingo. *Homesteading the Plains: Toward a New History*. Lincoln, NE: University of Nebraska Press.

### Galen Erickson Animal Science

Editor. *2017 Beef Cattle Report*. Lincoln, NE: University Printing.

### Rodrigo Franco Veterinary Medicine and Biomedical Sciences

Editor. *Oxidative Stress and Redox Signalling in Parkinson's Disease*. London, UK: Royal Society of Chemistry.

### Iker Gonzalez-Allende Modern Languages and Literatures

Editor. *El Exilio Vasco: Estudios en Homenaje al Profesor José Ángel Ascunce Arrieta [The Basque Exile: Studies in Homage to Professor Jose Angel Ascunce Arrieta]*. Bilbao, Spain: University of Deusto Press.

### Richard L. Graham University Libraries/English

Author, with Wheeler Winston Dixon. *A Brief History of Comic Book Movies*. Cham, Switzerland: Palgrave Macmillan.

**Timothy Hemsath** **Architecture Program**

Author, with Kaveh Alagheh Bandhosseini. *Energy Modeling in Architectural Design*. New York, NY: Routledge.

**Matthew L. Jockers** **English**

Author, with Jodie Archer. *The Bestseller Code*. New York, NY: St. Martin's Press.

**Valerie Jones** **Advertising**

Editor, with Ming Wang. *The New Advertising: Branding, Content and Consumer Relationships in the Data-driven Social Media Era*. Santa Barbara, CA: ABC-CLIO, LLC.

**David Karle** **Architecture**

Author, with Sarah Thomas Karle. *Conserving the Dust Bowl: The New Deal's Prairie States Forestry Project*. Baton Rouge, LA: Louisiana State University Press.

**Sarah Thomas Karle** **Landscape Architecture**

Author, with David Karle. *Conserving the Dust Bowl: The New Deal's Prairie States Forestry Project*. Baton Rouge, LA: Louisiana State University Press.

**Casey Ryan Kelly** **Communication Studies**

Author. *Food Television and Otherness in an Age of Globalization*. Lanham, NJ: Rowan & Littlefield.

**Stevan Knezevic** **Northeast Research and Extension Center**

Editor. *2017 Guide for Weed, Disease, and Insect Management in Nebraska*. Lincoln, NE: University Printing.

**Peter M. Lefferts** **Glenn Korff School of Music**

Editor, with William J. Summers. *English Thirteenth Century Polyphony: A Facsimile Edition*. London, UK: Stainer & Bell for the British Academy.

**Brian D. Lepard** **Law**

Editor. *Reexamining Customary International Law*. New York, NY: Cambridge University Press.

**Carole Levin** **History**

Editor, with Anna Riehl Bertolet, Jo Eldridge Carney. *A Biological Encyclopedia of Early Modern Englishwomen: Exemplary Lives and Memorable Acts, 1500-1650*. New York, NY: Routledge, Taylor and Francis Group.

**John W. Maag** **Special Education and Communication Disorders**

Author. *Behavior Management: From Theoretical Implications to Practical Applications*. Boston, MA: Cengage.

**Max Perry Mueller** **Classics and Religious Studies**

Author. *Race and the Making of the Mormon People*. Chapel Hill, NC: The University of North Carolina Press.

**Glenn E. Nierman** **Glenn Korff School of Music**

Author, with Lynn Tuttle, Kelly Parkes, Johanna Siebert, Rebecca Wilhelm. *Workbook for Building and Evaluating Effective Music Education in Ensembles*. Reston, VA: National Association for Music Education.

Author, with Lynn Tuttle, Kelly Parkes, Johanna Siebert, Rebecca Wilhelm. *Workbook for Building and Evaluating Effective Music Education in General Music*. Reston, VA: National Association for Music Education.

**Gwen C. Nugent** **Nebraska Center for Research on Children, Youth, Families and Schools**

Editor, with Gina M. Kunz, Susan M. Sheridan, Todd A. Glover, Lisa L. Knoche. *Rural Education Research in the United States: State of the Science and Emerging Directions*. Cham, Switzerland: Springer International.

**Erica Ryherd** **Architectural Engineering**

Editor, with David T. Bradley, Lauren M. Ronsse. *Worship Space Acoustics: 3 Decades of Design*. New York, NY: Springer.

**Michael J. Scheel** **Educational Psychology**

Author, with Collie W. Conoley. *Goal Focused Positive Psychotherapy: A Strengths Oriented Approach*. New York, NY: Oxford University Press.

**David J. Sellmyer** **Nebraska Center for Materials and Nanoscience/ Physics and Astronomy**

Editor, with Yanglong Hou. *Magnetic Nanomaterials: Fundamentals, Synthesis and Applications*. Weinheim, Germany: Wiley-VCH.

**Esti Sheinberg** **Glenn Korff School of Music**

Editor, with Anatoly Milka, translated by Marina Rirzarev. *Rethinking J.S.Bach's The Art of Fugue*. London and New York, NY: Routledge.

**Greg A. Somerville**

**School of Veterinary Medicine  
and Biomedical Sciences**

Editor. *Staphylococcus: Genetics and Physiology*. London: Caister Academic Press.

**Joseph Starita**

**Journalism**

Author. *A Warrior of the People: How Susan LaFlesche Overcame Gender and Racial Inequality to Become America's First Indian Doctor*. New York, NY: St. Martin's Press.

**Jeffrey R. Stevens**

**Psychology**

Editor. *Impulsivity: How Time and Risk Influence Decision Making*. New York, NY: Springer.

**Julie Thomas**

**Teaching, Learning and Teacher Education**

Author, with Donna Farland-Smith. *Eureka! Grade 3-5 Science Activities and Stories*. Arlington, VA: NSTA Press.

**Laura Thompson**

**Southeast Research and Extension District**

Editor, with Keith Glewen. *Nebraska Extension On-Farm Research, 2016 Growing Season Results*. Lincoln, NE: University Printing.

**Jerry D. Volesky**

**West Central Research and Extension Center**

Editor, with Nadine Bishop, Bethany Johnston, Jess Milby, Jeff Nichols, Mitch Stephenson, Troy Walz, Sara Winslow, Kristin Dickinson. *Range Judging Handbook and Contest Guide for Nebraska*. Lincoln, NE: University Printing.

**Stacey Waite**

**English**

Author. *Teaching Queer: Radical Possibilities for Writing and Knowing*. Pittsburgh, PA: University of Pittsburgh Press.

**Yiqi Yang**

**Textiles, Merchandising and Fashion Design/  
Biological Systems Engineering**

Editor, with Jianyong Yu, Helan Xu, Baozhong Sun. *Porous Lightweight Composites Reinforced with Fibrous Structures*. Berlin, Germany: Springer-Verlag GmbH Germany.

## Recognitions and Honors

Faculty who have been elected to honor academies or who have received national or international honors or awards

July 1, 2016–June 30, 2017

Submitted by faculty, chairs/heads or deans

### Joseph S. Francisco

**Chemistry/Dean of the  
College of Arts and Sciences**

National Academy of Sciences

### Brian Larkins

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

National Academy of Sciences

### James Van Etten

**Plant Pathology**

National Academy of Sciences

### Kathleen Anderson

**Animal Science**

2017 ESS Fellow Award, Equine Science Society

### Katherine Ankersen

**Architecture**

Fellow, Interior Design Educators Council

### Christos Argyropoulos

**Electrical and Computer Engineering**

Fellow, Office of Naval Research

Young Scientist Award, International Union of Radio Science

### Larry Berger

**Animal Science (emeritus)**

Distinguished Alumnus Award, Kansas State University Department of Animal Science and Industry

### Christopher R. Bilder

**Statistics**

Fellow, American Statistical Association

### Kenneth Bloom

**Physics and Astronomy**

Fellow, American Physical Society

### Allison Bonander

**Communication Studies**

Outstanding New Coach Award, American Forensic Association

### Dawn O. Braithwaite

**Communication Studies**

Namesake of the Dawn O. Braithwaite Award for Qualitative Research, Central States Communication Association

### Edgar Cahoon

**Biochemistry**

Honorary Doctorate, Swedish University of Agricultural Sciences  
Faculty of Landscape Architecture, Horticulture and Crop Production Science

Fellow, American Society of Plant Biologists

### Les Carlson

**Marketing**

Fellow, American Academy of Advertising

### Kenneth Cassman

**Agronomy and Horticulture (emeritus)**

Highly Cited Researcher 2016, Clarivate Analytics

### Katherine M. Castle

**Communication Studies**

Pearson Award for Innovation in Teaching with Technology,  
Association for Business Communication

### Heng Chen

**Supply Chain Management and Analytics**

Outstanding Paper in Air Transportation, Institute for Operations Research and the Management Sciences

### Thomas Clemente

**Agronomy and Horticulture**

Crop Science Research Award, Crop Science Society of America

### Archie Clutter

**Agricultural Research Division**

Rockefeller Prentice Memorial Award in Animal Breeding and Genetics, American Society of Animal Science

### Matt Cohen

**English**

Fellowship, National Endowment for the Humanities

### Andrea Cupp

**Animal Science**

Animal Physiology and Endocrinology Award, American Society of Animal Science

### Dawne Y. Curry

**History/Ethnic Studies**

U.S. Fulbright Scholar Award, U.S. Department of State

**Jennifer A. Davidson** **Economics**

Rising Star Award, Council for Economic Education and National Association of Economic Educators

National Business Person of the Year, Nebraska Future Business Leaders of America

**Kwame Dawes** **English**

Gold Medal in Writing/Publishing, Independent Publisher Book Awards

**Jeffrey L. Day** **Architecture Program/  
Landscape Architecture**

The Best Things America Built in 2016, with E.B. Min, for the design of Omaha's Blue Barn Theater, Slate.com

Best in Category Award of Excellence: Design as Interior, Interior Design Educators Council

Outdoor Lighting Design Illumination Award: Special Citation for Use of Light as a Beacon that Enhances the Community Culture, Illuminating Engineering Society

**Bedross Der Matossian** **History**

Outstanding Book Award 2013-2015, Society for Armenian Studies

**Angela Dietsch** **Special Education and  
Communication Disorders**

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

**David DiLillo** **Psychology**

Exceptional Mentor, Association of Behavioral and Cognitive Therapies

**Wayne Drummond** **Architecture (emeritus)**

Honorary Member, American Society of Landscape Architects

**Patrick Dussault** **Chemistry**

Fellow, American Association for the Advancement of Science

**Sebastian Elbaum** **Computer Science and Engineering**

Distinguished Member, Association of Computing Machinery

**Roger Elmore** **Agronomy and Horticulture**

Fellow, Crop Science Society of America

Agronomic Education and Extension Award, American Society of Agronomy

**Ronald Faller** **Civil Engineering**

Best Overall Paper Award (with **Cody Stolle**, **Karla Lechtenberg** and **T. Yim**), International Roadside Safety Conference, Transportation Research Board

Practical Paper Award (with **Scott Rosenbaugh** and **Robert Bielenberg**), International Roadside Safety Conference, Transportation Research Board

Best New Innovation Paper Award (with **Karla Lechtenberg**, **Jennifer Schmidt**, **Ana Guajardo**, **Robert Bielenberg**, **John Reid** and **E. Emerson**), International Roadside Safety Conference, Transportation Research Board

**Shane Farritor** **Mechanical & Materials Engineering**

Fellow, National Academy of Inventors

**Christina Fielder** **Arts and Sciences**

Outstanding Advising Administrator Award, NACADA: The Global Community for Academic Advising

**Cory Forbes** **School of Natural Resources**

SENCER Leadership Fellow, National Center for Science and Civic Engagement

**Bill Frakes** **Journalism**

Grand Prize for journalism student project, "The Wounds of Whiteclay: Nebraska's Shameful Legacy" (faculty advisor), Robert F. Kennedy Journalism Awards

**Chuck Francis** **Agronomy and Horticulture**

Educator Award, North American Colleges and Teachers of Agriculture

**Joseph S. Francisco** **Chemistry**

Honorary Professor, Beijing University for Chemical Technology

**Sherilyn C. Fritz** **Earth and Atmospheric Sciences**

Tage Erlander Visiting Professorship, Swedish Research Council

**Dana Fritz** **School of Art, Art History and Design**

Artist Residency, Brush Creek Foundation for the Arts, Saratoga, Wyoming

**Timothy Gay** **Physics and Astronomy**

Speaker of the Council of Representatives, American Physical Society

**Jim Gentry** **Marketing**

George Fisk Award for the Best Conference Paper, 2016  
Macromarketing Conference, Macromarketing Association

**Konstantinos Giannakas** **Agricultural Economics**

Publication of Enduring Quality Award, Canadian Agricultural  
Economics Society

**Alisa Gilmore** **Electrical and Computer Engineering**

Innovator Award, Empowerment Network

**Doug Golick** **Entomology**

Innovative Teaching Award, Association of Public and Land-grant  
Universities

**Ronnie Green** **Chancellor**

Morrison Award, American Society of Animal Science  
4-H Luminary, National 4-H Council

**Mark A. Griep** **Chemistry**

Helen M. Free Award for Outstanding Public Outreach, American  
Chemical Society  
Frederick C. Luebke Award, Center for Great Plains Studies

**Dee Griffin** **Veterinary Medicine and Biomedical Sciences**

Industry Leadership Award, Cattle Feeders Hall of Fame

**Jason Griffiths** **Architecture**

Regional Excellence in Wood Design Award (co-winners include his  
design studio students), Woodworks

**Dale M. Grotelueschen** **School of Veterinary Medicine  
and Biomedical Sciences/  
Great Plains Veterinary Educational Center**

Award of Excellence, American Association of Bovine Practitioners

**Alexei Gruverman** **Physics and Astronomy**

Ferroelectrics Recognition Award, IEEE Ultrasonics, Ferroelectrics and  
Frequency Control Society

**Linxia Gu** **Mechanical & Materials Engineering**

Fellow, American Society of Mechanical Engineers

**Christopher R. Gustafson** **Agricultural Economics**

Best Article, *Journal of the International Association of Agricultural  
Economists*

**Frauke Hachtmann** **Journalism**

Alumni Master Award, University of Nebraska Athletic Department

**Deb Hamernik** **Agricultural Research Division/  
Animal Science**

President, American Society of Animal Science

**Ted Hamann** **Teaching, Learning and Teacher Education**

Equity Fellow, Midwest and Plains Equity Assistance Center

**Michael Hanus** **Advertising and Public Relations**

Outstanding Dissertation Award, Human Communication and  
Technology Division, National Communication Association  
Fellow, Visiting Professor Program, Advertising Educational  
Foundation

**Terry Hejny** **Nebraska LEAD Program**

Agri-Award, Triumph of Agriculture Exposition Farm and Ranch  
Machinery Show

**Mary Anne Holmes** **Earth and Atmospheric Sciences (emeritus)**

Fellow, American Association for the Advancement of Science

**Melissa Homestead** **English**

Fellow, Summer Stipend, National Endowment for the Humanities

**Gabriel Houck** **English**

Orison Fiction Prize, Orison Books

**Jinsong Huang** **Mechanical & Materials Engineering**

Highly Cited Researcher 2016, Clarivate Analytics

**Suat Irmak** **Biological Systems Engineering**

Best Paper Award in *Journal of Irrigation and Drainage Engineering*,  
Irrigation and Drainage Council of the American Society of Civil  
Engineers and Environmental and Water Resources Institute

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

**Amit Jhala** **Agronomy and Horticulture**  
Early Career Outstanding Weed Scientist Award, Weed Science Society of America

**Lisa Karr** **Animal Science**  
Corbin Companion Animal Biology Award, American Society of Animal Science

**Casey Ryan Kelly** **Communication Studies**  
Early Career Award, Rhetorical and Communication Theory Division of the National Communication Association  
Diane Hope Outstanding Book Award, Visual Communication Division of the National Communication Association

**Imran Khan** **Marketing**  
Best Paper in Logistics and Supply Chain Management Track, Society for Marketing Advances Conference

**Dane Kiambi** **Advertising and Public Relations**  
Fellow, Plank Center for Leadership in Public Relations

**Kathleen J. Krone** **Communication Studies**  
Fredric M. Jablin Award for Outstanding Contributions to Organizational Communication, International Communication Association, Organizational Communication Division  
Article of the Year, *Management Communication Quarterly*

**Karen Kunc** **School of Art, Art History and Design**  
Sponsor's Prize, Hida-Takayama International Contemporary Woodblock Prints Triennial, Takayama, Japan  
Second Prize, Book as Art 5.0: Illuminated, Decatur Art Alliance, Decatur, Georgia

**Rebecca Lai** **Chemistry**  
Local Section Outreach Volunteer of the Year Award, American Chemical Society's Committee on Community Activities

**Joe Luck** **Biological Systems Engineering**  
Educator/Researcher of the Year, Precision Ag Institute  
Larry W. Turner Young Extension Professional Award, American Society of Agricultural and Biological Engineers

**Fred Luthans** **Management (emeritus)**  
Lifetime Achievement Award, Organizational Behavior Division of the Academy of Management

**Andre F. Maciel** **Marketing**  
Best Special Session Award, Consumer Culture Theory Conference  
Sidney J. Levy Award, Consumer Culture Theory Consortium

**Martha Mamo** **Agronomy and Horticulture**  
Soil Science Education and Extension Award, Soil Science Society of America

**Maria Marron** **College of Journalism and Mass Communications**  
L.J. Hortin Distinguished Alumna Award, E.W. Scripps School of Journalism at Ohio University

**Pat McBride** **New Student Enrollment**  
Kansas Monk Award, Benedictine College

**Julia McQuillan** **Sociology**  
Distinguished Feminist Lecturer, Sociologists for Women in Society

**Colleen E. Medill** **Law**  
Member of the Advisory Council on Welfare Benefit and Pension Plans, United States Department of Labor

**Aleidine J. Moeller** **Teaching, Learning and Teacher Education/ Modern Languages and Literatures**  
Yunshuan Scholar, Guangdong University, China

**Amelia M.L. Montes** **English/The Institute for Ethnic Studies**  
Fulbright Scholar Award for Research, Writing, and Teaching at the University of Novi Sad, Serbia, Fulbright Organization

**Kaci Nash** **Libraries**  
Best article published in *Civil War History* in 2016 (with **William G. Thomas** and Robert Shephard), John T. Hubbell Prize

**Elizabeth Niehaus** **Educational Administration**  
Excellence in International Research Award, American College Personnel Association

Outstanding Service to the International Community Award, American College Personnel Association

**Terri Norton** **Construction Engineering**  
Innovator Award, Empowerment Network

Fulbright Scholar Award, Council for International Exchange of Scholars

**Chigozie Obioma**

Nebraska Best Book Award, Fiction Category, Nebraska Center for the Book

Best New Author Award, Go on Girl! National Bookclub

**English****Kristen Olson**

Collaborative Research Award, *International Journal of Market Research*

**Sociology****Lisa Pennisi**

Spirit of Service Award, Center for Civic Engagement

**Natural Resources****Julie Peterson**

Young Alumni Award, Ohio Wesleyan University

**Entomology/West Central Research and Extension Center****Dan Piatkowski**

Excellence in Safety Research for Active Living Award, Centers for Disease Control and Prevention

**Community and Regional Planning****Gary Pickard**

Fellow, American Association for the Advancement of Science

**School of Veterinary Medicine and Biomedical Sciences****Robert Powers**

Fellow, American Association for the Advancement of Science

**Chemistry****Kenneth Price**

President, Society for Textual Scholarship

**English/Center for Digital Research in the Humanities****Prahalada Rao**

Yoram Koren Outstanding Young Manufacturing Engineer, Society of Manufacturing Engineers

**Mechanical & Materials Engineering****Mark R. Riley**

Fellow, American Institute of Medical and Biological Engineers

**Biological Systems Engineering****Gregg Rothermel**

Fellow, Institute of Electrical and Electronics Engineers

**Computer Science and Engineering****Rajib Saha**

Best Poster, Summer School for Chemical Engineering Faculty, American Society of Engineering Education

**Chemical and Biomolecular Engineering****Philip Sapirstein**

Loeb Classical Library Foundation Fellowship, Harvard University

**School of Art, Art History and Design/Center for Digital Research in the Humanities****Daniel P. Schachtman**

Fellow, American Society of Plant Biology

**Agronomy and Horticulture****Rebekka Schlichting**

Grand Prize for Journalism student project, "The Wounds of Whiteclay: Nebraska's Shameful Legacy" (faculty adviser), Robert F. Kennedy Journalism Awards

**Journalism****Amy Millmier Schmidt**

Standards Development Award, American Society of Agricultural and Biological Engineers

**Biological Systems Engineering/Animal Science****Jennifer Schmidt**

Best New Innovation Paper Award (with Karla Lechtenberg, Ronald Faller, Ana Guajardo, Robert Bielenberg, John Reid and E. Emerson), Transportation Research Board

**Civil Engineering****Hamid Sharif**

Fellow, Institute of Electrical and Electronics Engineers

**Electrical and Computer Engineering****Chungwook Sim**

Daniel J. Penny Research Fellowship, Precast/Prestressed Concrete Institute

**Civil Engineering****Jolene D. Smyth**

Warren J. Mitofsky Innovators Award, American Association for Public Opinion Research

**Sociology****Matthew Spangler**

Continuing Service Award, Beef Improvement Federation

**Animal Science****Joseph Starita**

Chief Standing Bear Humanitarian Award, Nebraska Commission on Indian Affairs

**Journalism**

Grand Prize for Journalism student project, "The Wounds of Whiteclay: Nebraska's Shameful Legacy" (faculty adviser), Robert F. Kennedy Journalism Awards

**Jay Storz**

Honorary Professor, Aarhus University of Science and Technology, Denmark

**Biological Sciences**



**Richard K. Sutton** **Agronomy and Horticulture/  
Landscape Architecture Program**  
Honor Award for Research, American Society of Landscape Architects

**Daniel Tannenbaum** **Economics**  
Early Career Research Award, W.E. Upjohn Institute for Employment Research

**Pat Tetreault** **LGBTQA+ Resource Center**  
Alumni of Distinction Award, Kansas State University

**William G. Thomas III** **History**  
Fellowship, John Simon Guggenheim Memorial Foundation  
Best article published in Civil War History in 2016 (with **Kaci Nash** and Robert Shephard), John T. Hubbell Prize

**Bruce Thorson** **Journalism**  
Best of the West, Associated Press and National Press Photographers Association

**Julie Tippens** **Child, Youth and Family Studies**  
Trocaire Leadership Award, Gwynedd Mercy Academy High School Alumnae Board

**Christopher Tuan** **Civil Engineering**  
T.C. Graham Prize, Association for Iron and Steel Technology

**Joseph Turner** **Mechanical & Materials Engineering**  
Outstanding Paper, American Society of Nondestructive Testing

**Cheryl Turner** **Center on Children, Families and the Law**  
Trauma-Informed Care Pioneer in Education, Beyond Consequences Institute

**Mark van Roojen** **Philosophy**  
Laurence S. Rockefeller Visiting Fellow in the University Center for Human Values, Princeton University  
Fellow, Summer Stipend, National Endowment for the Humanities

**Shashi Verma** **Natural Resources (emeritus)**  
Highly Cited Researcher 2016, Clarivate Analytics

**Ana M. Vlez** **Entomology**  
Young Professors Class of 2016, DuPont

**David von Kampen** **Glenn Korff School of Music**  
Winner of ORTUS International New Music Competition, KHORIKOS Ensemble (a cappella choir)

**Mehmet Can Vuran** **Computer Science and Engineering**  
Highly Cited Researcher 2016, Clarivate Analytics

**Hope Wabuke** **English**  
2017 Poetry Fellowship, National Endowment for the Arts

**Matthew Waite** **Journalism**  
Hall of Fame, Nebraska Press Association

**LuAnn Wandsnider** **Anthropology**  
Presidential Recognition Award, Society for American Archaeology

**Jack Whittier** **Panhandle Research and  
Extension Center/Animal Science**  
Distinguished Service Award, Western Section of American Society of Animal Science

**Mary S. Willis** **Nutrition and Health Sciences**  
Fellow, American Association for the Advancement of Science

**John Woollam** **Electrical and Computer Engineering**  
R.F. Bunshah Award, International Conference on Metallurgical Coatings and Thin Films

**David Yuill** **Durham School of Architectural Engineering  
and Construction/Architectural Engineering**  
New Investigator Award, American Society of Heating, Refrigerating and Air-conditioning Engineers

**Xiao Cheng Zeng** **Chemistry**  
Surfaces and Interfaces Award, Royal Society of Chemistry

**Tian Zhang** **Civil Engineering**  
State of the Art Award, American Society of Civil Engineers

**Gary Zoubek** **Southeast Research and  
Extension Center (emeritus)**  
Hall of Fame Award, National Association of County Agricultural Agents

## Glossary of Federal Agency Abbreviations

DHS	Department of Homeland Security	ED	Department of Education
DHHS	Department of Health and Human Services	IES	Institute of Education Sciences
ACF	Administration for Children and Families	EPA	Environmental Protection Agency
CDC	Centers for Disease Control	EPSCoR	Experimental Program to Stimulate Competitive Research
NIOSH	National Institute for Occupational Safety and Health	IMLS	Institute of Museum and Library Services
SAMHSA	Substance Abuse and Mental Health Services Administration	NASA	National Aeronautics and Space Administration
DOC	Department of Commerce	NEA	National Endowment for the Arts
NIST	National Institute of Standards and Technology	NEH	National Endowment for the Humanities
NOAA	National Oceanic & Atmospheric Administration	NIH	National Institutes of Health
DoD	Department of Defense	FIC	Fogarty International Center
AFOSR	Air Force Office of Scientific Research	NCI	National Cancer Institute
ARO	Army Research Office	NCRR	National Center for Research Resources
DARPA	Defense Advanced Research Projects Agency	NEI	National Eye Institute
DTRA	Defense Threat Reduction Agency	NHLBI	National Heart, Lung and Blood Institute
DURIP	Defense University Research Instrumentation Program	NIAID	National Institute on Allergy & Infectious Diseases
JVAP	Joint Vaccine Acquisition Program	NIBIB	National Institute of Biomedical Imaging and Bioengineering
MDA	Missile Defense Agency	NICHD	National Institute of Child Health and Human Development
ONR	Office of Naval Research	NIDA	National Institute on Drug Abuse
SERDP	Strategic Environmental Research and Development Program	NIDCD	National Institute on Deafness & Communication Disorders
USAMRAA	US Army Medical Research Acquisition Activity	NIDDK	National Institute of Diabetes, Digestive & Kidney Disease
USAMRMC-TATRC	US Army Medical Research and Materiel Command-Telemedicine and Advanced Technology Research Center	NIEHS	National Institute of Environmental Health Sciences
DOE	Department of Energy	NIGMS	National Institute on General Medical Sciences
ARPA-E	Advanced Research Projects Agency-Energy	NIMH	National Institute of Mental Health
NETL	National Energy Technology Laboratory	NINDS	National Institute of Neurological Disorders & Stroke
DOI	Department of Interior	NSF	National Science Foundation
FWS	Fish and Wildlife Service	USAID	United States Agency for International Development
GS	Geological Survey	USDA	United States Department of Agriculture
DOJ	Department of Justice	AFRI	Agriculture and Food Research Initiative
NIJ	National Institute of Justice	ARS	Agricultural Research Service
DOL	Department of Labor	FNS	Food and Nutrition Service
DOS	Department of State	FS	Forestry Service
BECA	Bureau of Educational and Cultural Affairs	NASS	National Agricultural Statistics Service
DOT	Department of Transportation	NIFA	National Institute for Food and Agriculture
FAA	Federal Aviation Administration	NRCS	Natural Resources Conservation Service
FHWA	Federal Highway Administration	OCE	Office of the Chief Economist
RITA	Research and Innovative Technology Administration		

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