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2016

## Research and Creative Activity, July 1, 2015-June 30, 2016: Major Sponsored Programs and Faculty Awards for Research and Creative Activity, University of Nebraska-Lincoln

Office of Research and Economic Development, University of Nebraska-Lincoln

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**N**

**RESEARCH**

**Office of Research and  
Economic Development**

**RESEARCH  
AND  
CREATIVE  
ACTIVITY**

**July 1, 2015 – June 30, 2016**

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

**UNIVERSITY OF NEBRASKA-LINCOLN**

<b>3</b>	<b>Awards of \$5 Million or More</b>
<b>13</b>	<b>Awards of \$1 Million to \$4,999,999</b>
<b>29</b>	<b>Awards of \$250,000 to \$999,999</b>
<b>67</b>	<b>Early Career Awards</b>
<b>71</b>	<b>Arts and Humanities Awards of \$250,000 or More</b>
<b>75</b>	<b>Arts and Humanities Awards of \$50,000 to \$249,999</b>
<b>76</b>	<b>Arts and Humanities Awards of \$5,000 to \$49,999</b>
<b>78</b>	<b>Patents</b>
<b>82</b>	<b>License Agreements</b>
<b>85</b>	<b>Creative Activity</b>
<b>87</b>	<b>Books</b>
<b>90</b>	<b>Recognitions and Honors</b>
<b>97</b>	<b>Glossary</b>

On the Cover: Below the soil surface, plant roots navigate a world teeming with microbes – both helpful and hostile. Complex interactions between roots and their soil-dwelling neighbors are critical to plant health and productivity. Building on longstanding strengths in plant science, University of Nebraska–Lincoln researchers lead two major initiatives to better understand these vital root-microbe interactions. One project aims to improve health and productivity of agricultural crops; the other seeks to optimize sorghum’s biofuel potential. The cover illustration shows part of a plant root amid the diverse microbes inhabiting the rhizosphere, the region of soil surrounding plant roots.

*(Illustration by Joel Brehm, Office of Research and Economic Development)*



**Steve Goddard**

Interim Vice Chancellor for  
Research and Economic Development

This “Major Sponsored Programs and Faculty Awards for Research and Creative Activity” booklet highlights the successes of the University of Nebraska–Lincoln faculty during the fiscal year July 1, 2015–June 30, 2016. It lists funding sources, projects and investigators 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 in which our faculty have engaged; and intellectual property licenses and patents issued for the products of UNL research.

At UNL we continue to grow our research enterprise, investing in big ideas, new faculty, new facilities and new opportunities. These investments of time, energy, creativity and dollars are paying off, and I am pleased to present evidence of our faculty’s accomplishments.

We’re building for the future with strategic investments in key areas of traditional and emerging research strengths. We are expanding our reach by defining our vision, seeking and supporting talented people with ambitious ideas, giving them the best facilities and the freedom to innovate and create; and pursuing partnerships necessary to tackle complex issues, solve global challenges, address national needs and enhance Nebraska’s economy.

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

Thank you for your interest in and support for research, scholarship and creative activity at UNL, and for making 2016 an award-winning research year!

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

Steve Goddard



This booklet is dedicated to the memory of Prem S. Paul, 1947–2016, longtime vice chancellor for research and economic development at UNL, under whose leadership the annual Research Fair and this publication of faculty accomplishments took shape.



# Awards of \$5 Million or More

Active awards, July 1, 2015-June 30, 2016

\* Indicates new in 2015-2016

**Cahoon, Edgar**

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

\*RII Track-1: Center for Root and Rhizobiome Innovation (CRR)

\$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 new project draws upon a range of expertise in Nebraska. UNL is teaming with scientists at the University of Nebraska Medical Center, University of Nebraska at Kearney and Doane University on the new Center for Root and Rhizobiome Innovation. Project co-leaders are Edgar Cahoon, George W. Holmes Professor of Biochemistry and director of UNL’s 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



UNL 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 UNL team was part of the multi-institutional collaboration that built the original CMS experiment, one of two large particle detector experiments at the Large Hadron Collider. With this 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 Building Cooperative Extension's 21st Century Network  
 \$6,025,596  
 9/1/11 - 8/31/16

**eXtension**

USDA-NIFA

National eXtension Project

\$21,470,000

Association of Public  
 and Land-Grant Universities

10/1/04 - 12/31/15



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

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

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

Lu, Yongfeng

Electrical and Computer Engineering

Morris, T. Jack

Biological Sciences

Schubert, Eva

Electrical and Computer Engineering

Schubert, Mathias

Electrical and Computer Engineering

Spreitzer, Robert

Biochemistry

Takacs, James

Chemistry

Van Etten, James

Plant Pathology

Weeks, Donald

Biochemistry





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

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

**Lewis, Jim**

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

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

Smith, Wendy Center for Science, Mathematics  
 and Computer Education



A grant from The Sherwood Foundation® and the Lozier Foundation supports a three-year partnership between Omaha Public Schools and UNL's Center for Science, Mathematics and Computer Education to fund the NebraskaMATH Omaha Public Schools Teacher Leader Academy. 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.

## NebraskaMATH

\$9,235,407

NSF

1/1/09 – 12/31/15

Edwards, Carolyn

Heaton, Ruth

Psychology/Child, Youth and Family Studies

Teaching, Learning and Teacher Education/

Center for Science, Mathematics and

Computer Education

Lincoln Public Schools

Jacobson, Barbara

McGowan, Thomas

Papick, Ira

Teaching, Learning and Teacher Education

Mathematics/Center for Science,

Mathematics and Computer Education

Stroup, Walter

Statistics

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

## 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

\$24,808,902

USDA-AFRI

1/1/12 – 12/31/16

Hippareddi, Harshavardhan

Food Science and Technology



UNL veterinary scientist Rodney Moxley leads a major project involving 12 universities and other institutions to target eight of the most dangerous *E. coli* strains throughout the beef production chain. Funded by a \$25 million Agriculture and Food Research Initiative grant from the U.S. Department of

Agriculture's National Institute of Food and Agriculture, the project's long-term goal is to reduce the occurrence and public health risks from Shiga toxin-producing *E. coli* in beef, while preserving an economically viable and sustainable beef industry. The project explores the public health, economic and environmental impacts of existing or new intervention strategies on predicted and actual STEC exposure risk. Innovative education, extension and evaluation efforts are intertwined with research on beef chain STEC risk mitigation and decreased numbers of human STEC cases.

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

**Rilett, Laurence**

**Civil Engineering/  
Nebraska Transportation Center**

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 UNL’s Mid-America Transportation Center (MATC) as a regional university transportation center. Led by Laurence Rilett, Keith W. Klaasmeyer Chair in the Department of Civil

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

**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

Zygielbaum, Arthur

Center for Plant Science Innovation/  
Natural Resources



Daniel Schachtman, professor of agronomy and horticulture and director of UNL'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. Ismail Dweikat, sorghum breeder and professor of agronomy and horticulture, and Arthur Zygielbaum, remote sensing expert and associate research professor of natural resources, are teaming with Schachtman on this research. UNL also 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.

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

Research and Develop Nanoscale Magneto-electronic,  
Sensor and Energy Materials and Devices

\$5,864,300

DoD-ARO

9/24/10 – 3/23/16

Cheung, Chin Li

Chemistry

Liou, Sy-Hwang

Physics and Astronomy

Shield, Jeffrey

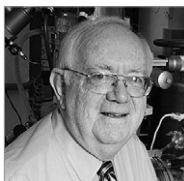
Mechanical & Materials Engineering

Skomski, Ralph

Physics and Astronomy

Zeng, Xiao Cheng

Chemistry/Physics and Astronomy



David Sellmyer, George Holmes University Professor of Physics, and colleagues in the Nebraska Center for Materials and Nanoscience, have received funding from the Army Research Office to support several efforts of high current interest in nanoscience and nanotechnology: 1) magneto-electronic and sensor materials and devices, 2) nanomaterials for energy applications, and 3) development of a nanofabrication and characterization facility to support related research. Goals of the first project are to develop a high-sensitivity magnetoresistive sensor for both DC and high-frequency-band EMI magnetic field mapping; investigate new magnetic semiconductor systems for room-temperature spintronic applications; and research the

fabrication of nanodot arrays for magnetic logic and information-processing operations. Research on nanomaterials for energy systems involves fabrication of new nanomagnets for applications in motors and hybrid vehicles, as well as research on nanoparticles and nanoclusters on oxide structures likely to have applications in energy production and environmental science. The third general area of this project involves the purchase and installation of a variety of state-of-the-art nanofabrication and characterization tools to be housed in the NIST ARRA-supported Nanoscience Metrology Facility.

**Tsymbal, Evgeny**

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

Center for NanoFerroic Devices

\$7,125,000

DOC-NIST through  
Semiconductor Research Corp.-  
Nanoelectronics Research Corp.

4/1/13 – 12/31/17



UNL leads a \$7.125 million research collaboration involving six universities and an industry consortium to develop a new generation of electronic devices. Semiconductor Research Corp. and the National Institute of Standards and Technology have awarded a UNL physics

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

Materials Research Science & Engineering Center:  
Polarization and Spin

\$9,600,000

NSF

11/1/14 – 10/31/20

Gruverman, Alexei

Physics and Astronomy

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

**Waller, Steven****College of Agricultural Sciences  
and Natural Resources**

\*Developing the Next Generation of Rwandan Agricultural Leaders  
 \$25,027,437  
 7/1/15 – 6/30/22  
 Davis, Joshua  
 Heng-Moss, Tiffany

Various Associations/Foundations  
 Global Engagement  
 CASNR

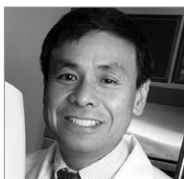


With grants totaling more than \$25,000,000, the College of Agricultural Sciences and Natural Resources (CASNR) at UNL is partnering with various associations and foundations to provide educational opportunities for Rwandan students to participate in the Undergraduate Scholars Program (CUSP). In support 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 dean Steve Waller leads this effort.

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

\$5,499,715  
 9/16/10 – 7/31/17

Nebraska Center for Virology  
 NIH-NIGMS



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

Kaposi’s Sarcoma & Human Herpesvirus in Africa

\$5,794,724  
 7/16/10 – 4/30/17

NIH-NCI  
 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, UNL 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, 2015-June 30, 2016

\* Indicates new in 2015-2016

## Allen, Craig

## Natural Resources

IGERT: Resilience and Adaptive  
Governance in Stressed Watersheds

\$3,116,173

NSF

Fritz, Sherilyn  
Samal, Ashok  
Tomkins, Alan  
Tyre, Richard

Earth and Atmospheric Sciences  
Computer Science and Engineering  
Law/Public Policy Center  
Natural Resources

## 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  
Regassa, Teshome  
Waters, Brian

Agronomy and Horticulture  
Agronomy and Horticulture  
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  
Hoffman, Michael

Electrical and Computer Engineering  
Electrical and Computer Engineering

## Barlow, Steven

## Special Education and Communication Disorders

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

\$2,797,503

NIH-NICHD

## Becker, Donald

## Biochemistry

Redox Biology Center

\$4,305,466

NIH-NIGMS

Mechanistic Studies of Functional Switching  
in the PutA Flavoprotein

\$1,888,980

NIH-NIGMS

## Bellows, Laurie

## Graduate Studies

McNair Scholars Project and the University of Nebraska-Lincoln

\$1,088,494

ED



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

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

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

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

\$1,194,259  
Peterson, Daniel  
NIH-NIGMS  
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  
Claes, Daniel  
Dominguez, Aaron  
Kravchenko, Ilya  
Snow, Gregory  
NSF  
Physics and Astronomy  
Physics and Astronomy  
Physics and Astronomy  
Physics and Astronomy

Transatlantic Networking

\$2,917,300  
DOE-Fermi National Laboratory

U.S. CMS Operations at the LHC

\$3,983,641  
Dominguez, Aaron  
Swanson, David  
NSF through Princeton University  
Physics and Astronomy  
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  
 Statistics  
 Child, Youth and Family Studies  
 Nutrition and Health Sciences  
 Nutrition and Health Sciences  
 Anderson-Knott, Mindy  
 De Guzman, Maria  
 Fischer, Jean  
 Takahashi, Shinya

**Buchholz, Wallace** **Biological Process Development Facility**  
 Tech Transfer, Scale Up, and GMP Production of XTEN  
 \$2,432,923 Amunix Operating Inc.  
 Biological Process Development Facility  
 Johnson, Scott

**Cahoon, Edgar** **Biochemistry/  
 Center for Plant Science Innovation**  
 Biochemical Genomics:  
 Deciphering the Chemical Factories of Oilseeds  
 \$1,001,815 NSF through Washington State University  
 Biological Sciences/  
 Center for Plant Science Innovation  
 Moriyama, Etsuko

Center for Metabolic Channeling  
 for Enhanced Biofuel Systems  
 \$1,412,772 DOE through Donald Danforth Plant Science Center

**Cassman, Kenneth** **Agronomy and Horticulture**  
 Global Yield Gap and Water Productivity Atlas  
 \$1,255,923 Bill & Melinda Gates Foundation  
 Agronomy and Horticulture  
 Agronomy and Horticulture  
 Grassini, Patricio  
 Yang, Haishun

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

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

**Dickey, Elbert** **eXtension**  
 eXtension Military Families Learning Network  
 \$2,240,454 USDA-NIFA

**DiLillo, David**

Sexual Revictimization: Emotional and Psychosocial Mechanisms  
 \$3,229,123  
 Hoffman, Lesa

**Psychology**

NIH-NICHD  
 Psychology

**Dombrowski, Kirk**

\*Measuring Social Behavior via Dynamic Network Interaction  
 \$1,224,423  
 Khan, Bilal  
 Maerlender, Arthur  
 Swearer, Susan

**Sociology**

NIH-NIGMS  
 Sociology  
 Center for Brain, Biology and Behavior  
 Educational Psychology

Injection Risk Networks in Rural Puerto Rico  
 \$2,970,743  
 Welch-Lazoritz, Melissa

NIH-NIDA  
 Bureau of Sociological Research/  
 Sociology

**Duppong Hurley, Kristin**

Parent Connectors: An Efficacy Study of Peer Support  
 for Parents of Middle-School Youth with Emotional Disturbance  
 \$3,206,013  
 Torkelson-Trout, Alexandra

**Special Education and  
Communication Disorders**

ED-IES  
 Special Education and  
 Communication Disorders

**Dzenis, Yuris**

Optimal Stent Selection for the Femoropopliteal Artery  
 \$1,028,824  
 Desyatova, Anastasia

**Mechanical & Materials Engineering**

NIH-NHLBI through UNMC  
 Mechanical & Materials Engineering

**Eccarius, Malinda**

Mountain Prairie Upgrade Partnership-Itinerant  
 \$1,199,400  
 Bovaird, James  
 Welch, Greg

**Special Education and  
Communication Disorders**

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

**Engen-Wedin, Nancy**

Indigenous Roots Teacher Education Program  
 \$1,078,185  
 McGowan, Thomas

**Teaching, Learning and  
Teacher Education**

ED  
 Teaching, Learning and Teacher Education

**Farritor, Shane**

Robotic Tele-Surgery Research  
 \$2,084,873  
 Nelson, Carl  
 Terry, Benjamin

**Mechanical & Materials Engineering**

DoD-Army-TATRC through UNMC  
 Mechanical & Materials Engineering  
 Mechanical & Materials Engineering

Supporting Surgical Options in Space  
 \$1,350,000  
 Goddard, Stephen  
 Nelson, Carl  
 Pérez, Lance

NASA through UNMC  
 Computer Science and Engineering  
 Mechanical & Materials Engineering  
 Electrical and Computer Engineering

**Fischer, Jean** **Nutrition and Health Sciences**  
 Supplemental Nutrition Assistance Program (SNAP-ED)  
 \$1,607,053 USDA-FNS through Nebraska Department of  
 Health and Human Services  
 Boeckner, Linda Extension  
 Carr, Timothy Nutrition and Health Sciences

**Fontaine, Joseph** **Natural Resources**  
 Use and Satisfaction of Public Hunting Opportunities  
 \$1,240,600 DOI-GS through Nebraska  
 Game and Parks Commission  
 Martin, Dustin Natural Resources

**Frankl, Nicole** **Nebraska Local Technical Assistance Program**  
 Nebraska Local Technical Assistance Program FY 2016  
 \$1,118,920 DOT-FHWA through Nebraska Department of Roads

**Gaussoin, Roch** **Agronomy and Horticulture**  
 ConAgra Popcorn Breeding Maintenance  
 \$1,246,914 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  
 Cassman, Kenneth Agronomy and Horticulture  
 Glewen, Keith Southeast Research and Extension Center  
 Hay, Francis Biological Systems Engineering  
 Heng-Moss, Tiffany Entomology  
 James, Theresa Agronomy and Horticulture  
 Namuth Covert, Deana Agronomy and Horticulture  
 Perrin, Richard Agricultural Economics  
 Waters, Brian Agronomy and Horticulture  
 Wegulo, Stephen Plant Pathology  
 Yuen, Gary Plant Pathology

**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**

\*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  
 Svoboda, Mark Natural Resources  
 Wardlow, Brian Natural Resources  
 Wilhite, Donald 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**

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

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

Language Bases of Skilled Reading Comprehension  
 \$4,385,043 ED-IES through MGH Institute  
 of Health Professionals  
 Bovaird, James Educational Psychology/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools

**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  
Pytlik 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

\$1,066,416 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, 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

\$1,841,117 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  
Dominguez, Aaron Physics and Astronomy  
Snow, Gregory Physics and Astronomy

**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 Engineering

Swidler, Stephen

Teaching, Learning and Teacher Education

**Li, Ming**

**Psychology**

Serotonin, Maternal Behavior and Postpartum Depression

\$1,497,476

NIH-NIMH

Behavioral Mechanisms of Antipsychotic Action

\$1,424,409

NIH-NIMH

**Li, Qingsheng**

**Biological Sciences**

The Early Events Determining SIV Rectal Transmission

\$1,357,811

NIH-NIDDK

**Lodi, Kathleen**

**Extension**

Child Care and Youth Training and Technical Assistance Project

\$3,390,000

USDA-NIFA

Durden, Tonia

Child, Youth and Family Studies

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

\$3,248,208

USDA-NIFA

**Mackenzie, Sally**

**Agronomy and Horticulture/  
Biological Sciences**

Epigenetic Breeding in Crops

\$2,996,073

Bill & Melinda Gates Foundation

**Marley, Tom**

**Mathematics**

EMSW21-MCTP: Nebraska Mentoring  
through Critical Transition Points

\$2,225,689

NSF

Donsig, Allan

Mathematics

Walker, Judy

Mathematics

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

Lincoln Upward Bound

\$1,302,836

ED

Upward Bound Math/Science Program

\$1,303,016

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

**Olson, Kristin****Sociology/  
Gallup Research Center**

Reducing Error in Computer Survey Data Collection

\$2,967,347

NSF

Belli, Robert

Psychology/Gallup Research Center

Smyth, Jolene

Sociology/Gallup Research Center

Soh, Leen-Kiat

Computer Science and Engineering

**Patent-Nygren, Megan****Nebraska Local Technical  
Assistance Program**

Nebraska Rural Transit NU Development and Support

\$2,090,048

DOT-FHWA through

Nebraska Department of Roads

Bivin, William

Nebraska Local Technical

Assistance Program

**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, Marilyne

Chemistry

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

Homeostatic Regulation

of Peripheral Oscillators via Autonomic Circuitry

\$1,761,617

NIH-NINDS

Sollars, Patricia

Veterinary Medicine and Biomedical Sciences



**Pope, Kevin****Natural Resources**

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

**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-BIBIB  
 Rajca, Suchada Chemistry

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

Autoimmunity in the Mediation of Infectious Myocarditis  
 \$1,365,031 NIH-NHLBI  
 Elthon, Thomas Biotechnology/Agronomy and Horticulture  
 Othman, Shadi Biological Systems Engineering  
 Riethoven, Jean-Jack Biotechnology  
 Steffen, David Veterinary Medicine and Biomedical Sciences  
 Xu, Huihui Biological Systems Engineering

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

\*Traffic Calming Elements for Entry Control  
 Facility Threat Delay and Containment  
 \$2,772,959 National Strategic Research Institute  
 Faller, Ronald Civil Engineering/  
 Nebraska Transportation Center  
 Jones, Elizabeth Nebraska Transportation Center  
 Reid, John Mechanical & Materials Engineering/  
 Nebraska Transportation Center  
 Stolle, Cody Midwest Roadside Safety Facility/  
 Nebraska Transportation Center

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

Traffic Calming Elements for Entry Control Facility  
 Threat Delay and Containment  
 \$2,772,959 National Strategic Research Institute  
 Faller, Ronald Midwest Roadside Safety Facility  
 Jones, Elizabeth Nebraska Transportation Center  
 Reid, John Mechanical & Materials Engineering

UTC Tier 1 with University of Texas Pan American  
 \$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

**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 &amp; 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

School Psychology Specialization in Toddlers  
with Autism Spectrum Disorders

\$1,249,730

ED

Kunz, Gina

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

A Randomized Trial of Conjoint Behavioral Consultation (CBC)  
in Rural Educational Settings:

Efficacy for Elementary Students with Disruptive Behaviors

\$2,999,994

ED-IES

Bovaird, James

Educational Psychology

Glover, Todd

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

Kunz, Gina

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

**Shulski, Martha**

**Natural Resources**

Regional Climate Services Support in the High Plains Region

\$2,232,265

DOC-NOAA

Umphlett, Natalie

Natural Resources

**Simpson, Melanie**

**Biochemistry**

Molecular Mechanisms of Disease

\$1,078,105

NIH-NIGMS

Black, Paul

Biochemistry

Mechanisms of Hyaluronan Signaling and Turnover  
in Prostate Cancer

\$1,604,908

NIH-NCI

Harris, Edward

Biochemistry

**Smith, Wendy**

**Mathematics/Center for Science,  
Mathematics and Computer 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

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

Citric Acid Cycle Regulation  
of Exopolysaccharide Synthesis in Staphylococci  
\$1,384,992 NIH-NIAID  
Powers, Robert Chemistry

**Spreitzer, Robert****Biochemistry**

Role of the Rubisco Small Subunit  
\$1,496,500 DOE

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

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  
Hofmann, Tino Electrical and Computer Engineering  
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  
\$2,180,804 DOE

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

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

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

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

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

Open Science Grid Consortium  
\$1,048,000 NSF through University of Wisconsin-Madison

**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

Duppong 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

Duppong Hurley, Kristin

Special Education and  
Communication Disorders**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

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

Laser Produced Coherent X-Ray Sources

\$1,545,000

DOE

Banerjee, Sudeep

Physics and Astronomy

**Velander, William****Chemical and Biomolecular Engineering**

Technologies for Hemostasis and Stabilization

of the Acute Traumatic Wound

\$1,783,613

DoD-USAMRAA through UNMC

**Walia, Harkamal****Agronomy and Horticulture**

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

\$2,035,509

NSF

3/1/13 – 2/29/16

Lorenz, Aaron

Agronomy and Horticulture

Samal, Ashok

Computer Science and Engineering

Wang, Dong

Computer Science and Engineering

**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  
\$1,279,431 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

Alcohol Abuse/Dependence and Its  
Consequences for Indigenous Adolescents  
\$1,358,156 NIH-NIAAA  
Cheadle, Jacob Sociology  
Hoyt, Dan 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  
Jones, Clinton Veterinary Medicine and Biomedical Sciences

**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 &amp; AIDS Assoc Diseases/Malignancies

\$2,713,284

NIH-FIC

Research Training in Comparative Viral Pathogenesis

\$1,316,330

NIH-NIAID

**Yamamoto, Catherine****Student Affairs**

Student Support Services Program

\$2,480,520

ED

**Zempleni, Janos****Nutrition and Health Sciences/  
Nebraska Center for the Prevention  
of Obesity-related Diseases**\*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-related Diseases

Cui, Juan

Computer Science and Engineering/  
Nebraska Center for the Prevention  
of Obesity-related Diseases

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

Active awards, July 1, 2015-June 30, 2016

\* Indicates new in 2015-2016

## 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  
\$350,000 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

Functionalized Metallic Surfaces for Enhanced Heat Transfer,  
Drag Reduction, and Novel Power Sources  
\$652,407 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**

Monitoring, Mapping, Risk Assessment and Management of Invasive Species in Nebraska

\$350,000

Zach, Allison

**Natural Resources**DOI-FWS through Nebraska Game and Parks Commission  
Natural Resources

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

\$438,664

Fontaine, Joseph

Nebraska Game and Parks Commission  
Natural Resources**Amundsen, Keenan**

Buffalograss Breeding, Evaluation and Management for Golf Course

\$420,000

U.S. Golf Association

**Agronomy and Horticulture****Askren, Mark**

CC-NIE Networking Infrastructure: Accelerating Science for Nebraska

\$491,871

Bockelman, Brian

Ramamurthy, Byravamurthy

Swanson, David

**Information Services**NSF  
Computer Science and Engineering  
Computer Science and Engineering  
Computer Science and Engineering**Atkin, Audrey**

Mechanisms that Protect Transcripts from Nonsense-Mediated mRNA Decay

\$620,647

NSF

**Biological Sciences****Avalos, George**

\*Analysis and Control Theory for Moving Boundary and Nonlinear Phenomena in Interactive Partial Differential Equations

\$328,901

Toundykov, Daniel

**Mathematics**NSF  
Mathematics

Analysis and Control of Evolutionary Plates and Elastic Structures

\$292,773

Toundykov, Daniel

NSF  
Mathematics**Avramov, Luchezar**

Cohomology over Commutative Rings: Structure and Applications

\$458,919

NSF

**Mathematics****Avramova, Zoya**

Memory of a Drought:

Training Arabidopsis Plants to Withstand Dehydration Stress

\$763,929

Riethoven, Jean-Jack

**Biological Sciences**NSF  
Center for Biotechnology**Banerjee, Simanti**

\*The Impacts of Conservation Auction Design on Auction Performance and Community Welfare:

Evidence from Lab and Artefactual Experiments

\$498,641

USDA-NIFA

**Agricultural Economics**

- 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**  
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**  
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**  
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, Andrew** **Food Science and Technology**  
Microbiome Analysis of ConAgra Products  
\$325,000 ConAgra
- Berkowitz, David** **Chemistry**  
\*New Approaches to Catalyst Screening and Development  
\$573,522 NSF
- Billesbach, David** **Biological Systems Engineering**  
The AmeriFlux Network Management Project  
\$347,872 DOE through  
University of California-Berkeley National Lab
- SGP-Carbon Project  
\$400,006 University of California-Berkeley National Lab
- Bloom, Kenneth** **Physics and Astronomy**  
Any Data, Anytime, Anywhere  
\$710,336 NSF  
Dominguez, Aaron Physics and Astronomy  
Swanson, David Computer Science and Engineering
- Blum, Paul** **Biological Sciences**  
\*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
- Predictive Models for Dynamic Brittle Fracture and Damage  
at High-Velocity Impact in Multilayered Targets  
\$369,945 DoD-ARO
- Bockelman, Brian** **Computer Science and Engineering**  
CC-NIE Integration: Bringing Distributed  
High Throughput Computing to the Network with Lark  
\$573,344 NSF
- Brown, Deborah** **Biological Sciences**  
Generation and Regulation of Anti-Viral CD4 T Cells  
with Cytolytic Potential  
\$351,312 NIH-NIAID
- Buan Murphy, Nicole** **Biochemistry**  
EAGER: Coupling Electron Transport and  
Metabolism using Biological Routers  
\$299,615 NSF

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

\*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**

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

BioCassava Plus

\$433,442 Bill & Melinda Gates Foundation 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**

Ultrafast Imaging of Electronic Motion in Atoms and Molecules

\$737,778 DoD-AFOSR  
Starace, Anthony Physics and Astronomy

Ultrafast Electron Diffraction from Aligned Molecules

\$451,097 DOE

- Cerutti, Heriberto** **Biological Sciences/  
Center for Plant Science Innovation**  
Small RNA-Mediated Translation Repression in *Chlamydomonas*  
\$566,910 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  
DOI-FWS through Nebraska  
\$288,371 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  
\$450,000 NSF  
RI: Small: Towards Practical Tractability in Constraint Processing  
\$435,564 NSF
- Christensen, Alan** **Biological Sciences**  
Novel Mechanisms of Plant Mitochondrial DNA Repair  
\$660,788 NSF
- 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**  
\*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 Rivoliana* (Kampachi) Diet  
with Soy-Based Protein and Oil  
\$364,209 United Soybean Board/Smith/Bucklin

Engineering Hydrocarbon Biosynthesis and Storage Together with  
Increased Photosynthetic Efficiency into the Saccharinae  
\$727,694 DOE through University of Illinois  
at Urbana-Champaign

Necessary Resources to Aid in the Translation  
of Genomics Information into Applied Technologies  
\$669,020 NSF through University of Georgia

**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

**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**  
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

**Crockett, Lisa** **Psychology**  
An Ecological Model of Latino Youth Development  
\$339,935 NSF  
Buhs, Eric Educational Psychology  
Carranza, Miguel Sociology/Institute for Ethnic Studies  
De Guzman, Maria Child, Youth and Family Studies

**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

**De Ayala, Rafael****Educational Psychology**

GAANN Fellowship Program for Educational Psychology

\$528,608

ED

Ansorge, Charles

Educational Psychology

Bellows, Laurie

Graduate Studies

Bovaird, James

Educational Psychology

Geisinger, Kurt

Educational Psychology

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

Co-Aerial-Ecologist:

Robotic Water Sampling and Sensing in the Wild

\$956,210

USDA-NIFA

Burgin, Amy

Natural Resources

Elbaum, Sebastian

Computer Science and Engineering

Waite, Matthew

Journalism and Mass Communications

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

\$390,000

NSF

**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**

Voltage-Controlled, Low-Power Nonvolatile Spintronic Memory

\$899,830

Semiconductor Research Corp.

Binek, Christian

through University of Minnesota

Physics and Astronomy

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

Discovering New Anti-Infective Agents from Lysobacter

\$838,922

NIH-NIAID

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

\*Biotech Connector

\$750,000

DOC-ED

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

University of Nebraska's Post-Doctoral Program  
in Emotional Disturbance

\$643,776

ED

Torkelson-Trout, Alexandra

Special Education and  
Communication and Disorders

Randomized Clinical Trial of the Boys Town In-Home Program  
\$621,989 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  
\$485,000 NSF

New Reactions of Organic Peroxides  
\$420,000 NSF

**Dvorak, Bruce****Civil Engineering**

Water Innovation Network for  
Sustainable Small Systems (WINSSS)

\$338,160

Lai, Rebecca

Ray, Chittaranjan

EPA through University of Massachusetts-Amherst  
Chemistry  
Civil Engineering

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

\*SHF: Small: Measurable Program Analysis

\$499,733

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 &amp; 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



**Enders, Axel****Physics and Astronomy**

UNO-NASA Space Grant Consortium:  
Neutron Voltatics for Deep Space Missions

\$546,569  
Dowben, Peter  
Ianno, Natale

NASA through UNO  
Physics and Astronomy/Nebraska  
Center for Materials and Nanoscience  
Electrical and Computer Engineering

**Erickson, Galen****Animal Science**

Integrated Anaerobic Digestion with Algae  
Bioenergy and Green Aquaculture

\$250,000  
Isom, Loren  
Riley, Mark  
Schmidt, Amy  
Stowell, Richard

Nebraska Environmental Trust  
Industrial Agricultural Products Center  
Biological Systems Engineering  
Animal Science/Biological Systems Engineering  
Biological Systems Engineering

**Eskridge, Kent****Statistics**

GAANN Fellowship Program for Statistics

\$885,834

ED

**Espy, Kimberly****Psychology**

Neurocognitive Mechanisms of Developing  
Executive Control and Risk for ADHD in Preschool

\$415,250  
Garza, John  
James, Tiffany  
Molfese, Dennis  
Nelson, Jennifer

NIH-NIMH  
Research and Economic Development  
Research and Economic Development  
Psychology  
Research and Economic Development

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

\*Evaluation of New Jersey TCB Performance under MASH TL-3

\$702,369

DOT-FHWA through Nebraska  
Department of Roads  
Midwest Roadside Safety Facility  
Midwest Roadside Safety Facility  
Mechanical & Materials Engineering  
Midwest Roadside Safety Facility

Bielenberg, Robert  
Lechtenberg, Karla  
Reid, John  
Rosenbaum, Scott

\*Guidelines for Placement of Breakaway Light Poles  
behind Midwest Guardrail System

\$262,603

DOT-FHWA through Nebraska  
Department of Roads  
Midwest Roadside Safety Facility  
Mechanical & Materials Engineering

Bielenberg, Robert  
Reid, John

\*Iowa DOT Combination Bridge Separation  
Barrier with Bicycle Railing

\$254,445

DOT-FHWA through Nebraska  
Department of Roads  
Midwest Roadside Safety Facility  
Mechanical & Materials Engineering  
Midwest Roadside Safety Facility

Bielenberg, Robert  
Reid, John  
Rosenbaum, Scott

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 Roads  
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 Roads  
Reid, John Mechanical & Materials Engineering

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

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

**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  
\$299,686 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  
\$808,704 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**

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

**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**

Polarized Electron Physics

\$610,000 NSF

**Ge, Yufeng** **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

**Giannakas, Konstantin****Agricultural Economics**Center For Agricultural and Food Industrial Organization-  
Policy Research Group (CAFIO-PRG)

\$766,166

USDA-NIFA

Anderson, John

Economics

Burbach, Mark

Natural Resources

Calow, Peter

Research and Economic Development

Fulginiti, Lilyan

Agricultural Economics

Hayes, Michael

Natural Resources

Lubben, Bradley

Agricultural Economics

Lynne, Gary

Agricultural Economics

Perrin, Richard

Agricultural Economics

Schoengold, Karina

Agricultural Economics

Thompson, Eric

Bureau of Business Research

Yiannaka, Amalia

Agricultural Economics

**Gibson, Robert****Biological Sciences**

GAANN Integrative Ecology and Evolution

\$544,420

ED

**Goddard, Stephen****Computer Science and Engineering**CSR: Small: Systematic Approaches for Real-Time  
Stream Data Services

\$250,000

NSF

Liu, Xue

Computer Science and Engineering

**Gogos, George****Mechanical & Materials Engineering**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 &amp; Materials Engineering

Shield, Jeffrey

Mechanical &amp; Materials Engineering

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

Food Allergen Database

\$957,318

Various Industries

**Goosby, Bridget****Sociology**

Intergenerational Transmission of Race Disparities in Health

\$546,345

NIH-NICHD

**Gosselin, David****Natural Resources**Global Climate Change Education:  
Research Experiences, Modeling and Data

\$349,973

NASA

Bonnstetter, Ron

Teaching, Learning and Teacher Education

Low, Russanne

Natural Resources

Oglesby, Robert

Earth and Atmospheric Sciences/  
Natural Resources

**Graef, George**

Soybean Breeding and Genetic Studies for Nebraska  
\$257,379

**Agronomy and Horticulture**

Nebraska Soybean Board

**Grassini, Patricio**

\$433,081

\*Benchmarking Soybean Production Systems  
in the North-Central USA

North Central Soybean Research Program

**Agronomy and Horticulture****Griep, Mark**

\$749,285

Framing the Chemistry Curriculum

**Chemistry**

NSF

REU Site: Research Experiences for Undergraduates  
in Chemical Assembly at the University of Nebraska

\$270,000

NSF

**Grosskopf, Kevin**

\$725,842

IMPACT - Trade Adjustment Assistance Grant

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

**Durham School of Architectural Engineering and Construction****Guo, Jiantao**

\$312,541

Mechanistic Study of Cellulosome  
through Reprogramming Its Assembly

**Chemistry**

NSF

Niu, Wei

Chemistry

**Guretzky, John**

\$275,667

\*Developing Research and Extension Skills of  
Students in Integrated Agronomic Systems

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

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

\$330,256

USDA-NRCS through

South Dakota State University

Mamo, Martha

Agronomy and Horticulture

Schacht, Walter

Agronomy and Horticulture

Stockton, Matthew

West Central Research and Extension Center

Volesky, Jerry

West Central Research and Extension Center

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

Instrumentation Development:  
Label-Free and Rapid 3D-Nanostructure  
Ultrathin-Layer Imaging Chromatography

\$402,483

NSF

Hofmann, Tino

Electrical and Computer Engineering

Chromatographic Automation of Immunoassays

\$809,387

NIH-NIGMS

**Hamernik, Debora****Agricultural Research Division**

\*Scientific Knowledge and New Technology to  
Aid in the Selection and Management  
of the U.S. Beef, Swine and Sheep Populations

\$494,000

USDA-ARS

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

\*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

Fiber Laser Sensors for Acoustic Emission Detection

\$300,590

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

Engineering Protein Transport and Secretion in Filamentous Fungi

\$274,949

NSF

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

Court Improvement Project Infant/Toddler Program

\$655,843

The Sherwood Foundation<sup>®</sup>

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

Drought Information Service in Support  
 of the National Integrated Drought Information System NIDIS  
 \$739,803 DOC-NOAA  
 Bathke, Deborah Earth and Atmospheric Sciences  
 Fuchs, Brian Natural Resources  
 Knutson, Cody Natural Resources  
 Svoboda, Mark Natural Resources  
 Tadesse, Tsegaye Natural Resources

**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  
 \$734,477 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  
 Zhang, Chi

USDA-NIFA  
 Biological Sciences

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

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

NSF

Energy-Aware Aerial Systems for  
 Persistent Sampling and Surveillance  
 \$379,591 DoD-AFOSR through University of Colorado Boulder

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

Development of a Northern Hemisphere  
 Gridded Precipitation Dataset  
 Spanning the Past Half Millennium for Analyzing  
 Interannual and Longer-Term Variability in the Monsoons  
 \$529,501

Feng, Song  
 Oglesby, Robert

DOC-NOAA  
 Natural Resources  
 Earth and Atmospheric Sciences

**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  
 Physics and Astronomy  
 Chemistry

Combined Macroscopic and Nanoscopic Studies of the  
 Photovoltaic Behavior of Organic Perovskite Solar Cells  
 \$480,000

Gruverman, Alexei

NSF  
 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

Extremely Sensitive Solid-State Ultraviolet Photodetector  
 by Fabricated Low-Cost Solution Process  
 \$628,183

DoD-ONR



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

\$416,000

NSF

Ducharme, Stephen

Physics and Astronomy

Highly Sensitive, Low Cost  
Organic Photodetector-Based Photomultiplication

\$500,000

DoD-DTRA

**Hunt, William**

**Anthropology**

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

\$290,992

NSF

Hartley, Ralph

Anthropology

**Hutkins, Robert**

**Food Science and Technology**

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

\$489,699

USDA-NIFA

Walter, Jens

Food Science and Technology

**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  
ED through Nebraska Department of Education

\$549,287

**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

<b>Itskov, Vladimir</b>	<b>Mathematics</b>
Topology of Neural Coding in Recurrent Networks: Theory and Data Analysis	
\$316,862	NSF
<b>Iyengar, Srikanth</b>	<b>Mathematics</b>
Commutative Algebra: Homological and Homotopical Aspects	
\$435,785	NSF
<b>Jackson-Ziems, Tamra</b>	<b>Plant Pathology</b>
Uncovering the Genetic Basis of Tolerance to Goss's Wilt in North American Maize	
\$293,431	Dow AgroSciences
<b>Jhala, Amitkumar</b>	<b>Agronomy and Horticulture</b>
Pollen-Mediated Gene Flow from Acetolactate Synthase-Inhibiting Herbicide-Resistant Sorghum to Johnsongrass	
\$296,286	E. I. Dupont
Lindquist, John	Agronomy and Horticulture
<b>Jones, Clinton</b>	<b>Veterinary Medicine and Biomedical Sciences</b>
Analysis of Bovine Herpesvirus 1 Stress-Induced Reactivation from Latency	
\$500,000	USDA-NIFA
Doster, Alan	Veterinary Medicine and Biomedical Sciences
<b>Josiah, Scott</b>	<b>Nebraska State Forest Service</b>
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
<b>Kilic, Ayse</b>	<b>Civil Engineering/Natural Resources</b>
Developing and Enhancing Landsat Derived Evapotranspiration and Surface Energy Products	
\$268,110	DOI-GS through University of Idaho
CPNRD Mapping Evapotranspiration with High Resolution Satellite Data	
\$521,705	Central Platte NRD

**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

\$499,337

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**

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

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

Statistical Mechanics of Non-Local Disordered Models with Associated Quantum LDPC Codes

\$255,000

NSF

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

Sustainable Energy Options for Rural Nebraska

\$500,000

DOE

Hay, Francis

Biological Systems Engineering

Hudgins, Jerry

Electrical and Computer Engineering

Isom, Loren

Industrial Agricultural Products Center

Keshwani, Deepak

Biological Systems Engineering

Shelton, David

Northeast Research and Extension Center

**Krehbiel, Michelle** **Extension**  
 Nebraska CYFAR Sustainable Community Project  
 \$673,750 USDA-NIFA  
 Chai, Weiwon Nutrition and Health Sciences  
 Fischer, Jean Nutrition and Health Sciences  
 Franzen-Castle, Lisa Nutrition and Health Sciences  
 Jones, Georgia Nutrition and Health Sciences

**Kruger, Greg** **West Central Research and Extension Center**  
 Management Solutions for Glyphosate-Resistant  
 Pigweeds in Soybean Production Systems  
 \$299,902 United Soybean Board/Smith/Bucklin  
 through University of Arkansas

Influence of Agrisure Artesian Water-Optimization Alleles  
 \$279,920 Syngenta

**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

**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

**Li, Xu**

**Civil Engineering**

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

\$500,000

USDA-AFRI

Bartelt-Hunt, Shannon

Civil Engineering

Hodges, Laurie

Agronomy and Horticulture

Snow, Daniel

Natural Resources

**Lindquist, John**

**Agronomy and Horticulture**

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

\$300,000

USDA-NIFA

Bernards, Mark

Agronomy and Horticulture

**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**

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

\$541,765

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

**Mackenzie, Sally****Agronomy and Horticulture/  
Biological Sciences**

Understanding MSH1 Developmental Reprogramming  
\$925,482 Syngenta

Elucidation of Mito-Nuclear Interplay in Arabidopsis  
\$789,961 DOE  
Wang, Dong Statistics

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

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

**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

**Molfese, Dennis**

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

The NCAA-DoD Grand Alliance:

Concussion Assessment, Research and Education (CARE)  
\$395,747 DoD-NCAA-Grand Alliance through  
University of Michigan  
Burnfield, Judith Nebraska Athletic Performance Lab  
Honaker, Julie Special Education and  
Communication Disorders  
Maerlander, Arthur Center for Brain, Biology and Behavior  
Stoltenberg, Scott Psychology

**Morcous, George**

**Durham School of Architectural  
Engineering and Construction**

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

**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

The Geraniaceae Genomes Project: Accelerated and  
Coordinated Evolution across the Three Plant Genomes  
\$749,544 NSF through University of Texas at Austin

**Nastasi, Michael**

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

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

**Nelson, Carl**

**Mechanical & Materials Engineering**

Multifunction Robotic Tools for Natural Orifice  
and Single-Incision Surgery  
\$395,905 NIH-NIBIB  
Farritor, Shane Mechanical & Materials Engineering

A Novel Pediatric Gait Rehabilitation Device  
\$394,911 NIH-NICHD

REU Site: Undergraduate Research Opportunities  
in Biomedical Devices at the University of Nebraska-Lincoln  
\$303,265 NSF  
Bashford, Gregory Biological Systems Engineering

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

**Newman, Ian** **Educational Psychology**  
 Nebraska Collegiate Consortium to Reduce High Risk Drinking  
 \$218,023 DOT-FHWA through  
 Nebraska Department of Roads-  
 Office of Highway Safety  
 Hopkins, Megan Educational Psychology  
 Shell, Duane Educational Psychology

**Niu, Wei** **Chemistry**  
 SusChEM: Novel 1,2-Propanediol Biosynthesis from  
 Renewable Feedstocks through Enzyme Discovery  
 \$317,611 NSF  
 Guo, Jiantao Chemistry

**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

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

**Paul, Prem** **Office of Research and Economic Development**  
 Nebraska Innovation Center (Whittier) to Renovate and Improve  
 the Whittier School for Use as the Nebraska Innovation Center  
 \$656,600 HUD

**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

**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  
Agronomy and Horticulture

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, Thomas****Plant Pathology**

Integrative Taxonomy and Biogeography of Criconematidae

\$528,561

NSF

**Pytlik Zillig, Lisa****Public Policy Center**

SBES: Medium: Investigating the Role of Distrust  
in Unauthorized Online Activities

Using an Integrated Sociotechnical Approach

\$490,758

NSF

Hayes, Michael

Natural Resources

Samal, Ashok

Computer Science and Engineering

Soh, Leen-Kiat

Computer Science and Engineering

Tomkins, Alan

Law/Public Policy Center

**Qian, Yi****Electrical and Computer Engineering**

\*Spectrum and Energy Efficient Radio Resource Access in  
Wireless Networks with Densely Deployed Underlay Devices

\$292,000

NSF

Sharif-Kashani, Hamid

Electrical and Computer Engineering

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

\$455,999

NSF

Sharif-Kashani, Hamid

Electrical and Computer Engineering

Yang, Yaoqing

Electrical and Computer Engineering

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

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

\$359,852

NSF

**Rack, Frank****Earth and Atmospheric Sciences/  
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

Whillans Ice Stream Subglacial Access Research Drilling:  
Integrative Study of Marine Ice Sheet Stability  
and Subglacial Life Habitats in West Antarctica

\$356,461

NSF through Montana State University

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

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

**Raikes, Helen** **Child, Youth and Family Studies**  
Evaluation of Early Steps to School Success  
\$605,303 Save the Children

**Rajca, Andrzej** **Chemistry**  
Nitrogen-Centered Radicals  
\$463,278 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

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

REU Site: Nebraska REU in Applied Math  
\$285,263 NSF  
Ledder, Glenn Mathematics

**Reid, John** **Mechanical & Materials Engineering**  
Midwest States Regional Pooled Fund Program  
\$780,000 Nebraska Department of Roads  
Bielenberg, Robert Midwest Roadside Safety Facility  
Faller, Ronald Midwest Roadside Safety Facility

**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

**Rosenbaum, David** **Economics**  
Nebraska Energy Office Loan Management System  
\$294,745 Nebraska Energy Office

**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

**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**

Theory and Modeling of Petawatt Laser Pulse  
Propagation in Low Density Plasmas

\$419,999

Kalmykov, Serge

DOE  
Physics and Astronomy

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

\$342,000

Kalmykov, Serguei

NSF  
Physics and Astronomy

**Sharif-Kashani, Hamid** **Electrical and Computer Engineering**

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

\$999,921

Hempel, Michael

DOT-FRA  
Electrical and Computer Engineering

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

Development of Textured High Energy Nanocomposite  
Permanent Magnets for Electric Motors and Generators

\$347,726

National Oilwell Varco

MGRP Sauce Fluid Dynamic Study for Perfect Dispense System

\$550,000

Zhang, Zhaoyan

ConAgra  
Mechanical & Materials Engineering

Measurement of Vertical Track Deflection:  
Testing, Demonstration & Implementation

\$546,000

Farritor, Shane

DoT-FRA  
Mechanical & Materials Engineering

**Simpson, Melanie** **Biochemistry**

Defining Aberrant Steroid Elimination in  
Castration-Resistant Prostate Cancer

\$333,178

Barycki, Joseph

Guo, Jiantao

Markham, Jonathan

NIH-NCI  
Biochemistry  
Chemistry  
Biochemistry

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

Polarization-Mediated Modulation of Electronic Properties  
of Hybrid Ferroelectric Based Heterostructures

\$409,996

Gruverman, Alexei

NSF  
Physics and Astronomy

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

\*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

**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

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

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

Automatic Vetting For Malice in Android Platforms

\$630,141

DoD-DARPA through Iowa State University

Rothermel, Gregg

Computer Science and Engineering

**Stains, Marilyne****Chemistry**

WIDER: EAGER Evidence-Based Instructional Practices in Action:  
Enhancing Exemplary Teaching  
at the University of Nebraska-Lincoln

\$299,703

NSF

Ducharme, Stephen

Physics and Astronomy

Lee, Kevin

Center for Science, Mathematics  
and Computer Education

Morris, T. Jack

Biological Sciences

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

Strong Field & Ultrafast Atomic and Molecular Processes

\$270,000

NSF

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

Feed the Future Innovation Lab for  
Collaborative Research on Grain Legumes

\$380,000

AID through Michigan State University

Urrea Florez, Carlos

Panhandle Research and Extension Center

**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**

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/  
Nebraska Center for  
Materials and Nanoscience**

\*Hybrid Materials by Integration of  
Semiconductor Nanowires and Layered Crystals:  
Chemical Transformations and Functional Properties

\$500,000 NSF

Sutter, Peter

Electrical and Computer Engineering/  
Nebraska Center for Materials and Nanoscience

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

Enhancing Decision Support for Drought Risk  
in the United States: The Drought Risk Atlas

\$260,131

DOC-NOAA

Fuchs, Brian

Natural Resources

Hayes, Michael

Natural Resources

Shulski, Martha

Natural Resources

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

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

\$987,767

NASA

Baigorria, Guillermo

Agronomy and Horticulture/  
Natural Resources

Beyene, Shimelis

Anthropology

Hayes, Michael

Natural Resources

Wardlow, Brian

Natural Resources

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

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

\$900,114

NIH-NIGMS

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

Molecularly Intercalated Nanoflakes:  
A Supramolecular Alloy for Strong Energy Absorption

\$349,088

NSF

Zeng, Xiao Cheng

Chemistry

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

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

\$500,000

USDA-NIFA

Baumert, Joseph

Food Science and Technology

Hutkins, Robert

Food Science and Technology

Keshwani, Deepak

Biological Systems Engineering

Subbiah, Jeyamkondan

Biological Systems Engineering/  
Food Science and Technology**Tenhuberg, 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**

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

- Tian, Lei** **Computer Science and Engineering**  
 Turbo Button: A Semantically Smart Flash Memory Layer  
 for Internet-Scale Storage Systems  
 \$479,631 NSF  
 Yu, Hongfeng Computer Science and Engineering
- Todd, Kim** **Agronomy and Horticulture**  
 UNL Greenhouse Tomato Production  
 \$800,000 ConAgra  
 Browning, Sarah Southeast Research and Extension Center  
 Gaussoin, Roch Agronomy and Horticulture  
 Schlegel, Vicki Food Science and Technology
- Torkelson-Trout, Alexandra** **Special Education and  
 Communication and Disorders**  
 Leadership Training in Emotional Disturbance Disorders  
 \$601,733 ED  
 Duppong Hurley, Kristin Special Education and  
 Communication and Disorders
- 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  
 \$367,361 DOT-FHWA through  
 Nebraska Department of Roads
- Turner, Joseph** **Mechanical & Materials Engineering**  
 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



**Umphlett, Natalie**

\*High Plains Regional Climate Center

\$335,937

Sorensen, William  
Stiles, Crystal**Natural Resources**

DOC-NOAA

Natural Resources  
Natural Resources**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

Hu, Qi  
Oglesby, Robert

NSF

Natural Resources  
Earth and Atmospheric Sciences/  
Natural Resources**Van Etten, 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

Ma, Fangrui

USDA-NIFA

Center for Biotechnology/  
Nebraska Center for VirologyOsorio, Fernando    Veterinary Medicine and Biomedical Sciences/  
Nebraska Center for Virology**Vuran, Mehmet****Computer Science and Engineering**NeTS: Small: Advancing Time Synchronization  
for Sustainable Wireless Networks

\$500,000

Zhong, Ziguo

NSF

Computer Science and Engineering

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

\$300,000

Irmak, Suat

NSF

Biological Systems Engineering

Cog-TV with Neighborhood Watch:  
Business and Technical Aspects

of Cognitive Radio TV Sets for Enhanced Spectrum Access

\$283,879

Batur, Demet

NSF

Management

**Walia, Harkamal****Agronomy and Horticulture**\*ABI Innovation: A Computational Framework for Integrating  
Image Informatics with Transcriptomics for Discovering  
Spatiotemporally Resolved Regulatory Gene Networks in Plants

\$563,801

Yu, Hongfeng  
Zhang, Chi  
Zhang, Qi

NSF

Computer Science and Engineering  
Biological Sciences  
Statistics

Early Seed Development under Stressful Environments  
\$557,708 NSF  
Wang, Dong Statistics

**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

**Walter-Shea, Elizabeth** **Natural Resources**  
Toward a Circumarctic Lakes Observation Network (CALON)  
\$297,082 NSF

**Walters, Cory** **Agricultural Economics**  
Northern Plains Regional Farm Business Management  
and Benchmarking Partnership  
\$888,849 USDA-NIFA  
Lubben, Bradley Agricultural Economics

**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

**Wiebe, Matthew** **Veterinary Medicine and  
Biomedical Sciences**  
Intracellular Defenses against Foreign DNA:  
Insights from Poxvirus-Infected Cells  
\$340,339 NIH-NIAID

- Wiener, Richard** **Psychology**  
Therapeutic Jurisprudence and Probationer Decision Making:  
A Social Cognitive Model  
\$641,614 DOJ-NIJ
- Objectification, Affective Forecasting, and Sexual Harassment  
\$314,956 NSF  
Gervais, Sarah Psychology
- 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-SAMSHA through  
Nebraska Department of Health  
Meiergerd, Kimberly Bureau of Sociological Research
- Wood, Charles** **Biological Sciences/  
Nebraska Center for Virology**  
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  
\$380,970 Alliance for Green Revolution in Africa through CABI
- Wragge, Annette** **Special Education and  
Communication Disorders**  
Nebraska Autism Spectrum Disorders Network,  
State Coordinator Project  
\$303,895 ED through Nebraska Department of Education
- Xiang, Shi-Hua** **Biological Sciences**  
Mucosal Delivery and Retention  
of Anti-HIV Agents Using Lactobacillus  
\$611,119 Bill & Melinda Gates Foundation

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

\*NeTS: Small: Systematically and Scalably Testing  
Network Programs under Packet Dynamics

\$499,810 NSF  
Elbaum, Sebastian Computer Science and Engineering

**Yang, Haishun** **Agronomy and Horticulture**

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

\$542,988 AID through Development Alternatives Inc  
Cassman, Kenneth Agronomy and Horticulture  
Fuchs, Brian Natural Resources  
Hayes, Michael Natural Resources  
Ledder, Glenn Mathematics  
Lenton, Roberto Robert B. Daugherty Water for Food Institute  
Smith, Kelly Natural Resources  
Svoboda, Mark Natural Resources  
Tadesse, Tsegaye Natural Resources  
Zlotnik, Vitaly Earth and Atmospheric Sciences

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

Understanding DAWDLE Function  
in miRNA and siRNA Biogenesis

\$499,504 NSF

**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

**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

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

Nutritional Physiology of Life History Allocation Trade-Offs

\$343,500 NSF

**Zhang, Tian** **Civil Engineering**

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

\$300,000 NSF

**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, 2015-June 30, 2016

\* Indicates new in 2015-2016

### NSF CAREER Grants

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



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

Civil Engineering

CAREER: The Influence of Soil Attachment on the Biologic Activity of Extracellular Proteins

\$413,883

NSF



#### **Bassett, Gilles**

Agronomy and Horticulture/Biochemistry/  
Center for Plant Science Innovation

CAREER: The Metabolism of Prenylated Benzoquinones through the Lens of Plant-Prokaryote Phylogenomics

\$784,820

NSF



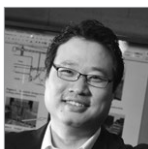
#### **Brassil, Chad**

Biological Sciences

CAREER: How Temporal Fluctuations Alter Indirect Interactions in Duckweed-Based Communities and Its Integration with a Student Report Exchange

\$531,141

NSF



#### **Cho, Yong Kwon**

Durham School of Architectural  
Engineering and Construction

CAREER: Hybrid 3D Unstructured Workspace Modeling: A Critical Component in Developing an Automated Construction Site

\$400,000

NSF



#### **Gu, Linxia**

Mechanical & Materials Engineering

CAREER: Bridging Cellular-Level Changes to Vascular Tissue Response to Reveal Basic Mechanisms of Restenosis

\$457,308

NSF



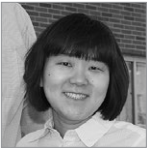
#### **Guo, Jiantao**

Chemistry

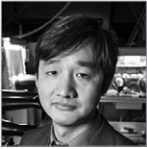
\*CAREER: Quadruplet Codon Decoding - Mechanistic Studies and Application in Cellular Genetic Code Expansion

\$622,320

NSF

**Hong, Xia**

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

**Huang, Jinsong**

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

**Lai, Rebecca**

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

**Li, Xu**

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

**Lim, Jung Yul**

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

**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

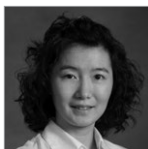
**Pannier, Angela**

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**

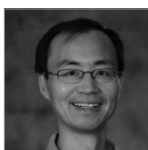
Chemistry/Center for Science, Mathematics and  
 Computer Education  
 \*CAREER: The Winding Roads to Effective  
 Teaching: Characterizing the Progressions in  
 Instructional Knowledge and Practices of STEM  
 Faculty  
 \$959,849

NSF

**Vuran, Mehmet**

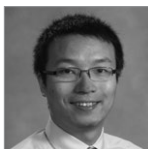
Computer Science and Engineering  
 CAREER: Bringing Wireless Sensor Networks  
 Underground  
 \$418,760

NSF

**Xu, Xiaoshan**

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

NSF

**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

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## 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, 2015-June 30, 2016

\* Indicates new in 2015-2016

**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, UNL'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

\$414,885

Poetry Foundation

1/1/05 - 12/31/16



The Poetry Foundation, in partnership with the Library of Congress, supports the American Life in Poetry Project, an initiative of Ted Kooser, the 2004-2006 Poet Laureate Consultant in Poetry to the Library of Congress. American Life in Poetry is a free weekly column for newspapers and online

publications featuring a poem written by a contemporary American poet, chosen by Kooser, with a brief introduction written by Kooser. The sole mission of this project is to promote poetry. The Poetry Foundation funds the project, with administrative support provided by the UNL English department, where the project office is located.

**Price, Kenneth****English/Center for Digital Research in the Humanities**Walt Whitman as an Author before *Leaves of Grass*

\$330,000

NEH

08/01/13 - 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.

An Integrated Guide to Walt Whitman's Literary Manuscripts

\$275,000

NEH

06/01/12 - 07/31/15

Walter, Katherine

University Libraries/Center for Digital Research in the Humanities

The Walt Whitman Archive ([whitmanarchive.org](http://whitmanarchive.org)), with support from the National Endowment for the Humanities, is using Encoded Archival Description (EAD) to create item-level finding guides to the more than seventy individual repositories holding Walt Whitman's prose manuscripts. Each description is linked to high-quality digital images of the manuscript material and dynamically joined in an integrated guide. Under the direction of Kenneth Price, the archive has developed a system that creates a relationship between the manuscript and the final manifestation of the prose draft, most often the version Whitman published in his

collection, *Complete Prose Works* (1892). Creating EAD records for Whitman's prose manuscripts will provide unprecedented documentation of and access to the literary manuscripts of a major literary figure. The end result will be an overarching guide to a virtual collection of all of Whitman's manuscripts, organized not around their physical location but according to the conceptual work to which they contribute.

**Shear, Donna**

**University of Nebraska Press**

Recovering Languages and Literacies of the Americas:  
A Collaborative Initiative

\$781,900

Andrew W. Mellon Foundation

1/3/11 - 12/31/17



This \$781,900 grant from the Andrew W. Mellon Foundation gives the University of Nebraska Press, along with the University of Oklahoma Press and the University of Texas Press, resources to help linguistic scholars publish indigenous language grammars and dictionaries, literacy studies, ethnographies

and other linguistic monographs. Twenty-seven books – nine from each press – will be published on the grammar and literacy of endangered languages. The initiative also aims to generate broader interest in linguistic monographs and to find more efficient, cost-effective ways to produce monographs. These publications are important resources for academics in the fields of linguistics, indigenous studies and social sciences, and to communities wishing to preserve their language and culture, said Donna Shear, University of Nebraska Press director, who is leading this collaboration.

**Walter, Katherine**

**University Libraries/Center for Digital Research in the Humanities**

\*National Digital Newspaper Program: Nebraska

\$200,000

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.

Center for Digital Research in the Humanities Endowment  
\$500,000 NEH  
12/21/10 – 7/31/15  
Price, Kenneth English/Center for Digital  
Research in the Humanities

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

### **Wisnicki, Adrian**

### **English/Center for Digital Research in the Humanities**

The Livingstone Online Enrichment and Access Project (LEAP)  
\$275,000 NEH  
9/1/13 – 8/31/17  
Pytlik Zillig, Brian University Libraries/Center for  
Digital Research in the Humanities



Adrian Wisnicki, assistant professor of English and spectral imaging specialist at UNL's Center for Digital Research in the Humanities, leads Livingstone Online, <http://livingstoneonline.org>, a large multi-institutional project to update the digital home for Livingstone's manuscripts. Wisnicki

and colleagues are collaborating with more than 30 archives worldwide, developing a sustainable digital platform, and conducting scholarship and outreach activities. More than \$430,000 in grants from the National Endowment for the Humanities fund Wisnicki's Livingstone work.

# Arts and Humanities Awards

## \$50,000 to \$249,999

Active awards, July 1, 2015-June 30, 2016

\* Indicates new in 2015-2016

**Barney, Brett**

**University Libraries/Center for  
Digital Research in the Humanities**

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

\$165,005

NEH

**Jockers, Matthew**

**English/Center for Digital  
Research in the Humanities**

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

\$112,524

Government of Canada-SSHRC  
through McGill University

**Lorang, Elizabeth**

**University Libraries/Center for  
Digital Research in the Humanities**

Image Analysis for Archival Discovery:  
Poetic Content in Historic Newspapers

\$60,000

NEH

Soh, Leen-Kiat

Computer Science and Engineering

**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

**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

Pytlík Zillig, Brian

University Libraries/Center for  
Digital Research in the Humanities

# Arts and Humanities Awards

## \$5,000 to \$49,999

Active awards, July 1, 2015-June 30, 2016

\* Indicates new in 2015-2016

**Brooke, Robert**

**English/Center for Digital  
Research in the Humanities**

\*The Nebraska State Poet Website: Poetry from the Plains:  
A Nebraska Perspective

\$8,738

Humanities Nebraska

**Edwards, Richard**

**Center for Great Plains Studies**

Symposium on Standing Bear and Trail Ahead

\$7,000

Humanities Nebraska

**Engen-Wedin, Nancy**

**Lied Center for Performing Arts**

\*Heather Hensen's Flight, A Crane's Story

\$15,000

NEH

Big Red Lied Experience for 2015

\$15,000

Pace Woods 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

**Levy, Leslie**

**International Quilt Study Center**

Digital Outreach Project

\$15,000

Woods Charitable Fund

Ambiguity and Enigma: Recent Quilts by Michael James

\$5,000

Quilter's Guild of Dallas Inc

**Price, Kenneth**

**English/Center for Digital  
Research in the Humanities**

Walt Whitman and Post-Reconstruction America

\$16,451

National Historical Publications and Records  
Commission through University of Iowa

**Pytlík Zillig, Brian**

**Center for Digital  
Research in the Humanities**

TEI Simple: Towards an Amenable TEI

\$10,200

Andrew W. Mellon Foundation  
through Northwestern University

**Renaud, Jerry**

**Journalism and Mass Communications**

Native Daughters Oklahoma K-12 Curriculum Guide

\$8,500

NEH through Oklahoma Humanities Council

Starita, Joseph

Journalism and Mass Communications

**Shear, Donna**

**University of Nebraska Press**

Publishing Literary Translation Works  
at the University of Nebraska Press

\$10,000

NEA

Early American Regions

\$30,100

University of Georgia

**Walter, Katherine**

**University Libraries/Center for Digital  
Research in the Humanities**

Buffalo Bill's European Frontier

\$40,404

NEH through Buffalo Bill Historical Center

Humanities without Walls

\$43,188

Andrew W. Mellon Foundation  
through University of Illinois-IPRH

**Weiss, Wendy**

**Textiles, Merchandising and Fashion Design**

Visiting Artists at the Robert Hillestad Textiles Gallery

\$5,000

Pearle Francis Finigan Foundation





Pioneering Partnerships for Innovation™

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

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

## Patents Issued in 2015-2016

Recognition for faculty who received patents for their inventions

July 1, 2015-June 30, 2016

**UNL faculty, students and postdocs in red**

**James Alfano, Zhengqing Fu, Ming Guo**, Plant Pathology; **Anna Joe**, Biological Sciences; **Thomas E. Clemente, Thomas E. Elthon**, Agronomy and Horticulture; Byeong-Ryool Jeong

**Title:** Transgenic Soybean Plants Exhibiting Improved Innate Immunity

**Date:** 10/27/2015

**Number:** 9169489

**Country:** United States

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**David Allen, Roberto F. Soares, Flavio Souza**, Mechanical & Materials Engineering; **Yong-Rak Kim**, Civil Engineering

**Title:** Computational Model for Predicting Asphaltic Pavement Life

**Date:** 7/28/2015

**Number:** 9091027

**Country:** United States

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**Christian Binek, Physics and Astronomy**

*Title:* Refrigeration Through Voltage-Controlled Entropy Change

*Date:* 6/14/2016

*Number:* 9366460

*Country:* United States

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**Thomas E. Clemente, Agronomy and Horticulture; Donald Weeks, Biochemistry;** Paul C.C. Feng, Stanislaw Flasinski, Razvan Dumitru

*Title:* Improved Production and Yield Capacity of Transgenic Plants Expressing a Genetically Engineered Version of the Dicamba Monooxygenase Gene (aka, oxygenaseDIC)

*Date:* 8/11/2015

*Number:* 2653987

*Country:* Canada

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**Stephen G. DiMagno, Chemistry**

*Title:* Fluorination of Aromatic Ring Systems

*Date:* 12/17/2015

*Number:* 20133203523

*Country:* Australia

*Title:* Fluorination of Aromatic Ring Systems

*Date:* 4/5/2016

*Number:* 9302990

*Country:* United States

*Title:* Fluorination of Aromatic Ring Systems

*Date:* 5/3/2016

*Number:* 619465

*Country:* New Zealand

*Title:* Processes and Reagents for Making Diaryliodonium Salts

*Date:* 3/8/2016

*Number:* 9278959

*Country:* United States

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**Peter A. Dowben, Bernard Doudin, Zhengzheng Zhang, Physics and Astronomy;** Pierre Braunstein, Guillaume Dalmas, Lucie Routboul

*Title:* Zwitterion Quinonoid Molecules as N-Type Organic Semiconductor and Hole Injection Enhancer for Organic Electronics Devices

*Date:* 5/24/2016

*Number:* 9349958

*Country:* United States

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**Peter A. Dowben**, Physics and Astronomy; Jonathan P. Bird,  
Andrew Marshall  
*Title:* Majority-Gate Logic Schemes Based on Magneto-Electric  
Devices  
*Date:* 3/1/2016  
*Number:* 9276040  
*Country:* United States

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**Patrick H. Dussault, Rebecca Y. Lai, Thomas Fisher,  
Anita Zaitouna**, Chemistry  
*Title:* Self-Assembled Monolayers and Methods for Using the Same  
in Biosensing Applications  
*Date:* 7/14/2015  
*Number:* 9079835  
*Country:* United States

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**Shane M. Farritor**, Mechanical & Materials Engineering  
*Title:* System for Imaging and Measuring Rail Deflection  
*Date:* 7/9/2015  
*Number:* 2013205131  
*Country:* Australia

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**Shane M. Farritor, Sheng Lu**, Mechanical & Materials Engineering  
*Title:* A Method for Identifying Trends in Repeated Measurements  
as Applied to Measurements of Railroad Track Quality  
*Date:* 5/24/2016  
*Number:* 9347864  
*Country:* United States

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**Jinsong Huang, Yongbo Yuan**, Mechanical & Materials Engineering  
*Title:* Super-gated Highly Sensitive Transistor Photon and Radiation  
Detectors  
*Date:* 5/3/2016  
*Number:* 9331293  
*Country:* United States

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**Robert Powers, Teklab Gebregiworgis, Arunakumar Gangaplara,  
Chandirasegaran Massilamany, Zsolt Illes**, Chemistry; **Jay Reddy**,  
Veterinary Medicine and Biomedical Sciences  
*Title:* Biomarkers Used to Detect and Monitor Neurological  
Autoimmune Diseases  
*Date:* 4/5/2016  
*Number:* 9304123  
*Country:* United States

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**Christopher Y. Tuan**, Civil Engineering; **Lim Nguyen**, Electrical and Computer Engineering

*Title:* Concrete Mix for Electromagnetic Wave/Pulse Shielding

*Date:* 3/8/2016

*Number:* 9278887

*Country:* United States

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

*Title:* Systems and Methods to Determine and Monitor Changes in Rail Conditions

*Date:* 7/30/2015

*Number:* 2013204576

*Country:* Australia

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**Joseph A. Turner**, Mechanical & Materials Engineering

*Title:* System and Methods for Ultrasonically Evaluating Structural Properties

*Date:* 7/23/2015

*Number:* 2011336762

*Country:* Australia

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

*Title:* Probiotics and Methods of Obtaining Same

*Date:* 9/8/2015

*Number:* 9125935

*Country:* United States

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**Bin Yang, Jinsong Huang, Yongbo Yuan**, Mechanical & Materials Engineering

*Title:* Photovoltaic Device

*Date:* 12/22/2015

*Number:* 9219239

*Country:* United States

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## 2015-2016 License Agreements

Recognition for faculty whose technologies formed the basis  
of licensing agreements with industry partners  
July 1, 2015-June 30, 2016

**UNL faculty, staff, students and postdocs in red**

**David Andrews, Ismail Dweikat, John Rajewski**, Agronomy and Horticulture; Linda Pavlish

*Technology:* Forage Pearl Millet

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**P. Stephen Baenziger, Greg Dorn, Richard Little, Mitchell Montgomery**, Agronomy and Horticulture; Chris Hoagland

*Technology:* Triticale Germplasm – 3 licenses

*Technology:* Triticale Lines

*Technology:* Winter Triticale Varieties

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

*Technology:* Freeman Hard Red Winter Wheat Variety

*Technology:* Wheat Varieties

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

Ben Moreno-Sevilla, Del Dovel

*Technology:* Triticale “Grow Green Plus”

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**Paul Blum**, Biological Sciences; **Benjamin Pavlik**,

Chemical and Biomolecular Engineering

*Technology:* Engineered *Clostridium botulinum* C2 Toxin for Targeted Neural Delivery

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

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

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**Stephen G. DiMagno, Bao Hu**, Chemistry

*Technology:* Material for Preparing MIBG and MABG Radioiodinated Bioconjugation Reagents

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**George Graef**, Agronomy and Horticulture

*Technology:* Round-up Ready Soybean

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**George Graef, Leslie Korte, Agronomy and Horticulture;**  
Dennis White, Leandro Alberto Castaneda  
*Technology:* Round-up Ready Soybean

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**George Graef, Leslie Korte, Agronomy and Horticulture**  
*Technology:* Soybean Variety

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**George Graef, Agronomy and Horticulture**  
*Technology:* Soybean Variety

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

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**Jinsong Huang, Qingfeng Dong, Zhengguo Xiao, Rui Dong, Yuchuan Shao, Cheng Bi, Qi Wang, Mechanical & Materials Engineering**  
*Technology:* Perovskite Single Crystal Materials and Devices, Methods of Fabrication and Manufacturing

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**Multiple creators, Various departments**  
*Technology:* Hybrid Maize Software e-Commerce Sales

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**Barbara Plake, Educational Psychology; James Wollack; Terry Gutkin**  
*Technology:* Educational Assessments

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**Robert Powers, Bradley Worley, Chemistry**  
*Technology:* MVA Pack: A Complete Data Handling Package for NMR Metabolomics

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**Dipak Santra, David Baltensperger, Glen Fricke,**  
Panhandle Research and Extension Center  
*Technology:* Plateau Proso Millet

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**Blair Siegfried, Andre Crespo, Entomology**  
*Technology:* Cry1Ab Resistant Strain of European Corn Borer

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**Haoran Sun, Stephen DiMagno, Chemistry**  
*Technology:* Anhydrous Fluoride Salts and Reagents and Methods for Their Production

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**Maher K. Tadros**, Civil Engineering; **Kromel E. Hanna**,  
**Quinton G. Patzlaff**, **George Morcoux**, Durham School of  
Architectural Engineering and Construction

*Technology:* Bolted Pre-Cast Pile Splicing

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**Chris Tuan**, Civil Engineering; **Lim Nguyen**, Electrical and  
Computer Engineering

*Technology:* EMP/EMI Conductive Concrete

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**Baoliang Zhao**, Mechanical & Materials Engineering;  
**David Anthony**, **Sebastian Elbaum**, **John-Paul Ore**,  
**Carrick Detweiler**, Computer Science and Engineering

*Technology:* Aerial Water Sampler and Crop Canopy  
Measurements with a Low-Flying Unmanned Aerial Vehicle

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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, 2015-June 30, 2016

*Submitted by faculty, chairs/heads or deans*

## **Krista Adams**                      **Teaching, Learning and Teacher Education**

Designer, mobile application, with **Douglas Golick** and **Soo-Young Hong**. "Properties of Matter: Pirate Adventure" (Version 1.0.1).

## **Paul Barnes**                      **Glenn Korff School of Music**

Performer, piano. "New Generations: The New Etudes of Philip Glass and Music of the Next Generation," CD recording, Orange Mountain Music, East Hampton, New York.

## **Robert E. Brooke**                      **English**

Developer, website. "Poetry From The Plains: A Nebraska Perspective," poetryfromthepains.org, hosted by CDRH, Lincoln, Nebraska.

## **Jeffrey L. Day**                      **Architecture Program**

Designer, architecture. "Blue Barn Theatre & Boxcar 10," Omaha, Nebraska.

## **Robert Ladislav Derr**                      **Art, Art History and Design**

Artist and performer, solo and group performance art. "Dribble Score #1 White, #2 Black & White, and #3 White & Black," Interlude, Media Arts Project and Black Mountain College Museum + Arts Center, Asheville, North Carolina.

Artist, video. "Attempt at a Mistake" and "58 Kisses," daDa Lives!, University of Cincinnati, Blue Ash Gallery, Cincinnati, Ohio.

Artist, video. "Discovering Columbus, Part II: Parks video," Diverted Reality, Evelyn E. Jorgenson Gallery, Moberly, Missouri.

Artist, video and photography. "In Play" (video and photographs) and "Chance" (photographs), Human Nature, Greiner Art Gallery, Hanover College, Hanover, Indiana.

Artist, video and photography. "Discovering Columbus," Photography Since the Millennium, Carnegie Center for Art and History, New Albany, Indiana.

Artist, video. "Hunting the Wren," Video Social Club #1: Weekenders, Plymouth Social Club, Plymouth, United Kingdom.

Artist, video. "No Time Like The Present," Creative Climate Awards, Taipei Economic and Cultural Offices, Human Impacts Institute, New York, New York.

Artist, video. "Conservation of Momentum," Water, Water Everywhere, Alexei von Schlippe Gallery, University of Connecticut at Avery Point, Groton, Connecticut; traveled to Huntington Museum of Art, Huntington, West Virginia; Meghan Gallery, Allegheny College, Meadville, Pennsylvania; and Eleanor D. Wilson Museum, Hollins University, Roanoke, Virginia.

Artist, photography. "Formalism," LUMA at 10: Greatest Hits Exhibition, Loyola University Museum of Art, Chicago, Illinois.



**Dana Fritz****Art, Art History and Design**

Artist, photography. "Dialogues IV: Distant Affinity," Dana Fritz Exhibition, Nihonbashi Institute for Contemporary Arts, Tokyo, Japan.

Artist, photography. "The Land Within Us," Dana Fritz Exhibition, Place M, Tokyo, Japan.

**Douglas Golick****Entomology**

Designer, mobile application, with **Krista Adams** and **Soo-Young Hong**. "Properties of Matter: Pirate Adventure."

**Deepak Keshwani****Biological Systems Engineering**

Designer, mobile application, with **Bradley Barker** and **David Mabie**. "Kernels of Knowledge - Rise of Bioplastics."

**Kurt Knecht****Glenn Korff School of Music**

Composer, organ. "Toccata, Adagio, Fugue," commissioned by the Organ Historical Society National Convention and performed at Kimmel Hall, Philadelphia, Pennsylvania.

**Katie Krcmarik****Advertising**

Artist, screen printing. "All the Things I Should Have Said" and "Tell Me A Secret," 2016 Annual Great Lakes Regional Community College Exhibition, Wayne State University, Detroit, Michigan.

Artist, screen printing. "All the Things I Should Have Said," ArtPrize, Grand Rapids, Michigan.

**Karen Kunc****Art, Art History and Design**

Artist, printmaking. "Persian Flower and Aqua Alta Series," Statements on Nature: A Survey of Printmaking Today, Schaefer International Gallery, Maui Arts & Culture Center, Kahului, Hawaii.

**Hans Sturm****Glenn Korff School of Music**

Performer, bass. "A Day in Paris," CD recording, Avant Bass, Lincoln, Nebraska.

## Books

Faculty who wrote or edited books published July 1, 2015-June 30, 2016

UNL authors in red

Submitted by faculty, chairs/heads or deans

### Grace Bauer

English

Author, *The Women At The Well*. Nacogdoches, TX: Stephen F. Austin University Press.

### Robert E. Brooke

English

Editor, *Writing Suburban Citizenship: Place-Conscious Education and the Conundrum of Suburbia*. Syracuse, NY: Syracuse University Press.

### Janet E. Carlson

Buros Center for Testing

Editor, with Nancy Anderson, Jennifer E. Schlueter and Kurt F. Geisinger, *Tests in Print IX*. Lincoln, NE: University of Nebraska Press.

### Edward J. Daly, III

Educational Psychology

Author, with Sabina Neugebauer, Sandra M. Chafouleas and Christopher H. Skinner, *Interventions for Reading Problems: Designing and Evaluating Effective Strategies (2nd ed.)*. New York, NY: Guilford Press.

### Wheeler Winston Dixon

English

Author, *Black and White Cinema: A Short History*. New Brunswick, NJ: Rutgers University Press.

### Gwendolyn Audrey Foster

English

Author, *Disruptive Feminisms: Raced, Gendered and Classed Bodies in Film*. New York, NY: Macmillan.

### Lauren Gatti

Teaching, Learning and  
Teacher Education/English

Author, *Toward a Framework of Resources for Learning to Teach: Rethinking US Teacher Preparation*. New York, NY: Palgrave Macmillan.

### Kurt F. Geisinger

Buros Center for Testing

Editor, with Frederick T. L. Leong, Dave Bartram, Fanny Cheung and Dragos Iliescu, *International Test Commission Handbook of Testing*. Oxford, England: Oxford University Press.

### David S. Hage

Chemistry

Editor, *Advances in Liquid Chromatography: New Developments in Stationary Phases and Supports for Drugs and Bioanalytical Applications*. London, England: Future Science.

### David J. Hansen

Psychology/Center for  
Brain, Biology and Behavior

Author, with Douglas W. Nangle, Rachel L. Grover, Julie N. Kingery and Cynthia Suveg, *Treating Internalizing Disorders in Children and Adolescents: Core Techniques and Strategies*. New York, NY: Guilford Press.

**Robert M. Harveson** **Plant Pathology**  
Editor, with Samuel G. Markell, Charles C. Block and Thomas J. Gulya, *Compendium of Sunflower Diseases and Pests*. Minneapolis, MN: American Phytopathological Society Press.

**Mark Hinchman** **Interior Design Program**  
Author, *Portrait of an Island: The Architecture and Material Culture of Goree, Senegal, 1758-1837*. Lincoln, NE: University of Nebraska Press.

**Maureen Honey** **English/Women's and Gender Studies**  
Author, *Aphrodite's Daughters: Three Modernist Poets of the Harlem Renaissance*. New Brunswick, NJ: Rutgers University Press.

**Julie Johnson** **Child, Youth and Family Studies**  
Author, *Leaders in Family and Consumer Sciences*. Okemos, MI: Kappa Omicron Nu.

**Suping Lu** **University Libraries**  
Editor, 血腥恐怖金陵岁月--金陵女子文理学院中外人士的记载 (*Nanjing under the Reign of Terror: Records by Ginling College Faculty and Staff*). Nanjing, China: Nanjing Publishing Press.

**Fred Luthans** **Management**  
Author, with Carolyn Youssef-Morgan and Bruce Avolio, *Psychological Capital and Beyond*. New York, NY: Oxford University Press.

**Kathy Moritz Rudasill** **Educational Psychology**  
Author, with Robert J. Coplan, *Quiet at School: An Educator's Guide to Shy Children*. New York, NY: Teacher's College Press.

**Michael Nastasi** **Mechanical & Materials Engineering/  
Nebraska Center for Energy Sciences Research**  
Author, with James W. Mayer and Yongqing Wang, *Ion Beam Analysis: Fundamentals and Applications*. Boca Raton, Florida: CRC Press.

**J. Ron Nelson** **Special Education and  
Communication Disorders**  
Author, with Steve Graham and Eva Horn, *Teaching Students with Special Needs*. Denver, CO: Love Publishing.

**David L. Olson** **Management/Supply Chain  
Management and Analytics**  
Author, with Desheng Dash Wu, *Enterprise Risk Management in Finance*. New York, NY: Palgrave Macmillan.

**Michael R. Page** **English**  
Author, *Frederik Pohl*. Champaign, IL: University of Illinois Press.

**Larkin Powell** **School of Natural Resources**  
Author, with George A. Gale, *Estimation of Parameters for Animal Populations: A Primer for the Rest of Us*. Caught Napping Publications: Lincoln, NE.

**Guy J. Reynolds**

**English/Cather Project**

Editor, with **Kari A. Ronning** and David Porter, *Willa Cather Scholarly Edition of Lucy Gayheart*. Lincoln, Nebraska: University of Nebraska Press.

**Luis Othoniel Rosa**

**Modern Languages and Literatures/  
Institute for Ethnic Studies**

Author, *Comienzos para una Estética Anarquista: Borges con Macedonio*. Santiago, Chile: Editorial Cuarto Propio.

**Erica E. Ryherd**

**Durham School of Architectural  
Engineering and Construction**

Editor, with David T. Bradley and Lauren M. Ronsse, *Worship Space Acoustics: 3 Decades of Design*. New York, NY: Springer.

**Shari J. Stenberg**

**English**

Author, *Repurposing Composition: Feminist Interventions for a Neoliberal Age*. Logan, UT: Utah State University Press.

**Bruce Thorson**

**Journalism**

Author, *Nebrasketball: Coach Tim Miles and a Big Ten Team on the Rise*. Lincoln, NE: University of Nebraska Press.

**Hope Wabuke**

**English**

Author, *The Leaving*. New York, NY: Akashic Press.

**Sandra Zellmer**

**Robert B. Daugherty Water for Food Institute**

Author, with Robert Glicksman, *Developing Professional Skills: Environmental Law*. St. Paul, MN: West.

## Recognitions and Honors

Faculty who have been elected to honor academies or who have received national or international honors or awards

July 1, 2015-June 30, 2016

*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

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**Don Adams**

**Animal Science**

Animal Industry Service Award, American Society of Animal Science

**Mark Balschweid**

**Agricultural Leadership,  
Education and Communication**

Fulbright Specialist Award, U.S. Department of State

**Steven M. Barlow**

**Special Education and  
Communication Disorders/  
Center for Brain, Biology and Behavior/  
Biological Systems Engineering**

Distinguished Career in Science Honors, American Speech-Language-Hearing Association

**Jack Beard**

**Law**

Cyber Security and Data Privacy Trailblazer, *National Law Journal*

**David Berkowitz**

**Chemistry**

Fellow, American Association for the Advancement of Science

**Christopher R. Bilder**

**Statistics**

Fellow, American Statistical Association

**Dawn O. Braithwaite**

**Communication Studies**

James Ferris Award for Contributions to Communication and Disability Studies, Disability Issues Caucus, National Communication Association

Monograph of the Year Award for the GLBTQ Division, National Communication Association

**Bruce Brodersen**

**Veterinary Diagnostic Center**

Veterinarian of the Year, Nebraska Veterinary Medical Association

**John Brunero**

**Philosophy**

2016 Article Prize, American Philosophical Association

- Edgar Cahoon** **Biochemistry**  
Terry Galliard Medal, International Symposium on Plant Lipids
- Jean Capó Cruet** **Ethnic Studies**  
Essential American Book (*Making Your Home Among Strangers*),  
Time Magazine
- Daniel Claes** **Physics and Astronomy**  
Fellow, American Physical Society
- Manuel Cortinas** **Veterinary Medicine and  
Biomedical Sciences**  
Teaching Award of Merit, Gamma Sigma Delta
- Lory Janelle Dance** **Sociology/  
Institute for Ethnic Studies**  
Computer-assisted Qualitative Data Analysis (CAQD) International  
Poster Session 1st Prize, Marburg Research Group for Methods &  
Evaluation
- Meghan Davidson** **Educational Psychology**  
Woman of the Year Award, Section for the Advancement of  
Women, Society of Counseling Psychology of the American  
Psychological Association
- Jeffrey L. Day** **Architecture Program**  
Collaborative Practice Award (for Bemis Gardens), Association of  
Collegiate Schools of Architecture  
International Illuminance Award (for Bluebarn Theatre),  
Illuminating Engineering Society of North America  
Faculty Design Award (for Bluebarn Theatre & Boxcar 10),  
Association of Collegiate Schools of Architecture  
Emerging Voices Award, Architectural League of New York  
AIA Central States Region Honor Award (for Bucktown House), AIA  
Central States Region
- Angela Dietsch** **Special Education and  
Communication Disorders**  
Early Career Contributions in Research Award, American Speech-  
Language-Hearing Association
- Peter A. Dowben** **Physics and Astronomy/Chemistry**  
Fellow, Royal Society of Chemistry
- Kwakiutl L. Dreher** **English/Institute for Ethnic Studies**  
Senior Faculty Fellow, University of South Carolina-Columbia
- Wayne Drummond** **College of Architecture**  
Honor Recipient, American Society of Landscape Architects
- Galen Erickson** **Animal Science**  
American Feed Industry Award in Ruminant Nutrition, American  
Society of Animal Science

- Behzad Esmaeili** **Durham School of Architectural Engineering and Construction**  
Best Paper Award, 2016 Construction Research Congress
- Samodha Fernando** **Animal Science**  
Early Career Achievement Award, American Society of Animal Science
- Chris Fielding** **Earth and Atmospheric Sciences**  
Honorary Membership, Society for Sedimentary Geology
- Scott Gardner** **Biological Sciences**  
Fellow, American Association for the Advancement of Science
- Kurt Geisinger** **Educational Psychology/  
Buros Center for Testing**  
Alumni Fellow, Penn State Alumni Association
- Patricio Grassini** **Agronomy and Horticulture**  
Early Professional Award, American Society of Agronomy
- Ronnie Green** **Institute of Agriculture and Natural Resources**  
Fellow, American Association for the Advancement of Science
- David S. Hage** **Chemistry**  
Award for Outstanding Achievements in Separation Science,  
Eastern Analytical Symposium
- Edmund 'Ted' Hamann** **Teaching, Learning and  
Teacher Education/Anthropology**  
Anthropology in Public Policy Award, American Anthropology  
Association
- Fayrene Hamouz** **Nutrition and Health Sciences**  
Lifetime Achievement Award, Nebraska Restaurant Association
- David J. Hansen** **Psychology/Center for  
Brain, Biology and Behavior**  
Fellow, Association for Behavioral and Cognitive Therapies  
Fellow, Society of Family Psychology, American Psychological  
Association
- Ruth Heaton** **Teaching, Learning and Teacher Education**  
Nadine Bezuk Excellence in Leadership and Service in Mathematics  
Teacher Education Award, Association of Mathematics Teacher  
Educators
- Tiffany Heng-Moss** **Entomology**  
New Horizon Award, Nebraska Agribusiness Club
- Gus Hurwit** **Law**  
Cyber Security and Data Privacy Trailblazer, *National Law Journal*
- Suat Irmak** **Biological Systems Engineering**  
Educational Aids Blue Ribbon Award, American Society of  
Agricultural and Biological Engineers

- Paul Johnsgard** **Biological Sciences**  
 Alumni Association Achievement Award, Washington State University
- Steve Kachman** **Statistics**  
 Continuing Service Award, Beef Improvement Federation
- Lisa Karr** **Animal Science**  
 Teaching Award of Merit, NACTA
- Brian M. Kelly** **Architecture Program**  
 Best in Category: Design as Interior (“Something Old, Something New”), Interior Design Educators Council
- William L. Kranz** **Northeast Research and Extension Center/  
 Biological Systems Engineering**  
 Partner of the Year Award (Team Member), Irrigation Association  
 Heerman Sprinkler Irrigation Award, American Society of Agricultural and Biological Engineers
- Kathleen Krone** **Communication Studies**  
 Article of the Year, *Management Communication Quarterly*  
 Charles H. Woolbert Research Award, National Communication Association
- Karen Kunc** **Art, Art History and Design**  
 Prix de Print, *Art in Print* Journal
- Kyungyong Lee** **Mathematics**  
 Centennial Fellowship, American Mathematical Society
- Ronald Lewis** **Animal Science**  
 Faculty Excellence Award, Great Plains Interactive Distance Education Alliance
- Yijia Lin** **Finance**  
 Early Career Scholarly Achievement Award, American Risk and Insurance Association
- Yongfeng Lu** **College of Engineering**  
 Arthur L. Schawlow Award, International Congress on Applications of Lasers and Electro-Optics
- Fred Luthans** **Management**  
 Distinguished Leader Award for Cognitive and Behavioral Health in Sports, Harvard Medical School
- Barney McCoy** **Broadcasting**  
 President, Midwest Broadcast Journalists Association
- Lance Meinke** **Entomology**  
 2015 Entomology Educational Project Award, Entomological Society of America – North Central Branch



**Amy Millmier Schmidt** **Animal Science**  
Outstanding Service Award, Nebraska Pork Producers Association

**Sheree M. Moser** **Child, Youth and Family Studies**  
National Service Award, Family, Community and Career Leaders of America  
Postsecondary Teacher of the Year, Association of Career and Technical Education of Nebraska

**Helen Moore** **Sociology**  
Distinguished Contributions to Teaching Award, American Sociological Association

**Mehrdad Negahban** **Mechanical & Materials Engineering**  
Honorary Doctorate, University of Rouen

**Merlyn Nielsen** **Animal Science**  
Teaching Fellow, American Society of Animal Science

**Chigozie Obioma** **English**  
Image Award for Outstanding Debut Literary Work, NAACP

**Angela L. Palmer-Wackerly** **Communication Studies**  
Outstanding Dissertation of the Year Award, National Communication Association Interpersonal Communication Division

**Prem S. Paul** **Office of Research and Economic Development**  
Lifetime Achievement Award, University Industry Demonstration Partnership

**Lance Pérez** **College of Engineering**  
Edwin C. Jones Jr. Meritorious Service Award, IEEE Education Society

**Santosh Pitla** **Biological Systems Engineering**  
Sunkist Young Designer Award, American Society of Agricultural and Biological Engineers

**Larkin Powell** **Great Plains Cooperative Ecosystems**  
Research Paper of the Year, The Wildlife Society

**Kelly Pritchett** **Special Education and Communication Disorders**  
Golisano Health Leadership Award, Special Olympics Nebraska

**Andrzej Rajca** **Chemistry**  
Fellow, American Association for the Advancement of Science

**Peter Revesz** **Computer Science and Engineering**  
Fulbright Scholar, U.S. Department of State

**Mark Riley** **Biological Systems Engineering**  
Fellow, American Association for the Advancement of Science

**Daniel Schachtman** **Agronomy and Horticulture**  
Fellow, American Association for the Advancement of Science

**Michael J. Scheel** **Educational Psychology**

Training Director of the Year Award, Society of Counseling Psychology, Supervision and Training Section

**Jennifer Schmidt, Robert Bielenberg,  
John Reid, Scott Rosenbaugh,  
Ronald Faller, Tyler Schmidt** **Midwest Roadside  
Safety Facility**

Best Paper Award, Roadside Safety Design Committee of the Transportation Research Board

**Bill Seiler** **Communication Studies**

Wallace A. Bacon Lifetime Teaching Excellence Award, National Communication Association

**David P. Shelton** **Northeast Research and Extension Center/  
Biological Systems Engineering**

Distinguished Career Leadership Award, Association of Natural Resources Extension Professionals

**Rob G. Simon** **Marketing**

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

**James Specht** **Agronomy and Horticulture**

Outstanding Achievement Award, United Soybean Board

**John Stansbury** **Civil Engineering**

Rudolph Hering Medal, American Society of Civil Engineers

**Joe Starita** **News-Editorial**

Nebraska's Most Notable 150 Books, Nebraska Literary Heritage Association

History Award Medal, National Society of the Daughters of the American Revolution

**Alison Stewart** **Art, Art History and Design**

Senior Fellow, Herzog August Bibliothek, Wolfenbüttel, Germany

**Colleen Syron** **Art, Art History and Design**

Neptune Award for Excellence: Best Regional/Local Marketing Campaign, Marine Marketers of America

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

Innovation in Teacher Education, The American Association of Colleges for Teacher Education

**James Van Etten** **Plant Pathology**

Award of Distinction, American Phytopathological Society

**David von Kampen** **Glenn Korff School of Music**

Music Teachers National Association Distinguished Composer of the Year, Music Teachers National Association

**Frans von der Dunk** **Law**

Social Science Book Award, International Academy of Astronautics

**Judy L. Walker** **Mathematics**

Louise Hay Award, Association for Women in Mathematics

**Randy Wehling****Food Science and Technology**

Distinguished Alumnus Award, Nebraska Community College Association

**Tim Wentz****Durham School of Architectural Engineering and Construction**

President, American Society of Heating, Refrigerating and Air-Conditioning Engineers

**Don Wilhite****Natural Resources**

Conservation Education Award, Nebraska Wildlife Federation

**Wayne Woldt****Biological Systems Engineering**

Presidential Citation, American Society of Agricultural and Biological Engineering

**Robert Wright****Entomology**

Distinguished Achievement Award in Extension, Entomological Society of America

**Jung Yul****Mechanical & Materials Engineering**

Berton Rahn Research Fund Prize Award, AO Foundation

**Janos Zemleni****Nutrition and Health Sciences**

Fellow, American Association for the Advancement of Science

**Tian Zhang****Civil Engineering**

Fellow, American Association for the Advancement of Science

Rudolph Hering Medal, American Society of Civil Engineers

# Glossary of Federal Agency Abbreviations

DHS	Department of Homeland Security
DHHS	Department of Health and Human Services
ACF	Administration for Children and Families
CDC	Centers for Disease Control
SAMSHA	Substance Abuse and Mental Health Services Administration
DOC	Department of Commerce
NIST	National Institute of Standards and Technology
NOAA	National Oceanic & Atmospheric Administration
DoD	Department of Defense
AFOSR	Air Force Office of Scientific Research
DARPA	Defense Advanced Research Projects Agency
DTRA	Defense Threat Reduction Agency
DURIP	Defense University Research Instrumentation Program
MDA	Missile Defense Agency
ONR	Office of Naval Research
USAMRAA	US Army Medical Research Acquisition Activity
USAMRMC-TATRC	US Army Medical Research and Materiel Command-Telemedicine and Advanced Technology Research Center
DOE	Department of Energy
NETL	National Energy Technology Laboratory
DOI	Department of Interior
FWS	Fish and Wildlife Service
GS	Geological Survey
DOJ	Department of Justice
NIJ	National Institute of Justice
DOL	Department of Labor
DOS	Department of State
BECA	Bureau of Educational and Cultural Affairs
DOT	Department of Transportation
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
RITA	Research and Innovative Technology Administration
ED	Department of Education
IES	Institute of Education Sciences
EPA	Environmental Protection Agency
EPSCoR	Experimental Program to Stimulate Competitive Research

HUD	Department of Housing and Urban Development
NAS	National Academy of Sciences
TRB	Transportation Research Board
NASA	National Aeronautics and Space Administration
NEA	National Endowment for the Arts
NEH	National Endowment for the Humanities
NIH	National Institutes of Health
FIC	Fogarty International Center
NCI	National Cancer Institute
NCRR	National Center for Research Resources
NEI	National Eye Institute
NHLBI	National Heart, Lung and Blood Institute
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIAID	National Institute on Allergy & Infectious Diseases
NIBIB	National Institute of Biomedical Imaging and Bioengineering
NICHHD	National Institute of Child Health and Human Development
NIDA	National Institute on Drug Abuse
NIDCD	National Institute on Deafness & Communication Disorders
NIDDK	National Institute of Diabetes, Digestive & Kidney Disease
NIGMS	National Institute on General Medical Sciences
NIMH	National Institute of Mental Health
NINDS	National Institute of Neurological Disorders & Stroke
NSF	National Science Foundation
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
AFRI	Agriculture and Food Research Initiative
ARS	Agricultural Research Service
FNS	Food and Nutrition Service
FS	Forestry Service
NIFA	National Institute for Food and Agriculture
NRCS	Natural Resources Conservation Service
OCE	Office of the Chief Economist

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