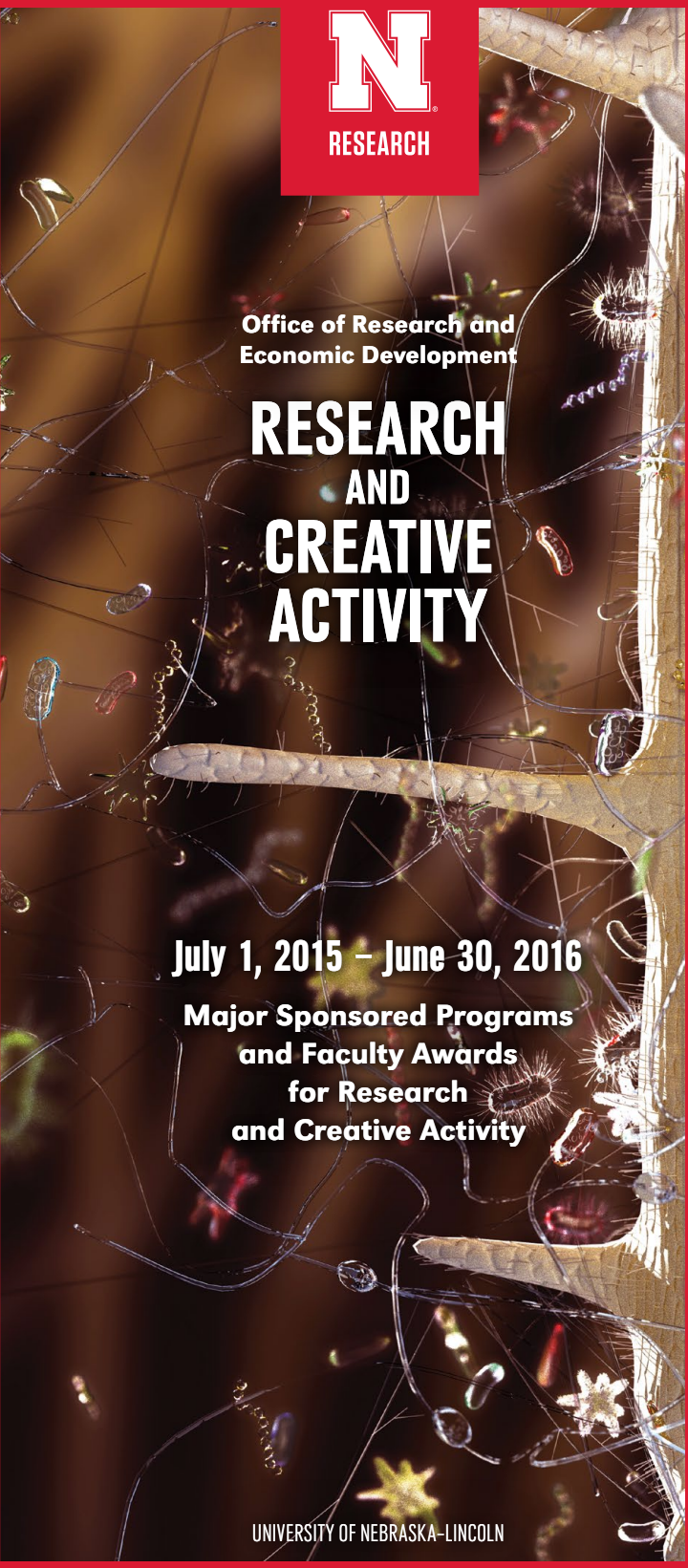

RESEARCH

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

| | |
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| 3 | **Awards of $5 Million or More** |
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| 75 | **Arts and Humanities Awards of $50,000 to $249,999** |
| 76 | **Arts and Humanities Awards of $5,000 to $49,999** |
| 78 | **Patents** |
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| 85 | **Creative Activity** |
| 87 | **Books** |
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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!

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 (CRRI)
$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/<br>Earth and Atmospheric Sciences/<br>Center for Biotechnology/<br>Center for Plant Science Innovation/<br>Nebraska Center for Redox Biology |
| Yu, Bin | Biological Sciences/Center for Biotechnology/<br>Center for Plant Science Innovation/<br>Nebraska Center for Redox Biology |
| Zhang, Chi | Biological Sciences/Center for Biotechnology/<br>Center for Plant Science Innovation/<br>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**

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

National eXtension Project
$21,470,000 Association of Public and Land-Grant Universities
10/1/04 – 12/31/15

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

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

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

## 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
Thippareddi, Harshavardhan Food Science and Technology

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

**Paul, Prem** **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 Rillett, 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 Magnetoelectronic, Sensor and Energy Materials and Devices

$5,864,300 — DoD-ARO

9/24/10 – 3/23/16

Cheung, Chin Li — Chemistry

Liou, Sy-Hwang — Physics and Astronomy

Shield, Jeffrey — Mechanical & Materials Engineering

Skomski, Ralph — Physics and Astronomy

Zeng, Xiao Cheng — Chemistry/Physics and Astronomy

David Sellmyer, 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) magnetoelectronic and sensor materials and devices, 2) nanomaterials for energy applications, and 3) development of a nanofabrication and characterization facility to support related research. Goals of the first project are to develop a high-sensitivity magnetoresistive sensor for both DC and high-frequency-band EMI magnetic field mapping; investigate new magnetic semiconductor systems for room-temperature spintronic applications; and research the

fabrication of nanodot arrays for magnetic logic and information-processing operations. Research on nanomaterials for energy systems 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.

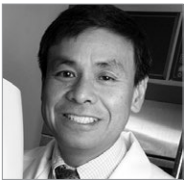
**Waller, Steven** — **College of Agricultural Sciences and Natural Resources**

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

Nebraska Center for Virology
$5,499,715 — NIH-NIGMS
9/16/10 – 7/31/17



Charles Wood, Lewis Lehr/3M University Professor of Biological Sciences, is the director of the Nebraska Center for Virology. The center, funded by the National Institutes of Health, combines the expertise and facilities of Nebraska's leading biomedical research institutions: 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 — NIH-NCI
7/16/10 – 4/30/17
West, John — Nebraska Center for Virology

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

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

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

$11,306,520 NIH-NIGMS

8/5/14 – 5/31/19

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

With the support of an $11.3 million grant from the National Institutes of Health's Center of Biomedical Research Excellence (COBRE) program, 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 — Earth and Atmospheric Sciences
Samal, Ashok — Computer Science and Engineering
Tomkins, Alan — Law/Public Policy Center
Tyre, Richard — 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 — Agronomy and Horticulture
Regassa, Teshome — Agronomy and Horticulture
Waters, Brian — Agronomy and Horticulture

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

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

$1,385,150 — DoD-DTRA

Bauer, Mark — Electrical and Computer Engineering
Hoffman, Michael — Electrical and Computer Engineering

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

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

$2,797,503 — 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 — USDA-NIFA
Kachman, Stephen — Statistics
Moriyama, Etsuko — Biological Sciences/ Center for Plant Science Innovation

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

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

**Bevins, Rick** — **Psychology**

Pharmacological Interventions to Diminish Nicotine-Associated Responding

$1,429,752 — NIH-NIDA

**Bilder, Christopher** — **Statistics**

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

$1,137,836 — NIH-NIAID

**Bloom, Kenneth** — **Physics and Astronomy**

Experimental Particle Physics at the Energy and Cosmic Frontiers

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

Transatlantic Networking

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

U.S. CMS Operations at the LHC

$3,983,641 — NSF through Princeton University
Dominguez, Aaron — Physics and Astronomy
Swanson, David — Computer Science and Engineering

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

MURI Center for Material Failure Prediction through Peridynamics

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

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

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

$1,001,324 — NSF

**Boeckner, Linda** — **Extension**

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

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

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

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

Tech Transfer, Scale Up, and GMP Production of XTEN

$2,432,923 — Amunix Operating Inc.
Johnson, Scott — Biological Process Development Facility

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

Biochemical Genomics: Deciphering the Chemical Factories of Oilseeds

$1,001,815 — NSF through Washington State University
Moriyama, Etsuko — Biological Sciences/ Center for Plant Science Innovation

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
Grassini, Patricio — Agronomy and Horticulture
Yang, Haishun — Agronomy and Horticulture

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

Translational Genomics for Improving Sow Reproductive Longevity

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

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

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

$1,386,925 — NIH-NCRR
Angeletti, Anisa — Biological Sciences
Bailey, Cheryl — Biochemistry
McQuillan, Julia — Sociology
Wood, Charles — Biological Sciences/ Nebraska Center for Virology

**Dickey, Elbert** — **eXtension**

eXtension Military Families Learning Network

$2,240,454 — USDA-NIFA

**DiLillo, David** — **Psychology**

Sexual Revictimization: Emotional and Psychosocial Mechanisms
$3,229,123 — NIH-NICHD
Hoffman, Lesa — Psychology

**Dombrowski, Kirk** — **Sociology**

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

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

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

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

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

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

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

Mountain Prairie Upgrade Partnership-Itinerant
$1,199,400 — ED
Bovaird, James — Nebraska Center for Research on Children, Youth, Families and Schools
Welch, Greg — Nebraska Center for Research on Children, Youth, Families and Schools

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

Indigenous Roots Teacher Education Program
$1,078,185 — ED
McGowan, Thomas — Teaching, Learning and Teacher Education

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

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

Supporting Surgical Options in Space
$1,350,000 — NASA through UNMC
Goddard, Stephen — Computer Science and Engineering
Nelson, Carl — Mechanical & Materials Engineering
Pérez, Lance — 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

**Lodl, 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 Facilty/ 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 & 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-MeVX-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 & 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** — **Natural Resources**

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

$350,000 — DOI-FWS through Nebraska Game and Parks Commission

Zach, Allison — Natural Resources

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

$438,664 — Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources

**Amundsen, Keenan** — **Agronomy and Horticulture**

Buffalograss Breeding, Evaluation and Management for Golf Course

$420,000 — U.S. Golf Association

**Askren, Mark** — **Information Services**

CC-NIE Networking Infrastructure: Accelerating Science for Nebraska

$491,871 — NSF

Bockelman, Brian — Computer Science and Engineering

Ramamurthy, Byravamurthy — Computer Science and Engineering

Swanson, David — Computer Science and Engineering

**Atkin, Audrey** — **Biological Sciences**

Mechanisms that Protect Transcripts from Nonsense-Mediated mRNA Decay

$620,647 — NSF

**Avalos, George** — **Mathematics**

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

$328,901 — NSF

Toundykov, Daniel — Mathematics

Analysis and Control of Evolutionary Plates and Elastic Structures

$292,773 — NSF

Toundykov, Daniel — Mathematics

**Avramov, Luchezar** — **Mathematics**

Cohomology over Commutative Rings: Structure and Applications

$458,919 — NSF

**Avramova, Zoya** — **Biological Sciences**

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

$763,929 — NSF

Riethoven, Jean-Jack — Center for Biotechnology

**Banerjee, Simanti** — **Agricultural Economics**

*The Impacts of Conservation Auction Design on Auction Performance and Community Welfare: Evidence from Lab and Artefactual Experiments

$498,641 — USDA-NIFA

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

Nebraska Wearable Technologies

$984,189 — NSF

Keshwani, Jennifer — Biological Systems Engineering
Krehbiel, Michelle — 4-H Youth Development
Nelson, Carl — Mechanical & Materials Engineering
Nugent Gwen — Nebraska Center for Research on Children, Youth, Families and Schools
Weiss, Wendy — Textiles, Merchandising and Fashion Design

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

Genome Wide Analysis of *M. Paratuberculosis* Pathogenesis

$499,981 — USDA-NIFA

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

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
$288,371 — DOI-FWS through Nebraska Game and Parks Commission

Fontaine, Joseph — Natural Resources
Pope, Kevin — Natural Resources

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

*RI: Small: Harnessing the Power of Constraint Propagation by Controlling Consistency Levels and Synthesizing Constraints
$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. through University of Minnesota

Binek, Christian — 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 — EPA through University of Massachusetts-Amherst

Lai, Rebecca — Chemistry

Ray, Chittaranjan — 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 & 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 Voltaics for Deep Space Missions

| | |
|---|---|
| $546,569 | NASA through UNO |
| Dowben, Peter | Physics and Astronomy/Nebraska Center for Materials and Nanoscience |
| Ianno, Natale | Electrical and Computer Engineering |

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

Integrated Anaerobic Digestion with Algae
Bioenergy and Green Aquaculture

| | |
|---|---|
| $250,000 | Nebraska Environmental Trust |
| Isom, Loren | Industrial Agricultural Products Center |
| Riley, Mark | Biological Systems Engineering |
| Schmidt, Amy | Animal Science/Biological Systems Engineering |
| Stowell, Richard | Biological Systems Engineering |

**Eskridge, Kent** — **Statistics**

GAANN Fellowship Program for Statistics

| | |
|---|---|
| $885,834 | ED |

**Espy, Kimberly** — **Psychology**

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

| | |
|---|---|
| $415,250 | NIH-NIMH |
| Garza, John | Research and Economic Development |
| James, Tiffany | Research and Economic Development |
| Molfese, Dennis | Psychology |
| Nelson, Jennifer | Research and Economic Development |

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

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

| | |
|---|---|
| $702,369 | DOT-FHWA through Nebraska Department of Roads |
| Bielenberg, Robert | Midwest Roadside Safety Facility |
| Lechtenberg, Karla | Midwest Roadside Safety Facility |
| Reid, John | Mechanical & Materials Engineering |
| Rosenbaum, Scott | Midwest Roadside Safety Facility |

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

| | |
|---|---|
| $262,603 | DOT-FHWA through Nebraska Department of Roads |
| Bielenberg, Robert | Midwest Roadside Safety Facility |
| Reid, John | Mechanical & Materials Engineering |

*Iowa DOT Combination Bridge Separation
Barrier with Bicycle Railing

| | |
|---|---|
| $254,445 | DOT-FHWA through Nebraska Department of Roads |
| Bielenberg, Robert | Midwest Roadside Safety Facility |
| Reid, John | Mechanical & Materials Engineering |
| Rosenbaugh, Scott | Midwest Roadside Safety Facility |

Development of Concrete Bridge Rails, Median Barriers, and Roadside Barriers for Test Level 5 of AASHTO MASH in Manitoba, Canada

$297,890 — Government of Manitoba-Infrastructure & Transportation
Rosenbaugh, Scott — Midwest Roadside Safety Facility
Schmidt, Jennifer — Midwest Roadside Safety Facility

Phase II Conceptual Development of an Impact Attenuation System for Intersecting Roadways

$256,184 — DOT-FHWA through Nebraska Department of 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 & Materials Engineering |
| Shield, Jeffrey | Mechanical & 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** — **Agronomy and Horticulture**

Soybean Breeding and Genetic Studies for Nebraska

$257,379 — Nebraska Soybean Board

**Grassini, Patricio** — **Agronomy and Horticulture**

*Benchmarking Soybean Production Systems in the North-Central USA

$433,081 — North Central Soybean Research Program

**Griep, Mark** — **Chemistry**

Framing the Chemistry Curriculum

$749,285 — NSF

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

$270,000 — NSF

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

IMPACT - Trade Adjustment Assistance Grant

$725,842 — DOL through Central Community College

Harms, Peter — Management

Luthans, Fred — Management

Shen, Zhigang — Durham School of Architectural Engineering and Construction

Stentz, Terry — Durham School of Architectural Engineering and Construction

Torraco, Richard — Educational Administration

**Guo, Jiantao** — **Chemistry**

Mechanistic Study of Cellulosome through Reprogramming Its Assembly

$312,541 — NSF

Niu, Wei — Chemistry

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

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

$275,667 — USDA-NIFA

Blanco, Humberto — Agronomy and Horticulture

Elmore, Roger — Agronomy and Horticulture

Howell Smith, Michelle — Nebraska Center for Research on Children, Youth, Families and Schools

Redfearn, Daren — Agronomy and Horticulture

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©
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 — USDA-NIFA
Zhang, Chi — 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 — DOC-NOAA
Feng, Song — Natural Resources
Oglesby, Robert — 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
Hong, Xia — Physics and Astronomy
Zeng, Xiao — Chemistry

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

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

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

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

$549,287 ED through Nebraska Department of Education

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

Continuous Evapotranspiration and
Consumptive Water Use Measurements of
Various Cropping Systems and Natural Ecosystems

$355,956 Nebraska Environmental Trust

Impact of Rotational Cover Crops on Soil Quality Parameters,
Soil Water Holding Capacity, Soil-Water Retention Curves,
and Field-Scale Water Balance Dynamics

$490,340 USDA-NRCS
Chatterjee, Sumantra Biological Systems Engineering
Djaman, Koffi Biological Systems Engineering
Mutiibwa, Denis Biological Systems Engineering
Odhiambo, Lameck Biological Systems Engineering
Skaggs, Kari Biological Systems Engineering

Impact of Tillage Practices on Corn and Soybean Transpiration,
Nutrient Dynamics, and Crop Water Productivity

$538,809 Nebraska Environmental Trust
Eisenhauer, Dean Biological Systems Engineering
Gates, John Earth and Atmospheric Sciences

**Itskov, Vladimir** — **Mathematics**

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

$316,862 — NSF

**Iyengar, Srikanth** — **Mathematics**

Commutative Algebra: Homological and Homotopical Aspects

$435,785 — NSF

**Jackson-Ziems, Tamra** — **Plant Pathology**

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

$293,431 — Dow AgroSciences

**Jhala, Amitkumar** — **Agronomy and Horticulture**

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

$296,286 — E. I. Dupont

Lindquist, John — Agronomy and Horticulture

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

Analysis of Bovine Herpesvirus 1 Stress-Induced Reactivation from Latency

$500,000 — USDA-NIFA

Doster, Alan — Veterinary Medicine and Biomedical Sciences

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

Protecting, Rehabilitating and Restoring Nebraska's Pine Forest Ecosystems

$989,667 — Nebraska Environmental Trust

Hazardous Mitigation Treatments on Non-Federal Lands

$431,970 — USDA-FS

Conservation and Stewardship Education for Nebraska Educators and Youth

$295,781 — USDA-FS

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

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, Weiwen — 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

**Lodl, 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

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 — DOE

Kalmykov, Serge — Physics and Astronomy

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

$342,000 — NSF

Kalmykov, Serguei — 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 — DOT-FRA

Hempel, Michael — 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

MPRP Sauce Fluid Dynamic Study for Perfect Dispense System

$550,000 — ConAgra

Zhang, Zhaoyan — Mechanical & Materials Engineering

Measurement of Vertical Track Deflection: Testing, Demonstration & Implementation

$546,000 — DoT-FRA

Farritor, Shane — Mechanical & Materials Engineering

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

Defining Aberrant Steroid Elimination in Castration-Resistant Prostate Cancer

$333,178 — NIH-NCI

Barycki, Joseph — Biochemistry

Guo, Jiantao — Chemistry

Markham, Jonathan — Biochemistry

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

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

$409,996 — NSF

Gruverman, Alexei — 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

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|---|---|
| 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

**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 |

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

Evaluating Integrated Resistance Management Strategies in Variable Environments

| | |
|---|---|
| $388,279 | Monsanto |
| Chirakkal, Haridas | Biological Sciences |
| Meinke, Lance | Entomology |

**Terry, Benjamin** — **Mechanical & Materials Engineering**

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** — **Natural Resources**

*High Plains Regional Climate Center

$335,937 — DOC-NOAA

Sorensen, William — Natural Resources

Stiles, Crystal — 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 — NSF

Hu, Qi — Natural Resources

Oglesby, Robert — 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 — USDA-NIFA

Ma, Fangrui — Center for Biotechnology/ Nebraska Center for Virology

Osorio, 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 — NSF

Zhong, Ziguo — Computer Science and Engineering

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

$300,000 — NSF

Irmak, Suat — Biological Systems Engineering

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

$283,879 — NSF

Batur, Demet — Management

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

*ABI Innovation: A Computational Framework for Integrating Image Informatics with Transcriptomics for Discovering Spatiotemporally Resolved Regulatory Gene Networks in Plants

$563,801 — NSF

Yu, Hongfeng — Computer Science and Engineering

Zhang, Chi — Biological Sciences

Zhang, Qi — Statistics

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 fefe 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

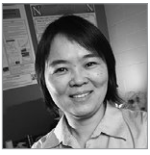
National Science Foundation CAREER grants are awarded only to untenured junior faculty. These grants recognize research and education "of the highest quality and in the broadest sense." CAREER grants are unique in requiring a four- to five-year plan for the scientist's development as both a researcher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

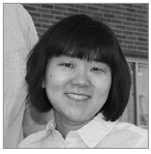
**Brassil, Chad**
Biological Sciences
CAREER: How Temporal Fluctuations Alter Indirect Interactions in Duckweed-Based Communities and Its Integration with a Student Report Exchange
$531,141 NSF

**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

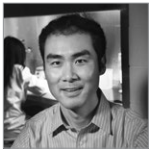
**Guo, Jiantao**
Chemistry
*CAREER: Quadruplet Codon Decoding – Mechanistic Studies and Application in Cellular Genetic Code Expansion
$622,320 NSF



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

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

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



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

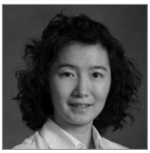
**Lim, Jung Yul**
Mechanical & Materials Engineering
CAREER: Adipocytic Mechanotransduction for Obesity
$430,554 NSF

**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



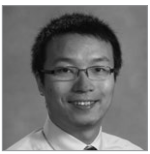
**Qu, Liyan**
Electrical and Computer Engineering
*CAREER: Adjustable-Voltage-Ratio Magnetoelectric Transformer: A New Voltage Conversion and Control Device for Smart Grids
$500,000 NSF

**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 Magnetoelectric 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). 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), 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

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

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

Active awards, July 1, 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

**Pytlik 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

NUtech VENTURES™

Pioneering Partnerships for Innovation™

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

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

## 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

---

**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 Frickel,** 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 Morcous,** 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

---

**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," poetryfromtheplains.org, hosted by CDRH, Lincoln, Nebraska.

**Jeffrey L. Day** — **Architecture Program**

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

**Robert Ladislas 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, Adigio, 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 Crucet** — **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 Zempleni** — **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
- NICHD National Institute of Child Health and Human Development
- NIDA National Institute on Drug Abuse
- NIDCD National Institute on Deafness & Communication Disorders
- NIDDK National Institute of Diabetes, Digestive & Kidney Disease
- 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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