



**RESEARCH**

**Office of Research and Economic Development**

# **RESEARCH AND CREATIVE ACTIVITY**

**July 1, 2019 – June 30, 2020**

**Major Sponsored Programs and Faculty Accomplishments  
in Research and Creative Activity**

University of Nebraska–Lincoln



## Bob Wilhelm

Vice Chancellor for Research  
and Economic Development

This booklet highlights successes in research, scholarship and creative activity by University of Nebraska–Lincoln faculty during the fiscal year running July 1, 2019, to June 30, 2020.

It lists investigators, project titles and funding sources on major grants and sponsored 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; and patents and licensing agreements issued. Based on your feedback, the Office of Research and Economic Development expanded this publication to include peer-reviewed journal articles and conference presentations and recognize students and faculty mentors participating in the Undergraduate Creative Activities and Research Experience Program (UCARE) and the First-Year Research Experiences program (FYRE).

While metrics cannot convey the full story of our work, they are tangible measures of impact. Nebraska achieved a record \$317 million in total research expenditures in FY 2019, a 26% increase over the past decade. Thanks to your efforts, our university is making progress toward its goal of approaching \$450 million in research expenditures by 2025.

Husker researchers are stimulating economic growth through university-sponsored industry activity. Nebraska Innovation Campus created 1,657 jobs statewide and had a total economic impact of \$324.1 million in FY 2019. NUtech Ventures brought in \$6.6 million in licensing income in FY 2020. The University of Nebraska system now ranks 65th among the top 100 academic institutions receiving U.S. patents, jumping 14 spots from 2019.

I am proud of the Nebraska Research community for facing the challenges of 2020 with grit and determination. Our researchers quickly adapted to develop solutions for an evolving pandemic — all while working apart and keeping themselves and their families safe. As an institution, we made a commitment to embrace an anti-racism journey and work toward racial equity. Advancing conversations and developing lasting solutions is among the most important work we can do as scholars.

Against the backdrop of the pandemic, rising racial and social tensions, and natural disasters, Nebraska researchers worked diligently to address other pressing issues, such as obesity and related diseases, nanomaterials, agricultural resilience and the state's STEM workforce.

Let's continue looking forward to what we can accomplish together. Thank you for participating in the grand challenges process and helping identify the wicked problems that Nebraska has unique expertise to solve. Soon, ORED will unveil a Research Roadmap that outlines how our campus will develop research expertise; enrich creative activity; bolster commitment to diversity, equity and inclusion; enhance economic development; and much more.

Amidst the uncertainty of 2020, I remain confident in our faculty's talent and commitment. I am pleased to present this record of accomplishments.

Bob Wilhelm

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Research community for  
facing the challenges of 2020  
with grit and determination.

## Awards of \$5 Million or More

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

### Bevins, Rick

### Psychology/ Rural Drug Addiction Research Center

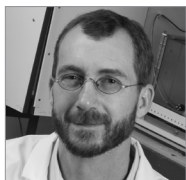
Rural Drug Addiction Research Center

\$11,854,178 ..... NIH-NIGMS

4/5/19 – 2/29/24

Khan, Bilal ..... Sociology/Rural Drug Addiction Research Center

Tyler, Kimberly ..... Sociology/Rural Drug Addiction Research Center



The Rural Drug Addiction Research Center was created in April 2019 as a National Institutes of Health Center of Biomedical Research Excellence, or COBRE. Under the leadership of Rick Bevins, Chancellor's Professor of psychology, the center's mission is to advance understanding of causes, impacts and interventions related to rural drug

addiction in the Midwest, a geographic area that has been historically understudied. Designed to be interdisciplinary and data-driven, the research links pre-clinical studies to field-based behavioral, neural, social, clinical, translational research and dissemination.

### Bloom, Kenneth

### Physics and Astronomy

U.S. CMS Operations at the LHC

\$6,257,263 ..... NSF through Princeton University

1/1/12 – 12/31/21



Ken Bloom, professor of physics and astronomy, coordinates the U.S. contingent of the international research team conducting experiments using the Large Hadron Collider (LHC) at CERN, the European Organization for Nuclear Research in Switzerland. This grant from the National Science Foundation enables the UNL team to support the current High-

Luminosity LHC (HL-LHC) upgrade project.

### Brank, Eve

### Center on Children, Families and the Law

Training on Family and Policy Services

\$11,268,815 ..... DHHS-ACF through

Nebraska Department of Health and Human Services

1/1/18 – 12/31/21

Olson, Kathryn ..... Center on Children, Families and the Law



Eve Brank, professor of psychology and director of the Center on Children, Families and the Law (CCFL), and Kathryn Olson, research assistant professor and assistant director of CCFL, lead this effort to develop and deliver training to child and family services specialists consistent with federal and state statutes and policy. With the support of the Nebraska Department of

Health and Human Services and the Administration for Children and Families in the U.S. Department of Health and Human Services, the program encompasses development and delivery of child protection and safety training for child protection and safety workers in Nebraska.

### Cahoon, Edgar

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

R1I Track-1: Center for Root and Rhizobiome Innovation (CRR1)

\$10,062,433 ..... NSF-EPSCoR

6/15/16 – 5/31/21

Adamec, Jiri ..... Biochemistry/Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Clemente, Thomas ..... Agronomy and Horticulture/

Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Drijber, Rhae ..... Agronomy and Horticulture/

Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Griep, Mark ..... Chemistry/Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Helikar, Tomas ..... Biochemistry/Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Herr, Joshua ..... Plant Pathology/Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

Moriyama, Etsuko .... Biological Sciences/Center for Biotechnology/

Center for Plant Science Innovation/

Nebraska Center for Redox Biology

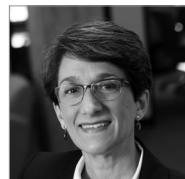
- Russo, Sabrina . . . . . Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Schachtman, Daniel . . . . . Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Schnable, James . . . . . Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- van Dijk, Karin . . . . . Biochemistry/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Walia, Harkamal . . . . . Agronomy and Horticulture/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Weber, Karrie . . . . . Biological Sciences/  
Earth and Atmospheric Sciences/  
Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Yu, Bin . . . . . Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology
- Zhang, Chi . . . . . Biological Sciences/Center for Biotechnology/  
Center for Plant Science Innovation/  
Nebraska Center for Redox Biology



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

The university is teaming with scientists at the University of Nebraska Medical Center, University of Nebraska at Kearney and Doane University on the Center for Root and Rhizobiome Innovation. Project leader is Edgar Cahoon, George Holmes Professor of biochemistry and director of the Center for Plant Science Innovation. The research uses a holistic strategy to study root and soil microbe interactions and to develop new biological tools to enhance crop performance.

- Graef, Michelle** . . . . . **Center on Children, Families and the Law**  
Quality Improvement Center for Workforce Development  
\$15,235,500 . . . . . DHHS-ACF  
9/30/16 – 9/29/21
- Ells, Mark . . . . . Center on Children, Families and the Law  
Paul, Megan . . . . . Center on Children, Families and the Law  
Stephenson, Kate . . . . . Center on Children, Families and the Law



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

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

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



With grants totaling more than \$47,000,000, the College of Agricultural Sciences and Natural Resources (CASNR) at the University of Nebraska–Lincoln is partnering with various associations and foundations to provide educational opportunities for Rwandan students to participate in the CASNR 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 Tiffany Heng-Moss leads this effort.

**Moxley, Rodney**      **Veterinary Medicine and Biomedical Sciences**

Shiga-Toxigenic *Escherichia coli* (STEC) in the Beef Chain:  
Assessing and Mitigating the Risk by  
Translational Science, Education and Outreach

\$24,808,592 ..... USDA-AFRI  
1/1/12 - 12/31/19  
Thippareddi, Harshavardhan ..... Food Science and Technology



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

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

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

University Transportation Centers Open Competition 2016

\$13,000,900 ..... DOT  
12/5/16 - 9/30/22



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

which emphasizes challenges facing rural areas and underserved communities, was designated the University Transportation Center of

its four-state region after a competitive review. Laurence Rilett, MATC director and the Keith W. Klaasmeyer Chair in engineering, leads the research center. Funding enables MATC to leverage its track record of success in transportation research and education to improve safety in the four Region 7 states: Nebraska, Iowa, Kansas and Missouri. MATC is housed in the university's College of Engineering. Its partner institutions include the University of Nebraska at Omaha, University of Nebraska Medical Center, University of Iowa, University of Kansas, University of Kansas Medical Center, Missouri University of Science and Technology, Lincoln University and Nebraska Indian Community College. The consortium also has partnerships with several private- and public-sector entities, including a longstanding relationship with the Nebraska Department of Transportation.

**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 - 8/14/21  
Dweikat, Ismail ..... Center for Plant Science Innovation/  
Agronomy and Horticulture  
Ge, Yufeng ..... Biological Systems Engineering



Daniel Schachtman, George Holmes Professor of agronomy and horticulture and director of the university's Center for Biotechnology, leads a \$13.5 million, multi-institutional research effort to improve sorghum as a sustainable source for biofuel production. A five-year grant from the U.S. Department of Energy funds this highly collaborative project that takes a

comprehensive approach to understanding how plants and microbes interact and to learn which sorghum germplasm can grow with less water and nitrogen. The University of Nebraska-Lincoln is collaborating with scientists at Danforth Plant Science Center, Washington State University, University of North Carolina-Chapel Hill, Boyce Thompson Institute, Clemson University, Iowa State University, Colorado State University and the DOE-Joint Genome Institute.

**Takacs, James****Chemistry/Nebraska Center for Integrated Biomolecular Communication**

Nebraska Center for Integrated Biomolecular Communication (NCIBC)

\$11,038,329	NIH-NIGMS
8/15/16 – 7/31/21	
Becker, Donald	Biochemistry/NCIBC
Buan Murphy, Nicole	Biochemistry/NCIBC
Cerny, Ronald	Chemistry/NCIBC
Clarke, Jennifer	Statistics/Food Science and Technology/NCIBC
DiRusso, Concetta	Biochemistry/NCIBC
Dodds, Eric	Chemistry/NCIBC
Hage, David	Chemistry/NCIBC
Harris, Edward	Biochemistry/NCIBC
Kidambi, Srivatsan	Chemical and Biomolecular Engineering/NCIBC
Lee, Jaekwon	Biochemistry/NCIBC
Morton, Martha	Chemistry/NCIBC
Powers, Robert	Chemistry/NCIBC
Riethoven, Jean-Jack	Center for Biotechnology/NCIBC
Stains, Clifford	Chemistry/NCIBC
Velander, William	Chemical and Biomolecular Engineering/NCIBC
Zhou, You	Center for Biotechnology/NCIBC



With a five-year, \$11 million grant from the National Institutes of Health, the University of Nebraska-Lincoln has established a research center focused on investigating cellular-level miscommunications that contribute to complex diseases like cancer, diabetes and chronic liver disease. The NCIBC serves as a hub for interdisciplinary collaborations among

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

**Tsymbal, Evgeny****Physics and Astronomy/Nebraska Center for Materials and Nanoscience**

Materials Research Science and Engineering Center: Polarization and Spin

\$9,629,898	NSF
11/1/14 – 10/31/21	



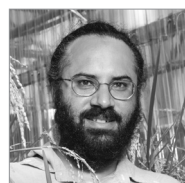
The Materials Research Science and Engineering Center (MRSEC) was established in 2002 with a grant from the National Science Foundation and involves scientists from the Departments of Physics and Astronomy, Chemistry, Mechanical & Materials Engineering, and the School of Biological Sciences. MRSEC projects 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.

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

RII Track-2 FEC: Comparative Genomics and Phenomics Approach to Discover Genes Underlying Heat Stress Resilience in Cereals	NSF-EPSCoR
\$5,783,738	
8/1/17 – 7/31/21	

Morota, Gota	Animal Science
Obata, Toshihiro	Biochemistry
Yu, Hongfeng	Computer Science and Engineering
Zhang, Chi	Biological Sciences
Zhang, Qi	Statistics



Harkamal Walia, associate professor of agronomy and horticulture, leads a project to explore the effects of high nighttime temperatures on wheat and rice. Temperature stress can lead to severe losses in the yield and quality of crops, especially wheat and rice, two major cereal crops worldwide. With the support of a \$5.78 million grant from the

National Science Foundation's Established Program to Stimulate Competitive Research (EPSCoR), Walia's team is investigating genes and genetic variants in wheat and rice to identify genetic markers and physiological characteristics tied to heat tolerance. The team also collaborates with researchers from Arkansas State University and Kansas State University.



**Wilhelm, Bob**      **Office of Research and Economic Development**

Nebraska Center for Energy Sciences Research  
\$6,250,000 ..... Nebraska Public Power District  
4/1/16 – 3/31/21

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

**Yoder, Ron**      **Institute of Agriculture and Natural Resources**

Rwandan Institute of Conservation Agriculture (RICA)  
\$17,210,366 ..... Various Sources  
10/13/17 – 12/31/20

Davis, Josh ..... Global Affairs  
Heng-Moss, Tiffany ..... College of Agricultural Sciences  
and Natural Resources



The Rwanda Institute for Conservation Agriculture (RICA) is a unique and innovative English language institution dedicated to preparing the next generation of agricultural leaders of Rwanda and East Africa. Under the leadership of Ron Yoder, senior associate vice chancellor for IANR, the University of Nebraska is serving as a critical academic

partner, helping to design and implement the curriculum and campus operations, especially during RICA's critical start-up phase. RICA students will learn the principles of conservation agriculture and One Health while emphasizing written communication, leadership and entrepreneurship. Students at RICA will be exposed to six different enterprises including beef cattle and small ruminants, dairy, poultry and swine, row and forage crops, vegetable and tree crops, irrigation and mechanization.

**Zempleni, Janos**

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

COBRE: Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules  
\$11,655,208 ..... NIH-NIGMS  
8/5/14 – 5/31/24

Lim, Jung Yul ..... Mechanical & Materials Engineering  
Sukumaran, Sunil ..... Nutrition and Health Sciences  
Wang, Yongjun ..... Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules



With the support of an \$11.6 million grant from the National Institutes of Health's Center of Biomedical Research Excellence (COBRE) program, the university has established the Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules. The center, under the leadership of Janos Zempleni, Willa Cather Professor of molecular

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

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

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

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

NRT-INFEWS: Training in Theory and Application of Cross-scale Resilience in Agriculturally Dominated Social Ecological Systems  
\$2,998,886 ..... NSF  
Munoz-Arriola, Francisco ..... Biological Systems Engineering  
Soh, Leen-Kiat ..... Computer Science and Engineering  
Twidwell, Dirac Jr. .... Agronomy and Horticulture

## **Allmand, Matthew** **Extension/Biological Systems Engineering/ Food Science and Technology**

Manufacturing Extension Partnership Center for Nebraska  
\$1,350,000 ..... DOC-NIST

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

Low-Power Signal-Processing Electronics  
for Unattended Radiation Monitoring Sensors  
\$1,060,772 ..... 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/ Nebraska Center for Redox Biology**

Molecular Mechanisms of Disease  
\$1,141,760 ..... NIH-NIGMS  
Harris, Edward ..... Biochemistry

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

TRIO – Ronald E. McNair Postbaccalaureate Achievement Program  
\$1,191,963 ..... ED

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

Assessment of Adult Female and Neonatal Mule Deer (*Odocoileus hemionus*) Survival, Movements and Habitat Use in Nebraska  
\$1,358,070 ..... Nebraska Game and Parks Commission

## **Bevins, Rick** **Psychology**

Interceptive Conditioning with Nicotine: Changes in Abuse Liability  
\$1,786,220 ..... NIH-NIDA

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

Group Testing for Infectious Disease Detection:  
Multiplex Assays and Back-End Screening  
\$1,137,836 ..... NIH-NIAID

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

Nebraska Nanoscale Facility of NNCI  
\$3,494,096 ..... NSF  
Lai, Rebecca ..... Chemistry/Nebraska Center for  
Materials and Nanoscience  
Liou, Sy-Hwang ..... Physics and Astronomy/Nebraska  
Center for Materials and Nanoscience  
Sellmyer, David ..... Physics and Astronomy/Nebraska  
Center for Materials and Nanoscience  
Shield, Jeffrey ..... Mechanical & Materials Engineering/  
Nebraska Center for Materials and Nanoscience

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

Open Science Grid Consortium  
\$2,280,837 ..... NSF through University of Wisconsin-Madison  
SI2-SSI Data Intensive Analysis for  
High Energy Physics (DIANA/HEP)  
\$1,001,324 ..... NSF

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

MURI Center for Material Failure  
Prediction through Peridynamics  
\$1,016,131 ..... DoD-AFOSR through University of Arizona

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

\*Nuclear and Electronic Dynamics in  
Ultrafast Ring-Conversion Molecular Reactions  
\$2,000,000 ..... DOE  
Ultrafast Electron Diffraction from Aligned Molecules  
\$1,041,385 ..... DOE



\*Low-Cost, Sacrificial, Energy-Absorbing, Crash Cushion  
 \$1,072,614 .....Traffix Devices Inc.  
 Bielenberg, Robert .....Midwest Roadside Safety Facility  
 Holloway, Jim .....Midwest Roadside Safety Facility  
 Lechtenberg, Karla .....Midwest Roadside Safety Facility  
 Rasmussen, Jennifer .....Midwest Roadside Safety Facility  
 Rosenbaugh, Scott .....Midwest Roadside Safety Facility  
 Stolle, Cody .....Midwest Roadside Safety Facility

Midwest States Pooled Fund Roadside Safety Program Year 29  
 \$1,235,000 .....DOT-FHWA through  
 Nebraska Department of Transportation  
 Bielenberg, Robert .....Midwest Roadside Safety Facility/  
 Nebraska Transportation Center  
 Lechtenberg, Karla .....Midwest Roadside Safety Facility/  
 Nebraska Transportation Center  
 Rasmussen, Jennifer .....Midwest Roadside Safety Facility/  
 Nebraska Transportation Center  
 Rosenbaugh, Scott .....Midwest Roadside Safety Facility/  
 Nebraska Transportation Center  
 Stolle, Cody .....Midwest Roadside Safety Facility/  
 Nebraska Transportation Center

**Fischer, Jean** **Nutrition and Health Sciences**  
 Supplemental Nutrition Assistance Program (SNAP-ED)  
 \$1,822,398 .....USDA-FNS through  
 Nebraska Department of Health and Human Services  
 Behrends, Donna ..... Nutrition and Health Sciences  
 Franzen-Castle, Lisa ..... Nutrition and Health Sciences  
 Johnson, Mary Ann ..... Nutrition and Health Sciences  
 Sehi, Natalie ..... Nutrition and Health Sciences  
 Wielenga, Vanessa ..... Nutrition and Health Sciences

**Fontaine, Joseph** **Natural Resources**  
 Assessing the Effects of Habitat Incentive Programs and  
 Public Access Programs on Pheasant Population  
 Dynamics and Hunter Harvest  
 \$1,989,522 .....Nebraska Game and Parks Commission  
 Damsky, David ..... Natural Resources  
 Foggia, Jennifer ..... Natural Resources  
 Reed, Tyler ..... Natural Resources

**Forbes, Cory** **Natural Resources**  
 DRK-12 High School Students Climate Literacy  
 Through Epistemology of Scientific Modeling  
 \$1,136,602 .....NSF

**Garcia Ruiz, Hernan** **Plant Pathology/  
 Nebraska Center for Virology**  
 Recognition and Recruitment of RNA Viruses  
 into RNA Silencing Pathways  
 \$1,312,105 .....NIH-NIGMS

**Gervais, Sarah** **Psychology**  
 Integrating Alcohol Myopia and Objectification  
 to Understand Sexual Assault  
 \$1,097,073 .....NIH-NIAAA  
 DiLillo, David .....Psychology  
 Dodd, Michael .....Psychology  
 Fritz, Matthew .....Educational Psychology

**Graef, George** **Agronomy and Horticulture**  
 \*Increasing Genetic Diversity, Yield, and Protein of  
 U.S. Commercial Soybean Germplasm  
 \$1,429,751 .....United Soybean Board/Smith/Bucklin  
 Clemente, Thomas ..... Agronomy and Horticulture  
 Hyten, David Jr. .... Agronomy and Horticulture

**Grassini, Patricia** **Agronomy and Horticulture**  
 Developing Solutions for Closing the Yield Gap  
 in Smallholder Oil Palm Plantations in Indonesia  
 \$4,246,035 ..... Norwegian Ministry of Foreign Affairs

**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

Catalytic Asymmetric Hydroboration:  
 Uncapping the Potential with Two-point Binding Substrates  
 \$1,232,002 .....NIH-NIGMS

**Hage, David** **Chemistry**  
 Chromatographic Studies of Functional Proteomics  
 \$1,075,264 .....NIH-NIDDK

**Harris, Edward** **Biochemistry**  
 Liver-Mediated Clearance of Low Molecular Weight Heparins  
 \$1,486,339 .....NIH-NHLBI  
 Dodds, Eric ..... Chemistry

**Harwood, David** **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)  
\$1,569,112 ..... NSF through Dartmouth College  
McManis, James ..... College of Engineering

**Hebert, Michael** **Special Education and Communication Disorders/  
Nebraska Center for Research on  
Children, Youth, Families and Schools**

Project VIEW: Visual Impairments Education in Writing  
\$1,399,158 ..... ED-IES  
Bovaird, James ..... Educational Psychology/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Koziol, Natalie ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Savaiano, Mackenzie ..... Special Education and  
Communication Disorders/  
Nebraska Center for Research on  
Children, Youth, Families and Schools

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

Innovating Life Sciences Education  
Through Computational Modeling and Simulations  
\$1,896,570 ..... NSF  
Dauer, Joseph ..... Natural Resources  
Smith, Wendy ..... Center for Science, Mathematics  
and Computer Education

A Predictive Multi-Scale Model of the Immune System:  
An Integrated Resource for Interdisciplinary Applications  
\$2,025,567 ..... NIH-NIGMS

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

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

R11 Track-2 FEC: Unmanned Aircraft System  
for Atmospheric Physics  
\$1,454,757 ..... NSF through Oklahoma State University  
Detweiler, Carrick ..... Computer Science and Engineering  
Pytlík Zillig, Lisa ..... Public Policy Center  
Van Den Broeke, Matthew ..... Earth and Atmospheric Sciences

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

Measurement of Growing Season Actual Crop  
Evapotranspiration and Crop Coefficients, and Dormant  
Season Evaporative Losses for Key Vegetation Surfaces  
in the Central Platte Natural Resources District  
\$1,409,675 ..... Central Platte NRD

**Jacobson, Beth** **Student Affairs**

UNL Educational Talent Search  
\$2,415,857 ..... ED

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

R11 Track-2 FEC: Neural Networks Underlying the Integration  
of Knowledge and Perception  
\$1,187,504 ..... NSF through University of Delaware  
Dodd, Michael ..... Psychology/  
Center for Brain, Biology and Behavior

**Khalimonchuk, Oleh** **Biochemistry/  
Nebraska Center for Redox Biology**

Mitochondrial Fidelity and Homeostasis  
\$1,846,766 ..... NIH-NIGMS  
Mechanisms of Mitochondrial Quality Control and Protection  
\$1,421,695 ..... NIH-NIGMS

**Kievit, Forrest** **Biological Systems Engineering**

\*Nanoparticle-Mediated Reduction of Oxidative Stress  
for the Treatment of Traumatic Brain Injury  
\$2,216,406 ..... NIH-NINDS

**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

\$2,498,510 .....DHHS-ACF  
Bovaird, Jim ..... Educational Psychology  
Marvin, Christine ..... Special Education and  
Communication Disorders/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Sheridan, Susan ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

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

\*Maximizing Returns from the CMS Experiment: Analysis of  
Run 2 Data and Preparation for the High-Luminosity LHC

\$1,500,000 .....NSF  
Bloom, Kenneth ..... Physics and Astronomy  
Claes, Daniel ..... 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

**Lechtenberg, Karla****Midwest Roadside Safety Facility**

NYSDOT-MASH-1: MASH 2016 Safety Facility  
Hardware Evaluations - Phase I System C1 and C3

\$3,228,715 .....DOT-NYDOT through  
Nebraska Department of Transportation  
Faller, Ronald ..... Midwest Roadside Safety Facility  
Holloway, Jim ..... Midwest Roadside Safety Facility  
Rasmussen, Jennifer ..... Midwest Roadside Safety Facility  
Song, Chung ..... Civil and Environmental Engineering  
Steelman, Joshua ..... Civil and Environmental Engineering  
Stolle, Cody ..... Midwest Roadside Safety Facility

**Lehn, Joyce****Student Affairs**

Student Support Services Program

\$2,647,468 .....ED

**Lei, Yuguo****Chemical and Biomolecular Engineering**

A Single Conical Tube Device  
for Precision CAR-T Cells Manufacturing

\$1,060,857 ..... NIH-NCI  
Viljoen, Hendrik ..... Chemical and Biomolecular Engineering  
Xu, Zheng ..... Statistics  
Zhang, Chi ..... Biological Sciences

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

\*Educating Undergraduate Students for STEM  
Career Opportunities in Nebraska: Networks,  
Experiential Learning, and Computational Thinking

\$3,580,869 ..... NSF  
Donsig, Allan ..... Mathematics  
Duncan, Brittany ..... Computer Science and Engineering  
Goodburn, Amy ..... Executive Vice Chancellor and  
Chief Academic Officer  
Radu, Petronela ..... Mathematics  
Sharif, Bonita ..... Computer Science and Engineering  
Smith, Wendy ..... Center for Science, Mathematics  
and Computer Education  
Soh, Leen-Kiat ..... Computer Science and Engineering

**Li, Qingsheng****Biological Sciences/  
Nebraska Center for Virology**

Next Generation Broadly Neutralizing Antibodies  
to Clear HIV-1 Reservoir

\$1,526,720 ..... NIH-NIAID through University of Maryland

**Li, Xu****Civil and Environmental Engineering**

Mitigating the Risk of Antibiotic Resistance at Critical Control Points  
in the Beef Cattle Manure Management Systems

\$1,200,000 ..... USDA-NIFA  
Bartelt-Hunt, Shannon ..... Civil and Environmental Engineering  
Erickson, Galen ..... Animal Science  
Schmidt, Amy ..... Animal Science/Biological Systems Engineering  
Wang, Bing ..... Food Science and Technology

**Lu, Yongfeng****Electrical and Computer Engineering**

3D-Printing of Diamond-Composite Structures  
using Selective Laser Semi-Melting

\$1,187,483 ..... DoD-MDA

Portable Fiber Laser System and Method to Remove Pits  
and Cracks on Sensitized Surfaces of Aluminum Alloys  
\$1,975,000 ..... DoD-ONR

**Lubben, Bradley** **Agricultural Economics**  
 North Central Risk Management Education Center  
 \$4,152,528 ..... USDA-NIFA

**MacDonald, James** **Animal Science**  
 Enhancing Animal Protein Through Crops and Cattle  
 \$1,000,000 ..... Foundation for Food and Agriculture Research  
 Awada, Tala ..... Natural Resources  
 Banerjee, Simanti ..... Agricultural Economics  
 Blanco, Humberto ..... Agronomy and Horticulture  
 Drewnoski, Mary ..... Animal Science  
 Erickson, Galen ..... Animal Science  
 Okalebo, Jane ..... Natural Resources  
 Parsons, Jay ..... Agricultural Economics  
 Redfearn, Daren ..... Agronomy and Horticulture  
 Suyker, Andy ..... Natural Resources

**Mahmood, Rezaul** **Natural Resources**  
 High Plains Regional Climate Center  
 \$3,531,430 ..... DOC-NOAA  
 Sorensen, William ..... Natural Resources  
 Stiles, Crystal ..... Natural Resources  
 Umphlett, Natalie ..... Natural Resources

**McQuillan, Julia** **Sociology**  
 \*Worlds of Connections: Engaging Youth with Health Research  
 Through Network Science and Stories in Augmented Reality  
 \$1,235,707 ..... NIH-NIGMS  
 Diamond, Judy ..... University of Nebraska State Museum  
 Spiegel, Amy ..... Social and Behavioral  
 Science Research Consortium  
 Syron, Colleen ..... Art, Art History and Design  
 Wonch Hill, Trish ..... Social and Behavioral  
 Science Research Consortium

**Meiklejohn, Colin** **Biological Sciences**  
 Investigating the Special Role of Sex Chromosomes in Speciation:  
 Discovering the Molecular Identities, Functions, and Evolutionary  
 Histories of X-Linked Hybrid Male Sterility Genes in *Drosophila*  
 \$1,298,165 ..... NIH-NIGMS

**Mendoza-Gorham, Joan** **Student Affairs**  
 Lincoln Upward Bound  
 \$1,511,785 .....ED  
 Upward Bound Math/Science Program  
 \$1,511,785 .....ED

**Namkung, Jessica** **Special Education and  
 Communication Disorders/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools**

\*Exploring Cognitive and Foundational Processes  
 Underlying Pre-Algebra Among Students With and  
 Without Mathematics Learning Difficulties  
 \$1,399,534 ..... ED-IES  
 Bovaird, James ..... Educational Psychology/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Koziol, Natalie ..... Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Smith, Wendy ..... Center for Science, Mathematics  
 and Computer Education/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools

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

**Nelson, Timothy** **Psychology/  
 Center for Brain, Biology and Behavior**  
 Executive Control and Adolescent Weight Trajectories  
 \$2,443,777 ..... NIH-NIDDK  
 Brock, Becca ..... Psychology/Center for Brain, Biology and Behavior  
 Nelson, Jennifer ..... Research and Economic Development/  
 Center for Brain, Biology and Behavior  
 Role of Executive Control in Adolescent Substance Use  
 and Co-occurring Problems  
 \$1,301,978 ..... NIH-NIDA through  
 Boys Town National Research Institute  
 Espy, Kimberly ..... Psychology/  
 Center for Brain, Biology and Behavior  
 Nelson, Jennifer ..... Psychology/  
 Center for Brain, Biology and Behavior

**Neta, Maital** **Psychology/  
Center for Brain, Biology and Behavior**  
Functional Brain Networks Mediating  
Individual Differences in Valence Bias  
\$1,826,454 ..... NIH-NIMH

**Ngoko Djikop, Jean Marcel** **Physics and Astronomy**  
Dynamics of Few-Body Atomic Processes  
\$2,565,804 ..... DOE

**Nugent, Gwen** **Nebraska Center for Research on  
Children, Youth, Families and Schools**  
Testing the Efficacy of INSIGHTS for Promoting Positive  
Learning Environments and Academic Achievement in Nebraska:  
A Replication Study  
\$3,299,957 ..... ED-IES  
Bovaird, James ..... Educational Psychology/  
Nebraska Center for Research on Children,  
Youth, Families and Schools  
Sheridan, Susan ..... Educational Psychology/Nebraska Center for  
Research on Children, Youth, Families and Schools

**Olson, Kathryn** **Center on Children, Families and the Law**  
\*New Worker Pre-Service Training in the Eastern Service Area  
(Douglas and Sarpy Counties)  
\$1,473,248 ..... DHHS-ACF through  
Nebraska Department of Health and Human Services  
Brank, Eve ..... Center on Children, Families and the Law

**Pannier, Angela** **Biological Systems Engineering**  
Using Cell Priming and Telecommunications Modeling to  
Enhance Gene Delivery for Stem Cell Therapies (DP2)  
\$2,332,072 ..... NIH-NIBIB

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

**Pope, Kevin** **Natural Resources**  
Human Dimensions of Nebraska's Fisheries  
\$1,747,225 ..... DOI-FS through  
Nebraska Game and Parks Commission  
Chizinski, Christopher ..... Natural Resources

**Rajca, Andrzej** **Chemistry**  
New Nitroxide Spin Labels for Distance  
Measurements in Biological Systems  
\$1,745,253 ..... NIH-NIGMS  
Rajca, Suchada ..... Chemistry

Synthesis of Metal-Free Magnetic  
Resonance Imaging Contrast Agents  
\$1,208,299 ..... NIH-NIBIB  
Rajca, Suchada ..... Chemistry

**Ray, Chittaranjan** **Civil and Environmental Engineering/  
Nebraska Water Center/  
Robert B. Daugherty Water for Food Institute**  
Securing Water for and from Agriculture Through Effective  
Community and Stakeholder Engagement  
\$1,054,083 ..... USDA-NIFA through  
Pennsylvania State University  
Burbach, Mark ..... Natural Resources/  
Robert B. Daugherty Water for Food Institute  
Burkhart-Kriesel, Cheryl . . . Panhandle Research and Extension Center  
Fulginiti, Lilyan ..... Agricultural Economics/  
Robert B. Daugherty Water for Food Institute  
Groskopf, Jessica ..... Panhandle Research and Extension Center/  
Robert B. Daugherty Water for Food Institute  
Perrin, Richard ..... Agricultural Economics/  
Robert B. Daugherty Water for Food Institute  
Rudnick, Daran ..... West Central Research and Extension Center/  
Robert B. Daugherty Water for Food Institute  
Weigle, Jason ..... Southeast Extension Center

**Savaiano, Mackenzie** **Special Education and  
Communication Disorders**  
\*Mid-Plains Professional Upgrade Partnership - Visual Impairment  
\$1,162,200 ..... ED  
Caruso, Eric ..... Special Education and Communication Disorders  
Mid-Plains Professional Upgrade Partnership - Sensory Disabilities  
\$1,082,718 ..... ED  
Thomas, Anne ..... Special Education and Communication Disorders



**Schnable, James** **Agronomy and Horticulture/  
Center for Plant Science Innovation**  
\*TGCM: (T)rait, (G)ene, and (C)rop Growth (M)odel-Directed  
Targeted Gene Characterization in Sorghum  
\$2,675,039 ..... DOE  
Ge, Yufeng ..... Biological Systems Engineering/  
Center for Plant Science Innovation  
Sigmon, Brandi ..... Plant Pathology/  
Center for Plant Science Innovation

**Scott, Stephen** **Computer Science and Engineering**  
Operationalizing Cyber Situational Awareness Research:  
Capability Exploration  
\$1,525,215 ..... DoD-Offutt Air Force Base-STRATCOM through  
National Strategic Research Institute  
Haugerud, Rick ..... Information Services  
Magilton, Elsbeth ..... Law  
Variyam, Vinod ..... Computer Science and Engineering

**Sellmyer, David** **Physics and Astronomy/Nebraska  
Center for Materials and Nanoscience**  
Studies of Artificially Structured Composite Magnets  
\$1,768,002 ..... 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  
\$4,599,878 ..... 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  
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

Early Learning Network Lead  
\$1,999,987 ..... ED  
Knoche, Lisa ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

**Sinitskii, Alexander** **Chemistry**  
\*DNA-Enabled Hierarchical Assembly of Graphene Electronics  
\$4,499,998 ..... DoD-ONR

**Soh, Leen-Kiat** **Center for Science, Mathematics  
and Computer Education/  
Computer Science and Engineering**  
Adapt, Implement and Research at Nebraska:  
A Statewide Implementation Study of a Researcher-Practitioner  
Partnership for K-8 Computer Science Education  
\$2,000,000 ..... NSF  
Nugent, Gwen ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Smith, Wendy ..... Center for Science, Mathematics  
and Computer Education  
Trainin, Guy ..... Teaching, Learning and Teacher Education

**Speck, Kate** **Public Policy Center**  
Nebraska Youth Suicide Prevention 2019-2024  
\$3,610,121 ..... DHHS-SAMHSA  
Bulling, Denise ..... Public Policy Center  
Hoffman, Stacey ..... Public Policy Center

**Storz, Jay** **Biological Sciences**  
RII Track-2 FEC: Using Natural Variation to Educate, Innovate,  
and Lead (UNVEIL): A Collaborative Research Network to  
Advance Genome-to-Phenome Connections in the Wild  
\$1,856,000 ..... NSF through University of Montana  
Meiklejohn, Colin ..... Biological Sciences  
Montooth, Kristi ..... Biological Sciences

Mutational Pleiotropy, Epistasis, and the  
Adaptive Evolution of Hemoglobin Function  
\$1,437,536 ..... NIH-NHLBI

**Sun, Xinghui** **Biochemistry**  
\*Role of lncRNA Meg3 in Obesity-Induced  
Endothelial Senescence and Insulin Resistance  
\$1,955,473 ..... NIH-NHLBI  
Harris, Edward ..... Biochemistry  
Khalimonchuk, Oleh ..... Biochemistry

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

Exploring and Embracing Heterogeneity  
in Atomically Thin Energy Materials

\$1,238,000 ..... DOE  
Sutter, Eli ..... Mechanical & Materials Engineering

**Svoboda, Mark** **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  
Tadesse, Tsegaye ..... Natural Resources

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

En-route Care for Acute Respiratory  
Distress Syndrome (ARDS) Maturation

\$1,259,336 ..... DoD-Offutt Air Force Base-STRATCOM through  
National Strategic Research Institute

**Thomas, Amanda** **Teaching, Learning and Teacher Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools**

Nebraska STEM: Supporting Elementary Rural Teacher Leadership  
\$1,499,493 ..... NSF  
Forbes, Cory ..... Natural Resources/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Homp, Michelle ..... Center for Science, Mathematics and  
Computer Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Nugent, Gwen ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Scharmann, Lawrence ..... Teaching, Learning and Teacher Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Smith, Wendy ..... Center for Science, Mathematics and  
Computer Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools

Soh, Leen-Kiat ..... Computer Science and Engineering/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Thomas, Julie ..... Teaching, Learning and Teacher Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Trainin, Guy ..... Teaching, Learning and Teacher Education/  
Nebraska Center for Research on  
Children, Youth, Families and Schools  
Wei, Sally ..... College of Engineering/  
Nebraska Center for Research on  
Children, Youth, Families and Schools

**Thomas, Anne** **Special Education and Communication Disorders**

\*Mid-Plains Professional Upgrade Partnership: Interdisciplinary  
Preparation in Deaf Education and Speech-Language Pathology

\$1,052,376 ..... ED  
Weissling, Kristy ..... Special Education and Communication Disorders

**Thompson, Laura** **Eastern Nebraska Research and Extension Center**

\*Promoting Adoption of Innovative Precision Ag Nitrogen  
Management Technologies Through the Nebraska On-Farm  
Research Network for Improved Conservation Stewardship

\$1,267,747 ..... USDA-NRCS  
DeBoer, Karen ..... Panhandle Research and Extension Center  
Glewen, Keith ..... Southeast Extension District  
Krienke, Brian ..... Agronomy and Horticulture  
Lesoing, Gary ..... Southeast Extension District  
Luck, Joe ..... Biological Systems Engineering  
Maharjan, Bijesh ..... Panhandle Research and Extension Center  
Mamo, Mitiku ..... Northeast Extension District  
Mieno, Taru ..... Agricultural Economics  
Milander, Jeremy ..... Northeast Extension District  
Mueller, Nathan ..... Metro Extension District  
Nygren, Aaron ..... Northeast Extension District  
Puntel, Laila ..... Agronomy and Horticulture  
Rees, Jennifer ..... Southeast Extension District  
Sindelar, Michael ..... Southeast Extension District  
Sivits, Sarah ..... West Central Research and Extension Center  
Thomas, John ..... Panhandle Research and Extension Center  
Whitney, Todd ..... West Central Research and Extension Center

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

\*Fostering Educational Success:  
Reconnecting Families, Empowering Youth  
\$3,994,908 .....ED  
Duppong Hurley, Kristin ..... Special Education and Communication Disorders/ Academy for Child and Family Wellbeing  
Huscroft-D'Angelo, Jacqueline ..... 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

**Twidwell, Dirac Jr.** **Agronomy and Horticulture**

\*RII Track-2 FEC: Resilience Informatics for the Convergence of Critical Capacities to Address Regional-Scale Environmental Change  
\$3,953,265 ..... NSF-EPSCoR  
Allen, Craig ..... Natural Resources  
Banerjee, Simanti ..... Agricultural Economics  
Uden, Daniel ..... Agronomy and Horticulture

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

LaserNetUS  
\$1,000,000 ..... DOE  
Relativistic Optics: Interactions of Electrons with Laser Light at Highly Relativistic Intensities  
\$1,499,867 ..... DoD-AFOSR  
Banerjee, Sudeep ..... Physics and Astronomy  
Chen, Shouyuan ..... Physics and Astronomy  
Fuchs, Matthias ..... Physics and Astronomy  
Shadwick, Bradley ..... Physics and Astronomy  
Starace, Anthony ..... Physics and Astronomy  
Laser Produced Coherent X-Ray Sources  
\$1,994,997 ..... DOE

**Van Etten, James** **Plant Pathology/ Nebraska Center for Virology**

RII Track-2 FEC: G2P in VOM:  
An Experimental and Analytical Framework for Genome to Phenome Connections in Viruses of Microbes  
\$1,192,224. .... NSF through University of Delaware  
DeLong, John ..... Biological Sciences/ Nebraska Center for Virology  
Dunigan, David. .... Plant Pathology/ Nebraska Center for Virology

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

International Consortium for Multilingual Excellence in Education  
\$2,739,661 .....ED  
Gatti, Lauren ..... Teaching, Learning and Teacher Education  
Johnson, Aaron ..... Teaching, Learning and Teacher Education  
Kiramba, Lydiah ..... Teaching, Learning and Teacher Education

**Walters, Cory** **Agricultural Economics**

Northern Plains Regional Farm Business Management and Benchmarking Partnership  
\$1,322,060 ..... USDA-NIFA  
Banerjee, Simanti ..... Agricultural Economics

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

\*Rapid Manufacturing of a Universal Flu Vaccine Using TMV-Conjugated Centralized Antigens  
\$3,229,833 ..... NIH-NIAID

**West, John** **Nebraska Center for Virology**

KSHV, HIV and the Kaposi's Sarcoma Tumor Niche  
\$2,893,129 ..... NIH-NCI  
Wood, Charles ..... Biological Sciences/Biochemistry/ Nebraska Center for Virology

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

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

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

Mechanism of the Antiviral Activity of BAF against Poxvirus and HSV-1 Infection  
\$1,838,387 ..... NIH-NIAID

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

**Witte, Amanda** **Nebraska Center for Research on  
 Children, Youth, Families and Schools**  
 Nebraska Multi-Tiered System of  
 Support Implementation Support Team  
 \$1,032,646 ..... ED through Nebraska Department of Education

**Wood, Charles** **Biological Sciences/Biochemistry/  
 Nebraska Center for Virology**  
 Biomarkers for Dysbiosis-Related HIV-Associated Cognitive  
 Disorders among Persons Who Inject Drugs in Puerto Rico  
 \$3,029,162 ..... NIH-NIDA  
 Chiou, Kathy ..... Psychology/Nebraska Center for Virology  
 Dombrowski, Kirk ..... Sociology/Nebraska Center for Virology  
 Fernando, Samodha ..... Animal Science/Nebraska Center for Virology  
 Khan, Bilal ..... Sociology/Nebraska Center for Virology  
 West, John ..... Biochemistry/Nebraska Center for Virology

Models of KHSV Transmission and Its Inhibition  
 \$2,192,835 ..... NIH-NCI  
 Li, Qingsheng ..... Biological Sciences/Nebraska Center for Virology  
 West, John ..... Biochemistry/Nebraska Center for Virology

Zambia AIDS Malignancies Diagnosis and Pathogenesis Program  
 \$3,842,954 ..... NIH-NCI  
 Angeletti, Peter ..... Biological Sciences/  
 Nebraska Center for Virology  
 West, John ..... Nebraska Center for Virology

The Impact of Cannabis on Inflammation  
 and HIV-1 Reservoirs in Zambia  
 \$3,745,393 ..... NIH-NIDA  
 Li, Qingsheng ..... Biological Sciences/  
 Nebraska Center for Virology  
 West, John ..... 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)  
 \$4,277,974 ..... NIH-NCI  
 Angeletti, Peter ..... Biological Sciences  
 West, John ..... Nebraska Center for Virology

**Yu, Bin** **Biological Sciences/  
 Center for Plant Science Innovation**  
 Understand the Function of the MOS4-Associated Complex  
 in MicroRNA Biogenesis  
 \$1,570,405 ..... NIH-NIGMS

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

**Zeng, Xiao** **Chemistry**  
 RII Track-2 FEC: Low-Cost, Efficient Next-Generation Solar Cells  
 for the Coming Clean Energy Revolution  
 \$1,288,002 ..... NSF through Brown University  
 Hong, Xia ..... Physics and Astronomy

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

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

### **Abadie, Roberto** **Sociology**

Assessing the Effects of Hurricane Maria on Opioid Agonist  
Treatment Access among PWID in Rural Puerto Rico  
\$412,763 ..... NIH-NIDA  
Habecker, Patrick ..... Sociology

### **Adamowicz, Michael** **College of Agricultural Sciences and Natural Resources**

\*Application of the Human Virome to  
Touched Objects and Hair Shafts  
\$443,931 ..... DOJ-NIJ  
Clarke, Jennifer ..... Food Science and Technology  
Fernando, Samodha ..... Animal Science  
Herr, Joshua ..... Plant Pathology

The Human Virome as Trace Evidence in Forensic Investigation  
\$698,382 ..... DOJ-NIJ  
Clarke, Jennifer ..... Food Science and Technology/Statistics  
Fernando, Samodha ..... Animal Science  
Herr, Joshua ..... Plant Pathology

### **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

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

Quarter Scale Critical Heat Exchanger  
for International Space Station  
\$350,000 ..... NASA-Johnson Space Center  
Zuhlke, Craig ..... Electrical and Computer Engineering

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

### **Alexandrov, Vitali** **Chemical and Biomolecular Engineering**

\*Corrosion and Passivation Mechanisms of Li-Ion Battery  
Cathodes from Ab Initio Interfacial Reaction Dynamics  
\$302,291 ..... NSF

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

Global Change, Vulnerability and Resilience:  
Management Options for an Uncertain Future  
\$771,345 ..... DoD-SERDP  
Twidwell, Dirac Jr. .... Agronomy and Horticulture

### **Alsalem, Fadi** **Durham School of Architectural Engineering & Construction**

\*Micro-Electro-Mechanical Neural Integrated Sensing and  
Computing Units for Wearable Device Applications  
\$391,532 ..... NSF

### **Auchtung, Jennifer** **Food Science and Technology**

Using Complimentary in Vitro and in Vivo Models of the  
Human Microbiome to Study Antibiotic-Mediated Disruption  
\$387,955 ..... DHHS-CDC

### **Avalos, George** **Mathematics**

Analysis and Control Theory for  
Moving Boundary and Nonlinear Phenomena  
in Interactive Partial Differential Equations  
\$328,901 ..... NSF  
Guen Geredeli, Pelin ..... Mathematics

### **Awada, Tala** **Natural Resources/Agricultural Research Division**

\*Agricultural Intensification in the Western Corn Belt  
\$650,000 ..... USDA-ARS  
Giannakas, Konstantinos ..... Agricultural Economics  
Suyker, Andy ..... Natural Resources

Carbon Flux from Great Plains Agroecosystems Associated  
with the ARS LTAR Network  
\$300,000 ..... USDA-ARS  
Erickson, Galen ..... Animal Science  
Suyker, Andy ..... Natural Resources

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

\*Plant Breeding Partnerships: Continuing to  
Develop and Validate the Tools for Hybrid Wheat  
\$650,000 ..... USDA-NIFA  
Belamkar, Vikas ..... Agronomy and Horticulture  
El Basyoni, Ibrahim ..... Agronomy and Horticulture

Developing the Tools and Germplasm for Hybrid Wheat  
\$975,000 ..... USDA-NIFA

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

Low-profile PMT Scintillator Read-out System  
\$987,191 ..... Do D-DTRA through Kansas State University  
Hoffman, Michael ..... Electrical and Computer Engineering

**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

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

\*Development and Testing of *Mycobacterium avium* subsp.  
*paratuberculosis* DIVA Vaccines in Ruminants  
\$500,000 ..... USDA-NIFA

Genome Wide Analysis of *M. Paratuberculosis* Pathogenesis  
\$499,981 ..... USDA-NIFA

**Bartelt-Hunt, Shannon**                              **Civil and Environmental Engineering**

Influence of Agrochemical Mixtures  
on Treatment Wetland Ecosystems Services  
\$499,999 ..... USDA-NIFA  
Messer, Tiffany ..... Biological Systems Engineering  
Snow, Daniel ..... Nebraska Water Center

REU Site: Sustainability of Horizontal Civil Networks in Rural Areas  
\$445,241 ..... NSF  
Eun, Jongwan ..... Civil and Environmental Engineering  
Jones, Elizabeth ..... Nebraska Transportation Center  
Kim, Seunghee ..... Civil and Environmental Engineering  
Li, Xu ..... Civil and Environmental Engineering  
Li, Yusong ..... Civil and Environmental Engineering  
Linzell, Daniel ..... Civil and Environmental Engineering  
Messer, Tiffany ..... Biological Systems Engineering  
Sim, Chungwook ..... Civil and Environmental Engineering  
Steelman, Joshua ..... Nebraska Transportation Center  
Wittich, Christine ..... Civil and Environmental Engineering  
Wood, Richard ..... Civil and Environmental 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 and Environmental Engineering  
Li, Yusong ..... Civil and Environmental Engineering  
Rosenbaum, David ..... Economics  
Snow, Daniel ..... Nebraska Water Center  
Tang, Zhenghong ..... Community and Regional Planning Program  
Thompson, Eric ..... Bureau of Business Research

**Basche, Andrea**                                      **Agronomy and Horticulture**

\*Enhancing the Sustainability of U.S. Cropping Systems Through  
Cover Crops and an Innovative Information and Technology Network  
\$370,607 ..... USDA-NIFA through  
North Carolina State University  
McMechan, Justin ..... Entomology  
Wortman, Samuel ..... Agronomy and Horticulture

**Bashford, Gregory**                                      **Biological Systems Engineering**

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

**Batelaan, Herman**                                      **Physics and Astronomy**

Coherent Electron Control  
\$475,161 ..... NSF

**Becker, Donald****Biochemistry/  
Nebraska Center for Redox Biology/  
Center for Plant Science Innovation**

REU Site: Training in Redox Biology

\$298,186	.....NSF
Adamec, Jiri	.....Biochemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Du, Liangcheng	.....Chemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Franco Cruz, Rodrigo	.....Veterinary Medicine and Biomedical Sciences/ Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Khalimonchuk, Oleh	.....Biochemistry/ Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Lee, Jaekwon	.....Biochemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Ro, Seung-Hyun	.....Biochemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Stone, Julie	.....Biochemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Wilson, Mark	.....Biochemistry/Nebraska Center for Redox Biology/ Center for Plant Science Innovation
Zhang, Limei	.....Biochemistry/ Center for Plant Science Innovation/ Nebraska Center for Redox Biology/

**Belashchenko, Kirill****Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**\*First-Principles Studies of Spin-Orbit Torque and  
Magnetoresistance in Magnetic Nanostructures

\$363,787 .....NSF

First-Principles Studies of Relativistic  
Spin Interactions and Torques

\$258,646 .....NSF

**Benson, John****Natural Resources**Reproductive Success, Survival, and Cause-specific  
Mortality of Bighorn Sheep in Nebraska

\$280,740 .....Nebraska Game and Parks Commission

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

\$939,645	.....DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute
Dussault, Patrick	.....Chemistry
Helikar, Tomas	.....Biochemistry
Powers, Robert	.....Chemistry

**Bianchini Huebner, Andreia****Food Science and Technology**Alliance for Food Security Through Reduction of  
Postharvest Loss and Food Waste

\$935,827 .....USAID through Kansas State University

**Bielenberg, Robert****Midwest Roadside Safety Facility**\*Dynamic Testing and Evaluation of a Culvert-Mounted,  
Strong-Post MGS to TL-3 Guidelines of MASH 2016\$275,995 .....DOT-WI DOT through  
Nebraska Department of Transportation

Faller, Ronald	.....Midwest Roadside Safety Facility
Reid, John	.....Mechanical & Materials Engineering
Rosenbaugh, Scott	.....Midwest Roadside Safety Facility

Development of an Optimized MASH TL-4 Kansas Corral Rail  
(Kansas, Iowa, South Dakota and Virginia)\$401,400 .....DOT-KS DOT through  
Nebraska Department of Transportation

Faller, Ronald	.....Midwest Roadside Safety Facility
Holloway, James	.....Midwest Roadside Safety Facility
Lechtenberg, Karla	.....Midwest Roadside Safety Facility
Rosenbaugh, Scott	.....Midwest Roadside Safety Facility

**Binek, Christian****Physics and Astronomy/Nebraska Center  
for Materials and Nanoscience**Magnetolectrics and Spinorbitronics in  
Topological Heterostructures and Superlattices\$600,851 .....DoD-ONR through  
University of California, Los Angeles**Black, Paul****Biochemistry**

Waste to Oil and High Value Bioproducts

\$734,608 .....Nebraska Department of Economic Development  
through Vestal W2O

Allen, James .....Biochemistry

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

\*Managing Cover Crops to Enhance Soil Ecosystem Services  
in Soils Vulnerable to Environmental Pressures

\$500,000 ..... USDA-NIFA  
Parson, Jay ..... Agricultural Economics  
Proctor, Christopher ..... Agronomy and Horticulture  
Ruis, Sabrina ..... Agronomy and Horticulture  
Thompson, Laura .. Eastern Nebraska Research and Extension Center  
Yang, Haishun ..... Agronomy and Horticulture

\*Enhancing the Health of Low C, Sandy and Sloping Soil  
with Biochar and Cover Crops

\$499,999 ..... USDA-NIFA  
Creech, Cody ..... Panhandle Research and Extension Center  
Drijber, Rhæe ..... Agronomy and Horticulture  
Easterly, Amanda ..... Agronomy and Horticulture  
Jasa, Paul ..... Biological Systems Engineering  
Ruis, Sabrina ..... Agronomy and Horticulture

Enhancing Soil Ecosystem Services with Cover Crops

\$252,471 ..... Nebraska Environmental Trust  
Ferguson, Richard ..... Agronomy and Horticulture  
Jasa, Paul ..... Biological Systems Engineering

Assessing Innovative Strategies to Maximize Cover Crop Yields  
for Biofuel across Precipitation Gradient

\$500,000 ..... USDA-NIFA  
Creech, Cody ..... Panhandle Research and Extension Center  
Elmore, Roger ..... Agronomy and Horticulture  
Francis, Charles ..... Agronomy and Horticulture  
Koehler-Cole, Katja ..... Agronomy and Horticulture  
Parsons, Jay ..... Agricultural Economics  
Ruis, Sabrina ..... Agronomy and Horticulture  
Shaver, Tim ..... West Central Research and Extension Center  
Yang, Haishun ..... Agronomy and Horticulture

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

Chromatin Modification in Archaea and  
Its Role in Gene Expression

\$379,675 ..... NSF  
Van Cott, Kevin ..... Chemical and Biomolecular Engineering

REU Site: Integrated Development of Bioenergy Systems

\$416,464 ..... NSF  
Cerutti, Heriberto ..... Biological Sciences/  
Center for Plant Science Innovation

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

\*Corrosion-Induced Fracture and Failure: Transforming Computations  
from Micrometers and Minutes to Meters and Years

\$748,375 ..... NSF  
Larios, Adam ..... Mathematics

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

Efficacy of the START-Play Program for  
Infants with Neuromotor Disorders

\$499,088 ..... ED-IES through Duquesne University  
Sheridan, Susan ..... Educational Psychology/Nebraska Center for  
Research on Children, Youth, Families and Schools

**Brennan, Marc****Special Education and Communication Disorders**

\*Restoration of Spectral Resolution with Hearing-Aid Amplification  
\$448,983 ..... NIH-NIDCD

**Brewer, Gary****Entomology**

A Multi-Tactic Push-Pull Strategy for Controlling Stable Flies  
on Pasture Cattle in Nebraska and Florida

\$325,000 ..... USDA-NIFA  
Boxler, David ..... West Central Research and Extension Center  
Hanford, Kathryn ..... Statistics  
Stockton, Matt ..... West Central Research and Extension Center

**Brown, Carrie****Holland Computing Center**

\*CC\* Team: Great Plains Regional CyberTeam

\$269,874 ..... NSF through University of Missouri-Columbia

**Brown-Brandl, Tami****Biological Systems Engineering**

Assessing the Effects of Farrowing Crate Design and  
Mothering Phenotype on Pre-Weaning Piglet Survival

\$439,110 ..... National Pork Board  
Keshwani, Deepak ..... Biological Systems Engineering  
Shi, Yeyin ..... Biological Systems Engineering  
Stowell, Rick ..... Biological Systems Engineering

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

\*Identifying Coupled Metabolic Processes in Methanogenic Archaea  
\$598,983 ..... NSF

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

\*An Evidence-Based Approach to Preventing Student Suicide  
at the University of Nebraska-Lincoln

\$305,409 ..... DHHS-SAMHSA  
Boehm, Constance ..... Student Affairs



Developing Nebraska's Homeland Security Planning Capacity  
 \$250,000 . . . . . 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**

Dissecting the Sphingolipid Metabolic and Regulatory Network  
 \$750,000 . . . . . NSF  
 Markham, Jonathan . . . . . Biochemistry/  
 Center for Plant Science Innovation  
 Saha, Rajib . . . . . Chemical and Biomolecular Engineering/  
 Center for Plant Science Innovation

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

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

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

\*Capturing Ultrafast Electron-Driven  
 Chemical Reactions in Molecules  
 \$700,847 . . . . . DOE  
 OP: Diffractive Imaging of Complex Isolated Molecules  
 \$375,170 . . . . . NSF

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

Developing Genetic and Genomics Tools for *Tetraselmis* sp.  
 \$689,033 . . . . . Gordon and Betty Moore Foundation  
 Clemente, Thomas . . . . . Agronomy and Horticulture/  
 Center for Plant Science Innovation

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

**Chaves Elizondo, Byron** **Food Science and Technology**

\*Improving the Development of Food Safety Plans Through  
 the Advanced Preventive Controls School Initiative  
 \$299,559 . . . . . USDA-NIFA  
 Baumert, Joseph . . . . . Food Science and Technology  
 Downs, Melanie . . . . . Food Science and Technology  
 Martinez, Bismarck . . . . . Food Science and Technology  
 Wang, Bing . . . . . Food Science and Technology

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

\*Exploring Links Between Hunting and Conservation Organization  
 Participation to Increase Effectiveness of R3 Programs  
 \$315,809 . . . . . Nebraska Game and Parks Commission

\*Human Dimensions of Wildlife Survey Analysis  
 \$281,510 . . . . . DOI-FWS through  
 Nebraska Game and Parks Commission

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

**Choi, Evan** **Child, Youth and Family Studies/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools**

\*Youth Civic Engagement: Using Simulations and Design Thinking  
 \$647,000 . . . . . USDA-NIFA  
 De Guzman, Maria . . . . . Child, Youth and Family Studies/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Jennings, Euwanda . . . . . Metro Extension District/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Kim, Surin . . . . . Textiles, Merchandising and Fashion Design/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Larson, Andy . . . . . 4-H State Office/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Parra, Gilbert . . . . . Child, Youth and Family Studies/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Sierra, Leo . . . . . Panhandle Research and Extension Center/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools  
 Valentine, Dagen . . . . . 4-H State Office/  
 Nebraska Center for Research on  
 Children, Youth, Families and Schools

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

RI: Small: Harnessing the Power of Constraint Propagation  
 by Controlling Consistency Levels and Synthesizing Constraints  
 \$486,000 . . . . . NSF

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

\*Double-Strand Break Repair in Plant Mitochondria:  
Products and Proteins

\$820,000 .....NSF

Novel Mechanisms of Plant Mitochondrial DNA Repair

\$660,788.....NSF

**Giftci, Ozan****Food Science and Technology**

\*An Innovative Approach to Increasing Bioavailability  
of Curcumin Using Nanoporous Starch Bioaerogels

\$468,000 ..... USDA-NIFA

Meneses Gonzalez, Yulie ..... Food Science and Technology

Moreau, Regis ..... Nutrition and Health Sciences

Rose, Devin ..... Food Science and Technology

Development of an Integrated Green Process to Obtain  
a High-value, Stable and Bioavailable Lycopene Product  
from Tomato Processing Industry Waste

\$489,781 ..... USDA-NIFA

Demirel, Yasar ..... Chemical and Biomolecular Engineering

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

\*Deconstructing the Role of SYNGR2 in  
Viral Disease Susceptibility in Livestock

\$500,000 ..... USDA-NIFA

Vu, Hiep ..... Animal Science

Investigation of Host Genetic Role in PCV2 and PRRSV Susceptibility

\$459,200..... USDA-NIFA

Kachman, Stephen ..... Statistics

Vu, Hiep ..... Nebraska Center for Virology

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

EAGER: Non-integrative Transient Delivery of Reagents into  
Plant Cells via the Type IV Secretion System of *A. tumefaciens*

\$299,006.....NSF

Novel Technologies to Solve the Water Use Problem of  
High Yielding C4 Bioenergy and Bioproduct Feedstocks

\$477,321 .....DOE through

University of Illinois at Urbana-Champaign

A Resource for Functional Genomics to  
Support Soybean Genetics and Breeding

\$835,378..... NSF through University of Georgia

**Corman, Jessica****Natural Resources**

\*StreamNet: Building Capacity to Improve Water Quality

\$307,730 .....Nebraska Environmental Trust

Chizinski, Christopher ..... Natural Resources

Thomas, Steven ..... Natural Resources

**Couch, Brian****Biological Sciences/  
Nebraska Center for Virology**

Mapping Change in Higher Education Social Networks  
and STEM Reforms

\$524,243.....NSF

Cultivating Active Learners by Enabling Instructors to  
Monitor and Enhance Student Buy-in and Utilization of  
Research-based Instructional Strategies

\$299,920.....NSF

Brassil, Chad ..... Biological Sciences

Impact of the Summer Institution on Faculty Teaching  
and Student Achievement

\$393,068..... NSF through University of Colorado

Nebraska Research Network in Functional Genomics

\$699,676.....NIH-NIGMS through UNMC

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

**Cressler, Clay****Biological Sciences**

\*Habitat and Coinfection as Drivers of Heterogeneity in  
Cross-Scale Wildlife Infectious Disease Processes

\$302,744..... NSF through University of Arkansas

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

Understanding the Mechanisms of the Pulsed Electric Current  
Process for Joining Oxide-Dispersion-Strengthened Alloys

\$307,825 .....NSF

Zhou, Qin..... Mechanical & Materials Engineering

Mechanisms of Toughening Structural Ceramics by  
Thermal Engineered Laser Shock Peening

\$348,336 .....NSF

Lu, Yongfeng ..... Electrical and Computer Engineering

**Dauer, Jenny** **Natural Resources**

\*Bridging Science Education and Psychology Perspectives to Support Science Literacy Theory and Instruction  
\$349,836 .....NSF

Making Decisions about Socioscientific Issues in Multidisciplinary Postsecondary Learning Environments  
\$303,419 .....NSF

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

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

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

\*NRI: INT: Raining Drones: Mid-Air Release and Recovery of Atmospheric Sensing Systems  
\$643,600 .....NSF  
Houston, Adam ..... Earth and Atmospheric Sciences

Fixed Wing VTOL Sensor Emplacement  
\$740,798 ..... DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute  
Bradley, Justin ..... Computer Science and Engineering  
Duncan, Brittany ..... Computer Science and Engineering

COTS Autonomous Tracking and Indicating Prototype  
\$677,489 ..... DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute  
Bradley, Justin ..... Computer Science and Engineering  
Duncan, Brittany ..... Computer Science and Engineering

Detection of Nuclear Threats Using Deployable Sensors  
\$469,293 ..... DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute  
Bradley, Justin ..... Computer Science and Engineering  
Duncan, Brittany ..... Computer Science and Engineering

At the Water's Edge:  
Installation and Optimization of Robotic Sensing Systems  
\$949,716 ..... USDA-NIFA  
Bradley, Justin ..... Computer Science and Engineering

**DiLillo, David** **Psychology**

\*Promoting Prosocial Bystander Behavior in Intoxicated Men: Evaluation of RealConsent2.0  
\$256,500 ..... NIH-NIAAA through Georgia State University  
Gervais, Sarah ..... Psychology

Intervention to Promote Pro-social Bystander Behaviors  
\$402,117 ..... NIH-NICHD  
Brock, Becca ..... Psychology  
Gervais, Sarah ..... Psychology

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

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

**Doht, Mitchell** **Extension/  
Nebraska Local Technical Assistance Program**

Nebraska Local Technical Assistance Program  
\$855,974 ..... DOT-FHWA through Nebraska Department of Transportation

**Douglass, Matthew** **Natural Resources**

\*Long-Term Perspectives on Water Security, Food Security, and Land Management Among Daasanach Pastoralists of East Turkana, Northern Kenya  
\$748,870 ..... NSF  
Powell, Larkin ..... Natural Resources  
Qj, Yi ..... Natural Resources

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

\*Heteromolecular Interface Design for Better Multiferroic Molecular Spintronics  
\$486,234 ..... NSF

Controlling Structural, Electronic, and Energy Flow Dynamics of Catalytic Processes Through Tailored Nanostructures  
\$340,001 ..... University of Central Florida

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

**Duncan, Brittany** **Computer Science and Engineering**

\*NRI: INT: Leveraging Environmental Monitoring UAS in Rainforests  
\$722,804 .....NSF  
Detweiler, Carrick .....Computer Science and Engineering

REU Site: Undergraduate Research Opportunities in  
Unmanned Systems Foundations and Applications  
\$360,649.....NSF  
Bradley, Justin.....Computer Science and Engineering  
Detweiler, Carrick .....Computer Science and Engineering

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

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

**Duppong Hurley, Kristin** **Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing**

Parental Involvement in Education: Comparing Academic  
Outcomes for High School Students in the General Population  
and those at Risk of Emotional and Behavioral Issues  
\$599,680 ..... ED-IES  
Huscroft-D'Angelo, Jacqueline ..... Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing  
Lambert, Matthew ..... Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing  
Torkelson-Trout, Alexandra ..... Special Education and  
Communication Disorders/  
Academy for Child and Family Wellbeing

Randomized Clinical Trial of the Boys Town In-Home Program  
\$803,256 ..... Father Flanagan's Boys' Home

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

A New Paradigm for Ether Synthesis  
\$390,000 .....NSF

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

\*STTR: Corrosion Resistant Missile Cell Hatch Cover  
\$500,047 ..... DoD-NAVSEA through Pacific Engineering Inc.

\*Ultratough Lightweight High-Temperature  
Nanofibers for Aerospace Composites  
\$599,374 .....DoD-AFOSR

**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

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

\*Evaluating Practice-Based Sexual Violence Primary  
Prevention Approaches from CDC's Rape Prevention  
\$743,021 ..... DHHS-CDC

\*The Role of Stigma in Partner Violence  
\$413,900 .....NSF

**Elkins, Lynne** **Earth and Atmospheric Sciences**

Testing Extrusion Tectonics, Rifting, and  
Lithosphere-Asthenosphere Coupling Models for the  
Central Highlands Diffuse Igneous Province, Vietnam  
\$413,437 .....NSF  
Burberry, Cara ..... Earth and Atmospheric Sciences

Assessing Segment-scale Compositional Control over  
Slow-spreading Ridge Morphology  
\$259,150 .....NSF

**Erixson, John** **Nebraska State Forest Service**

Genomic Tools, Genetic Resources, and Outreach to  
Expand Commercial U.S. Hazelnut Production  
\$685,869 ..... USDA-NIFA through Oregon State University  
Clare, Aaron ..... Nebraska State Forest Service

Community Adjacent Fuels Award  
\$572,654 ..... USDA-FS

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

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

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

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

**Everhart, Sydney** **Plant Pathology**

\*Improved White Mold Resistance in Dry and Snap Beans Through Multi-Site Screening and Pathogen Characterization Throughout Major Production Areas  
\$276,002 .....USDA-ARS

**Fabrikant, Ilya** **Physics and Astronomy**

\*Electron and Positronium Collisions with Molecules  
\$270,000 .....NSF  
  
Inelastic Electron Collisions with Molecules and Clusters  
\$269,465 .....NSF

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

Crash Testing of Various Bridge Guardrails and Transitions  
\$799,563 .....DOT-FHWA through Hawaii Department of Transportation  
Bielenberg, Robert .....Midwest Roadside Safety Facility  
Holloway, James .....Midwest Roadside Safety Facility  
Lechtenberg, Karla .....Midwest Roadside Safety Facility  
Ranjha, Sagheer .....Midwest Roadside Safety Facility  
Rasmussen, Jennifer .....Midwest Roadside Safety Facility  
Reid, John .....Mechanical & Materials Engineering  
Rosenbaugh, Scott .....Midwest Roadside Safety Facility  
Song, Chung .....Civil and Environmental Engineering  
Steelman, Joshua .....Civil and Environmental Engineering  
Stolle, Cody .....Midwest Roadside Safety Facility

MnDOT Barriers 157 and 158 MASH 2016 Testing, Level 3 and Level 4 Evaluations

\$560,286 .....DOT-MN DOT through Nebraska Department of Transportation  
Bielenberg, Robert .....Midwest Roadside Safety Facility  
Holloway, James .....Midwest Roadside Safety Facility  
Rasmussen, Jennifer .....Midwest Roadside Safety Facility  
Rosenbaugh, Scott .....Midwest Roadside Safety Facility  
Steelman, Joshua .....Civil and Environmental Engineering

Crash Testing of a Precast Concrete Barrier  
\$414,128 .....Iowa Department of Transportation  
Bielenberg, Robert .....Midwest Roadside Safety Facility  
Rasmussen, Jennifer .....Midwest Roadside Safety Facility  
Rosenbaugh, Scott .....Midwest Roadside Safety Facility

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

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

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

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

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

**Fernandez-Ballester, Lucia** **Mechanical & Materials Engineering**

Nucleation Control of Conjugated Polymers Through Melt-crystallization and Self-seeding  
\$345,000 .....NSF

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

\*Improving Water Quality and Fish Health  
in the Platte River and Tributaries

\$360,828 ..... Nebraska Environmental Trust  
Pegg, Mark ..... Natural Resources

Investigating Mobile Genetic Elements and Resistance Gene  
Reservoirs towards Understanding the Emergence and Ecology  
of Antimicrobial Resistance in Beef Cattle Production Systems  
\$830,751 ..... USDA-NIFA  
Bartelt-Hunt, Shannon ..... Civil and Environmental Engineering  
Loy, Dustin ..... Veterinary Medicine and Biomedical Sciences  
Messer, Tiffany ..... Biological Systems Engineering  
Schmidt, Amy ..... Animal Science/Biological Systems Engineering  
Snow, Daniel ..... Nebraska Water Center  
Stowell, Rick ..... Biological Systems Engineering

Moving Beyond Rumen Microbiota Composition to  
Identify Interactions between Host Genotype and Rumen  
Function towards Identifying Genetic Markers and  
Microbial Functions that Influence Feed Efficiency  
\$500,000 ..... USDA-NIFA  
Morota, Gota ..... Animal Science  
Spangler, Matthew ..... 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

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

\*INFEWS/T3 RCN: Cultivating a National Collaborative for  
Research on Food, Energy, and Water Education (NC-FEW)  
\$749,964 ..... NSF

\*Supporting Undergraduate Teaching and Learning  
about Socio-Hydrological Challenges Through  
Data-Driven Modeling in the FANH Sciences  
\$299,997 ..... USDA-NIFA

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

**Franz, Trenton****Natural Resources**

\*CPS: Medium: A Scalable Real-Time Sensing and Decision-Making  
System for Field-Level Row-Crop Irrigation Management  
\$319,994 ..... USDA-NIFA through  
University of Illinois-Urbana/Champaign  
Heeren, Derek ..... Biological Systems Engineering  
Rudnick, Daran ..... West Central Research and Extension Center

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

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

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

Drought Information Services and Research for Agriculture  
across the United States  
\$833,384 ..... USDA-OCE  
Svoboda, Mark ..... Natural Resources

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

Phase-Space Investigation of Laser-driven  
Weakly Relativistic Electron Beams  
\$420,000 ..... NSF  
Centurion, Martin ..... Physics and Astronomy  
Shadwick, Bradley ..... Physics and Astronomy  
Nonlinear X-Ray Optics  
\$594,760 ..... DOE

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

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

\*Digitization TCN: Digitizing Collections to Trace Parasite-Host Associations and Predict the Spread of Vector-Borne Disease  
\$426,149 .....NSF

CSBR: Natural History: Digitizing and Conserving Specimens in the Manter Laboratory of Parasitology  
\$499,988 .....NSF  
Diamond, Judy ..... University of Nebraska State Museum

CSBR: Natural History: Securing and Digitizing Data for Parasite Biodiversity Specimens in the Manter Laboratory  
\$499,991 .....NSF

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

Accurate Electron Spin Optical Polarimetry (AESOP)  
\$565,000 .....NSF

Polarized Electron Physics  
\$570,000 .....NSF

**Ge, Yufeng**                      **Biological Systems Engineering**

CPS: 3D Dynamic Soil Information System Enabled by UAV and Proximal Depth Sensing  
\$717,698 ..... USDA-NIFA  
Shi, Yeyin ..... Biological Systems Engineering  
Yu, Hongfeng ..... Computer Science and Engineering  
Zhou, Yuzhen ..... Statistics

VisNIR-Based Multi-sensing Penetrometer for in situ High-resolution Depth Sensing of Soils  
\$499,896 ..... USDA-NIFA

PAPM EAGER: Transitioning to the Next-generation Plant Phenotyping Robots  
\$285,000 ..... USDA-NIFA  
Pitla, Santosh ..... Biological Systems Engineering  
Schnable, James ..... Biological Systems Engineering

IDBR: Type A: Multispectral Laser 3D Ranging and Imaging System for Plant Phenotyping  
\$534,194 .....NSF  
Walia, Harkamal ..... Agronomy and Horticulture  
Yu, Hongfeng .....Computer Science and Engineering

**Gilmore, Troy**                      **Natural Resources**

Evaluation of Watershed-scale Groundwater Transit Time Distributions from Field Sampling and Numerical Modeling  
\$387,030 .....NSF  
Mittelstet, Aaron ..... Biological Systems Engineering  
Zlotnik, Vitaly ..... Earth and Atmospheric Sciences

**Golick, Douglas**                      **Entomology**

Building Undergraduate Research and Science Communication Skills Through Beneficial Insects Protection Research and Extension Experiences (FACT)  
\$344,767 ..... USDA-NIFA  
Anderson, Troy ..... Entomology  
Brewer, Gary ..... Entomology  
Dauer, Jenny ..... Natural Resources  
Louis, Joe ..... Entomology  
McMechan, Justin ..... Entomology  
Peterson, Julie ..... West Central Research and Extension Center  
Velez Arango, Ana Maria ..... Entomology  
Weissling, Tom ..... Entomology  
Wu-Smart, Judy ..... Entomology

Community as Habitat: Nebraska Communities Supporting Pollinators and Landscape Diversity Through Native Waterwise Plant Habitats  
\$364,520 ..... Nebraska Environmental Trust  
Evertson, Justin ..... Nebraska State Forest Service

**Graef, George**                      **Agronomy and Horticulture**

\*Increasing Soybean Genetic Gain for Yield by Developing Tools, Know-How and Community Among Public Breeders in the North Central U.S.  
\$267,966 ..... North Central Soybean Research Program through Ohio State University  
Hyten, David Jr. .... Agronomy and Horticulture

Utilizing Unique Genetic Diversity to Combine Elevated Protein Concentration with High Yield in New Varieties and Experimental Lines  
\$524,867 ..... United Soybean Board/Smith/Bucklin  
Hyten, David Jr. .... Agronomy and Horticulture

Increasing the Rate of Genetic Gain for  
Yield in Soybean Breeding Programs  
\$282,668 . . . . . North Central Soybean Research Program through  
Ohio State University  
Ge, Yufeng . . . . . Biological Systems Engineering  
Hyten, David Jr. . . . . Agronomy and Horticulture

Soybean Breeding and Genetic Studies for Nebraska  
\$293,416 . . . . . Nebraska Soybean Board

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

Developing a Platform to Monitor N Footprint in Agro-Ecosystems  
\$431,000 . . . . . USDA-NIFA  
Brozovic, Nicholas . . . . . Agricultural Economics/  
Robert B. Daugherty Water for Food Institute  
Gibson, Kate . . . . . Robert B. Daugherty Water for Food Institute  
Rattalino Edreira, Juan Ignacio . . . . . Agronomy and Horticulture

**Griep, Mark** **Chemistry**

Framing the Chemistry Curriculum  
\$749,285 . . . . . NSF

REU Site: Research Experiences for Undergraduates  
in Chemical Assembly at the University of Nebraska  
\$339,683 . . . . . NSF

**Gruverman, Alexei** **Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**

Domain Wall Engineering for Novel Nanoelectronics  
\$338,422 . . . . . NSF

**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

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

New Approaches to Catalyst Screening and Development  
\$522,208 . . . . . NSF  
Berkowitz, David . . . . . Chemistry

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

Subglacial Antarctic Lakes Scientific Access (SALSA):  
Integrated Study of Carbon Cycling in  
Hydrologically Active Subglacial Environments  
\$349,956 . . . . . NSF through Montana State University  
McManis, James . . . . . Engineering/Antarctic Drilling Program

**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

**Hebets, Eileen** **Biological Sciences**

A Comparative Systems Approach to Complex Animal Signaling  
\$702,502 . . . . . NSF

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

**Hong, Xia** **Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**

\*Complex Oxide Heterostructure-Based  
Negative Capacitance Mott FETs  
\$264,000 . . . . . Semiconductor Research Corp

Exploring Spin-Orbit Coupling and Correlated Phenomena  
in Iridate-based Ferroelectric Transistors and Tunnel Junctions  
\$499,012 . . . . . NSF

Nanoscale Ferroelectric Control of Novel Electronic States in Layered  
Two-dimensional Materials  
\$750,262 . . . . . DOE



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

Targeted Observation by Radars and UAS of Supercells (TORUS)

\$725,926 .....NSF

Investigating Soil Moisture-Convective Precipitation Feedbacks with Soil Moisture Active Passive

\$402,364 ..... NASA through The Ohio State University

**Hughes, Michelle** **Special Education and Communication Disorders**

Telepractice for Cochlear Implants

\$319,682 .....NIH-NIDCD

Wheeler, Lorey ..... Nebraska Center for Research on Children, Youth, Families and Schools

Physiology as a Potential Predictor of Perception in Cochlear Implants

\$291,566 .....NIH-NIDCD

Wheeler, Lorey ..... Nebraska Center for Research on Children, Youth, Families and Schools

**Hunt, Thomas** **Entomology**

Evaluating the Efficacy of Insect Resistance Management Plans for Delaying the Onset of *Bacillus Thuringiensis* Toxin Resistance in Western Bean Cutworm Populations

\$492,497 ..... USDA-NIFA

Peterson, Julie ..... West Central Research and Extension Center

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

Digestive Tract Microbiome in Healthy Term Infants Receiving Mothers-own Breast Milk or Cows Milk-based Infant Formulas

\$295,749 ..... Mead Johnson Nutrition

Izard, Jacques ..... Food Science and Technology

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

\*Water Use and Soil-Water Storage Effect of Individual and Mixed Cover Species and Impacts on Soil Quality Variables

\$303,872 ..... Nebraska Environmental Trust

**Izard, Jacques** **Food Science and Technology**

\*Dietary Sulfur, the Gut Microbiome and Colorectal Cancer

\$389,051 ..... NIH-NCI through Massachusetts General Hospital

**Johnson, Mary Ann**

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

Bioavailability and Distribution of Bovine Milk Exosomes and their RNA, Lipid and Protein Cargos in Mice

\$347,185 ..... PureTech Health

Housh, Terry ..... Nutrition and Health Sciences/ Nebraska Center for the Prevention of

Obesity Diseases through Dietary Molecules

Zempleni, Janos ..... Nutrition and Health Sciences/ Nebraska Center for the Prevention of

Obesity Diseases through Dietary Molecules

**Johnson, Phillip**

**Food Science and Technology**

Robust Methods for Food Allergen Detection and Quantitative Risk Assessment

\$424,742 ..... USDA-NIFA

Baumert, Joseph ..... Food Science and Technology

Downs, Melanie ..... Food Science and Technology

Marsh, Justin ..... Food Science and Technology

**Johnson, Scott**

**Biological Process Development Facility**

\*Developing MG53 as a Novel Protein Therapeutic for Acute Lung Injury

\$439,999 .....DoD-Army Medical Research through

Ohio State University

**Kazyak, Emily**

**Sociology/Women's and Gender Studies**

\*Religious Exemption Laws and the Rights of Sexual and Gender Minorities

\$324,228 .....NSF

Burke, Kelsy ..... Sociology

**Keshwani, Deepak**

**Biological Systems Engineering**

Immersive Educational Game Simulations to Enhance Understanding of Corn-Water Ethanol-Beef System Nexus

\$999,644 .....NSF

Chen, Jiajia ..... Food Science and Technology

Keshwani, Jenny ..... Biological Systems Engineering

Koelsch, Richard ..... Biological Systems Engineering

Rosenbaum, David ..... Bureau of Business Research

Thompson, Eric ..... Bureau of Business Research

**Khan, Bilal**

**Sociology**

\*Promoting Community Conversations About Research to End Native Youth Suicide in Rural Alaska

\$310,778 ..... DHHS-NIH through University of Michigan

**Kim, Panya** **Center for Plant Science Innovation**  
 \*IOS: The Microtubule Network and Plant Immunity  
 \$600,000 ..... NSF  
 Van Dijk, Karin ..... Biochemistry/Center for Plant Science Innovation

**Kim, Surin** **Textiles, Merchandising and Fashion Design**  
 Leveraging Community Connections, Local Issues,  
 and Youth High Tech Entrepreneurship Education  
 to Nurture Rural Economic Opportunities  
 \$493,560 ..... USDA-NIFA  
 De Guzman, Maria ..... Child, Youth and Family Studies  
 Guru, Ashu ..... 4-H State Office  
 Nicholas, Claire ..... Textiles, Merchandising and Fashion Design

**Knoche, Lisa** **Nebraska Center for Research on  
 Children, Youth, Families and Schools**  
 Getting Ready Preschool Development Grant PDG  
 \$318,116 ..... DHHS-ACF-Nebraska Department of  
 Health and Human Services through  
 Nebraska Children and Families Foundation

**Korus, Jesse** **Natural Resources**  
 \*Aquifer Recharge and Sustainability in the Republican Basin  
 \$269,008 ..... Nebraska Natural Resources Commission through  
 Middle Republican NRD  
  
 Nebraska GeoCloud: An Integrated Bedrock Mapping and  
 Hydrogeologic Framework Database and Map Viewer  
 \$264,014 ..... Nebraska Department of Natural Resources through  
 Lower Platte South NRD  
 Cameron, Kathleen ..... Natural Resources  
 Joeckel, Matt ..... Natural Resources

**Kovalev, Alexey** **Physics and Astronomy**  
 \*Non-Collinear Magnetism and Dynamic Effects  
 in Dzyaloshinskii-Moriya Magnets  
 \$750,000 ..... DOE

**Krehbiel, Michelle** **Extension**  
 Nebraska CYFAR Sustainable Community Project  
 \$648,750 ..... 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

**Krull, Dean** **Agronomy and Horticulture**  
 \*Managing Irrigation Systems Today  
 \$555,982 ..... Central Platte NRD

**Lackey, Susan** **Natural Resources**  
 Developing Hydrogeologic Databases to Assist  
 in Water Resources Management  
 \$654,700 ..... Lower Elkhorn NRD

**Lawrence, Nevin** **Panhandle Research and Extension Center**  
 BARRAL - Bioenergy, Advanced Biofuel  
 and Rubber Research Agricultural Linkages  
 \$500,001 ..... USDA-NIFA through Ohio State University  
 Maharjan, Bijesh ..... Panhandle Research and Extension Center  
 Qiao, Xin ..... Panhandle Research and Extension Center

**Lechtenberg, Karla** **Midwest Roadside Safety Facility**  
 Crash Testing MoDOT Devices  
 \$376,367 ..... Missouri Department of Transportation through  
 Nebraska Department of Roads  
 Faller, Ronald ..... Midwest Roadside Safety Facility  
 Holloway, Jim ..... Midwest Roadside Safety Facility  
 Rasmussen, Jennifer ..... Midwest Roadside Safety Facility

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

**Li, Qingsheng** **Biological Sciences/  
 Nebraska Center for Virology**  
 \*Impact of the Gut Microbiome on HIV-1 Rectal Transmission  
 and Immunopathogenesis During ART  
 \$416,659 ..... NIH-NIAID  
  
 \*Preclinical Development of Ingenol and HDACi  
 Toward HIV Eradication  
 \$303,578 ..... NIH-NIAID through University of Utah

\*Beat-HIV: Delaney Collaborative to  
Cure HIV-1 Infection by Immunotherapy  
\$286,156 ..... NIH-NIAID through Wistar Institute

Impact of Fc N-glycan Structure on HIV-specific Antibody Functions  
\$586,217 ..... NIH-NIAID through University of Wyoming

Long-acting Antiretroviral Nanoparticles for HIV Prophylaxis  
\$259,125 ..... NIH-NIAID through Creighton University

**Li, Xu** **Civil and Environmental Engineering**

Antibiotic Resistance Genes in the Soil-Plant Ecosystem  
\$330,000 ..... NSF  
Snow, Daniel ..... Nebraska Water Center  
Walia, Harkamal ..... Agronomy and Horticulture

**Lindquist, John** **Agronomy and Horticulture**

A Risk-assessment Model and Population Genomics Tools for  
Monitoring Herbicide-resistance Evolution in Weedy Sorghum  
\$499,998 ..... USDA-NIFA  
Jhala, Amit ..... Agronomy and Horticulture  
Sigmon, Brandi ..... Agronomy and Horticulture  
Tenhumberg, Brigitte ..... Mathematics/Biological Sciences

**Lodi, Kathleen** **Extension**

\*EAGER: Building an Ecosystem for Broadening Participation  
for Computing: 4-H and the Land-Grant University System  
\$297,313 ..... NSF  
Frerichs, Sandra ..... Extension  
Guru, Ashu ..... Extension  
O'Connor, Ann ..... Extension  
Wheeler, Lorey ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

EAGER: Empowering Out-of-School-Time Educators  
and Students through 4-H and the Land-Grant System  
\$299,950 ..... NSF

Frerichs, Sandra ..... Extension  
Guru, Ashu ..... Extension  
Wheeler, Lorey ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

**Louis, Joe** **Entomology/Biochemistry**

\*Characterizing the Interplay Between Sorghum and Fall Armyworm  
\$429,248 ..... USDA-NIFA

**Lu, Yongfeng** **Electrical and Computer Engineering**

\*Femto Second Laser Machining of Various Materials  
\$570,000 ..... Honeywell FM & T

Fabrication and Verification of Fuel Targets  
for Laser Fusion Research  
\$725,377 ..... DOE through University of Rochester

Radar 2021  
\$905,025 ..... Honeywell FM & T

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

**Luck, Joe** **Biological Systems Engineering**

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

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

**Mahmood, Rezaul** **Natural Resources**

\*The Great Plains Irrigation Experiment (GRAINEX) for  
Understanding the Influence of Irrigation on the  
Planetary Boundary Layer and Weather Events  
\$287,636 ..... NSF

**Males, Lorraine** **Teaching, Learning and Teacher Education**

Examining the Impact of the CPM Implementation  
in an Urban District  
\$384,753 ..... College Preparatory Mathematics (CPM)  
Educational Program

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

Fostering the Next Generation of Agricultural and Natural Resources Professionals Through Experiential Learning in Research, Education and Extension

\$281,475 ..... USDA-NIFA  
Keshwani, Jennifer ..... Biological Systems Engineering  
Lambe, David ..... Agronomy and Horticulture  
Lee, Donald ..... Agronomy and Horticulture  
Matkin, Gina ..... Agricultural Leadership, Education and Communication  
Sandall, Leah ..... Agronomy and Horticulture  
Schacht, Walter ..... Agronomy and Horticulture  
Speth, Carol ..... Agronomy and Horticulture

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

Plant Sphingolipids: New Targets for Engineering Cold-Tolerance in Crops

\$408,000 ..... USDA-NIFA  
Cahoon, Edgar ..... Biochemistry

**McMechan, Justin** **Entomology**

\*Soybean Gall Midge: Surveying the North Central Region, Adult Monitoring and Host Plant Resistance

\$307,953 ..... North Central Soybean Research Program  
Graef, George ..... Agronomy and Horticulture  
Hunt, Thomas ..... Entomology  
Wright, Robert ..... Entomology

**Messer, Tiffany** **Biological Systems Engineering**

Photodegradation of Insecticides in Rivers Adjacent to Agricultural Intensive Regions: A Novel Water Quality Monitoring Approach

\$498,500 ..... USDA-NIFA  
Snow, Daniel ..... Nebraska Water Center

**Montooth, Kristi** **Biological Sciences**

RoL: FELS: EAGER: A Predictive Framework of Metabolism as an Engine of Functional Environmental Responses across Levels of Biological Organization

\$299,999 ..... NSF  
DeLong, John ..... Biological Sciences

**Moon, Alena** **Chemistry**

\*Developing Educational Measurement Competency to Support Investigations of Students' Conceptions of Light

\$300,112 ..... NSF

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

Bioactivity of Curcumin and Gut Inflammation

\$480,214 ..... USDA-NIFA  
Hage, David ..... Chemistry

**Mulliniks, Travis** **West Central Research and Extension Center**

\*Impact of Milk Production on Cow-Calf Productivity, Grazing Behavior, and Profitability

\$299,999 ..... USDA-NIFA  
Fernando, Samodha ..... Animal Science  
Stephenson, Mitchell ..... Panhandle Research and Extension Center

**Munoz-Arriola, Francisco** **Biological Systems Engineering**

From Gene to Global Hydroclimatic Controls on Hybrid Performance Predictability

\$490,000 ..... USDA-NIFA  
Hernandez Jarquin, Juan Diego ..... Agronomy and Horticulture

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

\*Irrigation Innovation Consortium-Base Funding

\$263,000 ..... Foundation for Food and Agriculture Research through Colorado State University  
Rudnick, Daran ..... Robert B. Daugherty Water for Food Institute  
Safa, Babak ..... Robert B. Daugherty Water for Food Institute  
Zution Goncalves, Ivo ..... Robert B. Daugherty Water for Food Institute

Improving Variable Rate Irrigation Efficiency using a Real-time Soil Water Adaptive Control Model

Informed by Sensors Deployed on Unmanned Aircraft Systems

\$499,978 ..... USDA-NIFA  
Ge, Yufeng ..... Biological Systems Engineering  
Heeren, Derek ..... Biological Systems Engineering  
Luck, Joe ..... Biological Systems Engineering  
Meyer, George ..... Biological Systems Engineering  
Woldt, Wayne ..... Biological Systems Engineering

Reconfiguring Farmers' Behavior to Reduce Irrigation Water Use Through Water Measurements and Social Norms Interventions: A Case Study in the Republican River Basin

\$453,539 ..... USDA-NIFA  
Olson, Kristen ..... Sociology

**Nelson, J. Ron**      **Special Education and Communication Disorders**

\*Designing and Providing Academic Interventions  
\$955,034 .....ED  
Goodrich, Marc ..... Special Education and  
Communication Disorders  
Hebert, Michael ..... Special Education and  
Communication Disorders  
Loveall-Hague, Susan ..... Special Education and  
Communication Disorders  
Namkung, Jessica ..... Special Education and  
Communication Disorders  
Savaiano, Mackenzie ..... Special Education and  
Communication Disorders

**Ngoko Djiokap, Jean Marcel**      **Physics and Astronomy**

Strong Field & Ultrafast Atomic and Molecular Processes  
\$457,000 .....NSF

**Nguyen, Lim**      **Electrical and Computer Engineering**

ABC Group SRA: Center for Electromagnetic  
Concrete R&D and Shielding Innovations  
\$301,408 .....American Business Continuity Domes, Inc.

**Niu, Wei**      **Chemical and Biomolecular Engineering/  
Nebraska Center for Energy Sciences Research**

Engineering Carboxylic Acid Reductase  
for the Biosyntheses of Industrial Chemicals  
\$335,516 .....NSF  
Guo, Jiantao .....Chemistry/Nebraska Center for  
Energy Sciences Research  
Wilson, Mark ..... Biochemistry/Nebraska Center for  
Energy Sciences Research

**Nobert, Heather**      **Nebraska State Forest Service**

\*Great Plains Biochar Initiative II:  
Supply and Demand for Biochar as a Cattle Feed Additive  
\$250,000 ..... USDA-FS  
Erickson, Galen ..... Animal Science  
MacDonald, James ..... Animal Science  
Watson, Andrea ..... Animal Science

**Nugent, Gwen**

**Nebraska Center for Research on  
Children, Youth, Families and Schools**  
Analysis of Effective Science Coaching: What, Why and How  
\$699,584 .....NSF  
Houston, James ..... Nebraska Center for Research on  
Children, Youth, Families and Schools  
Kunz, Gina ..... Nebraska Center for Research on  
Children, Youth, Families and Schools

**Otu, Hasan**      **Electrical and Computer Engineering**

Identification and Characterization of Interaction Atlases in Humans  
\$399,477 ..... DHHS-National Library of Medicine  
Sayood, Khalid ..... Electrical and Computer Engineering

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

Understanding Molecular Factors that  
Regulate Initiation of Porcine Embryo Elongation  
\$465,000 ..... USDA-NIFA

**Park, Jae Sung**      **Mechanical & Materials Engineering**

\*Nonlinear Electrokinetics at Polarizable Soft Interfaces: Implications  
for Cell Membrane Characterization and Nanopore Transport  
\$387,356 .....NSF  
Yang, Ruiguo ..... Mechanical & Materials Engineering

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

Spatial Visualization Skills and Engineering Problem Solving  
\$645,943 .....NSF

**Petersen, Jessica**      **Animal Science**

Annotation of Functional Regulatory Regions in the Horse  
\$500,000 ..... USDA-NIFA

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

Structural Basis of Type IV Pilus-Induced  
*Clostridium difficile* Microcolony Formation  
\$259,560 .....NIH-NIAID

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

CIF: Small: WetComm: Foundations of Wet Communication Theory  
\$515,528 .....NSF  
Niu, Wei ..... Chemical and Biomolecular Engineering

**Pitla, Santosh** **Biological Systems Engineering**

In-field Tractor Operational Load Profile Generation in Support of Advanced Tractor Testing in Mixed-mode Power States  
\$472,887 ..... USDA-NIFA  
Hoy, Roger ..... Biological Systems Engineering  
Luck, Joe ..... Biological Systems Engineering  
Rohrer, Rodney ..... Biological Systems Engineering

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

\*Monitoring, Mapping, Risk Assessment and Management of Invasive Species in Nebraska  
\$453,662 ..... Nebraska Game and Parks Commission  
Zach, Allison ..... Natural Resources

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

**Powers, Robert** **Chemistry**

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

**Proctor, Christopher** **Agronomy and Horticulture**

Optimizing Cropping Systems for Resilience to Stress: The Role of Maturity Group Selection and Cover Crops on Yield, Weeds, Insects and Microbes  
\$461,187 ..... USDA-NIFA  
Drewnoski, Mary ..... Animal Science  
Everhart, Sydney ..... Plant Pathology  
McMechan, Justin ..... Entomology  
Parsons, Jay ..... Agricultural Economics  
Redfearn, Daren ..... Agronomy and Horticulture

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

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

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

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

**Qiao, Xin** **Panhandle Research and Extension Center**

\*Beneficial Impact of Injected Air Into a Subsurface Drip Irrigation System on Plant Growth and Uptake of Emerging Antibiotics Using Runoff From a Feedlot  
\$287,605 ..... Nebraska Environmental Trust  
Biswas, Saptashati ..... Nebraska Water Center  
D'Alessio, Matteo ..... Nebraska Water Center  
Ray, Chittaranjan ..... Civil and Environmental Engineering/  
Nebraska Water Center

SCC: An Integrated and Smart System for Irrigation Management in Rural Communities  
\$541,048 ..... USDA-NIFA through University of Iowa  
Rudnick, Daran ..... West Central Research and Extension Center  
Yang, Haishun ..... Agronomy and Horticulture

**Radu, Petronela** **Mathematics**

Higher Order Nonlocal Models in Continuum Mechanics  
\$354,089 ..... NSF  
Foss, Mikil ..... Mathematics

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

Evaluation of Early Steps to School Success  
\$734,694 ..... Save the Children

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

Organic Nanoparticles for Dual MRI-Guided Therapeutic Selection and Ovarian Cancer Drug Delivery  
\$316,735 ..... NIH-NCI through  
Massachusetts Institute of Technology  
  
Nitrogen-Centered Radicals  
\$510,000 ..... NSF

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

NeTS: Small: Intelligent Optical Networks using Virtualization and Software-Defined Control  
\$466,000 ..... NSF

**Ramer-Tait, Amanda** **Food Science and Technology/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules**

Epigenetic Regulation of Obesity and Metainflammation by  
Red Raspberry Ellagic Acid and its Microbiota-derived Metabolites,  
the Urolithins  
\$469,949 ..... USDA-NIFA

**Rasby, Rick** **Extension**

Nebraska Extension Implementation Program  
\$627,447 ..... USDA-NIFA  
Bradshaw, Jeffrey ..... Panhandle Research and Extension Center  
Glewen, Keith ..... Southeast Research and Extension Center  
Green, Jody ..... Southeast Research and Extension Center  
Jackson-Ziems, Tamra ..... Plant Pathology  
Jhala, Amitkumar ..... Agronomy and Horticulture  
Larson, Jonathan ..... Southeast Research and Extension Center  
Ogg, Clyde ..... Agronomy and Horticulture  
Wright, Robert ..... Entomology  
Wu-Smart, Judy ..... Entomology

**Rasmussen, Jennifer** **Midwest Roadside Safety Facility**

Determination of Zone of Intrusion Envelopes  
Under MASH Impact Conditions for Rigid Barrier  
\$400,000 ..... National Academy of Sciences-NCHRP  
Bielenberg, Robert ..... Midwest Roadside Safety Facility  
Faller, Ronald ..... Midwest Roadside Safety Facility  
Stolle, Cody ..... Midwest Roadside Safety Facility

**Ray, Chittaranjan** **Nebraska Water Center/  
Civil and Environmental Engineering/  
Robert B. Daugherty Water for Food Institute**

\*Development of Data Bases for Model Development and  
Field Testing of Crop Models in Midwest Farms  
\$250,000 ..... USDA-ARS  
  
Sustaining Agriculture Through Adaptive Management Resilient to  
a Declining Ogallala Aquifer and Changing Climate  
\$933,791 ..... USDA-NIFA through Colorado State University  
Haacker, Erin ..... Earth and Atmospheric Sciences/  
Robert B. Daugherty Water for Food Institute  
Rudnick, Daran ..... West Central Research and Extension Center/  
Robert B. Daugherty Water for Food Institute  
Schoengold, Karina ..... Agricultural Economics/Robert B. Daugherty  
Water for Food Institute  
Shaver, Tim ..... West Central Research and Extension Center/  
Robert B. Daugherty Water for Food Institute

Integrating the Vadose Zone for Improved Management  
of Nebraska Ground Water Quality  
\$384,227 ..... Nebraska Environmental Trust  
Snow, Daniel ..... Nebraska Water Center/  
Robert B. Daugherty Water for Food Institute

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

\*TCR Transgenic Models for Dilated Cardiomyopathy  
\$402,906 ..... NIH-NIAID  
Kidambi, Srivatsan ..... Chemical and Biomolecular Engineering  
Kievit, Forrest ..... Biological Systems Engineering  
Steffen, David ..... Veterinary Medicine and Biomedical Sciences

Prevention of Viral Cardiomyopathy and Insulinitis by Vaccination  
\$300,000 ..... American Heart Association  
Kidambi, Srivatsan ..... Chemical and Biomolecular Engineering  
Steffen, David ..... Veterinary Medicine and Biomedical Sciences

**Riekhof, Wayne** **Biological Sciences**

The Life History and Systems Biology of Fungal-Algal Mutualisms  
\$639,910 ..... NASA  
Harris, Steven ..... Plant Pathology  
Herr, Joshua ..... Plant Pathology

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

Research and Equipment Enhancement  
\$336,544 ..... DOT-FHWA through  
Nebraska Department of Transportation  
Faller, Ronald ..... Midwest Roadside Safety Facility/  
Nebraska Transportation Center

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

\*31-in. Midwest Guardrail System (MGS) and  
Curb Combination Guidelines for MASH TL-3  
\$600,000 ..... DOT-FHWA through  
National Academy of Sciences-NCHRP-TRB  
Bielenberg, Robert ..... Midwest Roadside Safety Facility  
Faller, Ronald ..... Midwest Roadside Safety Facility  
Lechtenberg, Karla ..... Midwest Roadside Safety Facility  
Linzell, Daniel ..... Civil and Environmental Engineering  
Rasmussen, Jennifer ..... Midwest Roadside Safety Facility  
Song, Chung ..... Civil and Environmental Engineering  
Steelman, Joshua ..... Civil and Environmental Engineering  
Stolle, Cody ..... Midwest Roadside Safety Facility

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

**Rudnick, Daran**                      **West Central Research and Extension Center**

\*Accelerating Adoption of Water Conservation  
 Technologies and Management Practices Through  
 Innovative Engagement Programming  
 \$850,000 ..... USDA-NRCS  
 Burr, Chuck ..... West Central Research and Extension Center  
 Caswell, Katherine ..... West Central Research and Extension Center  
 Ingram, Troy ..... Northeast Research and Extension Center  
 Ray, Chittaranjan ..... Civil and Environmental Engineering/  
 Nebraska Water Center  
 Rees, Jennifer ..... Southeast Extension Center  
 Stockton, Matt ..... West Central Research and Extension Center  
 Tigner, Robert ..... West Central Research and Extension Center  
 Whitney, Todd ..... West Central Research and Extension Center

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

\*Know Your Well:  
 A Program for Agricultural Education and FFA Students  
 \$398,880 ..... Nebraska Environmental Trust  
 Kriefels, Matt ..... Agricultural Leadership,  
 Education and Communication  
 Ray, Chittaranjan ..... Civil and Environmental Engineering/  
 Nebraska Water Center  
 Snow, Daniel ..... Nebraska Water Center

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

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

**Schachtman, Daniel**                      **Agronomy and Horticulture/  
 Center for Biotechnology/  
 Center for Plant Science Innovation**

\*The Role of Plant Root Exudates in Shaping  
 Soil Microbial Community Composition and the Influence  
 that has on Nutrient Cycling and Nitrogen Use  
 \$749,812 ..... USDA-NIFA

\*Genomics and Phenomics to Identify Yield and Drought Tolerance  
 Alleles for Improvement of Camelina as a Biofuel Crop  
 \$281,968 ..... USDA-ARS  
 Ge, Yufeng ..... Biological Systems Engineering/  
 Center for Biotechnology

**Schmidt, Tyler**                      **Animal Science**

Utilization of an Advanced Computer Vision Platform  
 to Identify Changes in the Physiological and Behavioral Changes  
 Associated with Illness and Aggressive/Damaging Behavior  
 During the Nursery and Finisher Phase  
 \$301,793 ... Foundation for Food and Agriculture Research through  
 National Pork Board  
 Mote, Benny ..... Animal Science  
 Pérez, Lance ..... Electrical and Computer Engineering  
 Psota, Eric ..... Electrical and Computer Engineering

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

RoI: FELS: EAGER: Genetic Constraints on the Increase  
 of Organismal Complexity Over Time  
 \$299,801 ..... NSF  
  
 High-throughput, High-resolution Phenotyping of Nitrogen Use  
 Efficiency Using Coupled In-plant and In-soil Sensors  
 \$334,169 ..... DOE-ARPA-E through Iowa State University  
  
 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, Mathias**                      **Electrical and Computer Engineering**

The Influence of Doping and Annealing onto the Lattice Dynamics,  
 Band Structure and Free Charge Carrier Properties in  
 Monoclinic Gallium Aluminum Oxide Semiconductor Alloys  
 \$430,052 ..... NSF  
 Korlacki, Rafal ..... Electrical and Computer Engineering  
  
 The Strain-Stress Relationships for Band Gap, Phonon and  
 Plasmon Energies in Monoclinic Ga2O3 and Related Materials  
 \$323,393 ..... DoD-AFOSR



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

GP-IMPACT: Building a Comprehensive  
Geoscience Learning Experience

\$400,075 .....NSF  
Bathke, Deborah ..... Earth and Atmospheric Sciences  
Harwood, David ..... Earth and Atmospheric Sciences

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

MRI: Acquisition of a Low-temperature High-magnetic-field  
Multifunctional Scanning Probe Microscopy System

\$330,530 .....NSF  
Xu, Xiaoshan ..... Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience

DMREF: Design and Synthesis of Novel Magnetic Materials

\$684,086 .....NSF  
Xu, Xiaoshan ..... Physics and Astronomy

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

Generation and Control of Self-organized Nonlinear Kinetic  
Structures in High-energy Density Plasmas in the Presence of  
Intense Magnetic Fields and Ultrashort Laser Pulses

\$632,020 ..... DOE

High Fidelity Modeling of Laser-Plasma Accelerators

\$524,991 .....NSF  
Kalmykov, Serge ..... Physics and Astronomy

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

\*CYVET: A Cyber-Physical Security Assurance Framework  
Based on a Semi-Supervised Vetting Approach

\$806,529 ..... DOE-NETL through UT-Battelle LLC-Oak Ridge  
Alahmad, Moe ..... Durham School of Architectural  
Engineering & Construction  
Hempel, Michael ..... Electrical and Computer Engineering  
Peng, Dongming ..... Electrical and Computer Engineering

**Shen, Zhigang** **Durham School of Architectural  
Engineering & Construction**

A Fast and Low-cost Method to Automate Detecting,  
Locating and Mapping Internal Gas Pipeline Corrosion  
Using Pig-mounted Thermal and Stereo Cameras

\$299,980 ..... DOT-PHMSA

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

Faculty Development Program in Nuclear Engineering  
at University of Nebraska-Lincoln

\$450,000 ..... U.S. Nuclear Regulatory Commission  
Cui, Bai ..... Mechanical & Materials Engineering

Grain and Interface Engineering for  
High-efficiency Hybrid Perovskite Solar Cells

\$450,000 ..... DoD-AFOSR

**Sim, Chungwook** **Civil and Environmental Engineering**

\*Spokes: MEDIUM: MIDWEST: Smart Big Data Pipeline for  
Aging Rural Bridge Transportation Infrastructure (SMARTI)

\$476,933 .....NSF through University of Nebraska at Omaha  
Faller, Ronald ..... Midwest Roadside Safety Facility  
Linzell, Daniel ..... Civil and Environmental Engineering  
Rilett, Laurence ..... Civil and Environmental Engineering  
Sharif-Kashani, Hamid ..... Electrical and Computer Engineering  
Song, Chung ..... Civil and Environmental Engineering  
Wittich, Christine ..... Civil and Environmental Engineering  
Woldt, Wayne ..... Biological Systems Engineering  
Wood, Richard ..... Civil and Environmental Engineering  
Zhu, Jinying ..... Civil and Environmental Engineering

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

Extended Atomically Precise Graphene Nanoribbons and  
Nanostructures with Improved Electrical Conductivity

\$768,496 ..... DoD-ONR

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

Persistence, Effectiveness and Retention Studies in STEM Teaching

\$392,264 .....NSF  
Augustyn, Lindsay ..... Center for Science, Mathematics  
and Computer Education  
Funk, Rachel ..... Center for Science, Mathematics  
and Computer Education

Teacher Leadership (T-LEAD): Investigating the Persistence and  
Trajectories of Noyce Master Teaching Fellows

\$701,004 .....NSF

Student Engagement in Mathematics Through  
an Institutional Network for Active Learning

\$398,904 .....NSF  
Donsig, Allan ..... Mathematics  
Wakefield, Nathan ..... Mathematics

NebraskaNOYCE Phase II:

Investigating the Impact in High-Need Districts

\$349,864	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

**Smyth, Jolene**

**Sociology/  
Survey Research and Methodology**

Using Statistical and Survey Methodology Research to Improve or Redesign Surveys Related to Science and Engineering	
\$460,000	USDA-NASS
Olson, Kristen	Sociology/Survey Research and Methodology

**Snow, Daniel**

**Nebraska 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	Nebraska Water Center/ Robert B. Daugherty Water for Food Institute

**Soh, Leen-Kiat**

**Computer Science and Engineering**

*Anticipating Social Unrest Using Integrated Model- and Data-Driven Approaches: The Impact of Socio-Demographic and Environmental Factors in Post-Colonial Nations	
\$521,451	DoD-National Geospatial Intelligence Agency through Citadel University
Hayes, Michael	Natural Resources
Samal, Ashok	Computer Science and Engineering
Werum, Regina	Sociology
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

**Spangler, Matthew**

**Animal Science**

Beef Cattle Production System Decision Support Tools to Enable Improved Genetic, Environmental, and Economic Resource Management	
\$299,312	USDA-NIFA

**Steelman, Joshua**

**Civil and Environmental Engineering**

*MASH Testing of Single Sign Supports (Florida)	
\$750,000	DOT-FL DOT through Nebraska Department of Transportation
Bielenberg, Robert	Midwest Roadside Safety Facility
Faller, Ronald	Midwest Roadside Safety Facility
Lechtenberg, Karla	Midwest Roadside Safety Facility
Rasmussen, Jennifer	Midwest Roadside Safety Facility

**Stephenson, Mitchell**

**Panhandle Research and Extension Center**

Grazing Land Monitoring Cooperative for Adaptive Management	
\$250,000	USDA-NRCS
Volesky, Jerry	West Central Research and Extension Center

**Stevens, Jeffrey**

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

Similarity as a Process Model of Intertemporal Choice	
\$655,576	NSF
Soh, Leen-Kiat	Computer Science and Engineering/ Center for Brain, Biology and Behavior

**Stowell, Rick**

**Biological Systems Engineering**

Water and Nutrient Recycling: A Decision Tool and Synergistic Innovative Technology	
\$496,646	USDA-NIFA through University of Arkansas
Heemstra, Jill	Northeast Research and Extension District
Schmidt, Amy	Biological Systems Engineering

**Sutter, Eli**

**Mechanical & Materials Engineering**

In-situ Electron Microscopy of DNA-guided Self-assembly and Reconfiguration of 3D Nanocrystal Superlattices	
\$534,231	DoD-ARO
Sutter, Peter	Electrical and Computer Engineering
Hybrid Materials by Integration of Semiconductor Nanowires and Layered Crystals: Chemical Transformations and Functional Properties	
\$500,000 NSF	
Sutter, Peter	Electrical and Computer Engineering

**Sutter, Peter**

**Electrical and Computer Engineering**

*Nanowires from Layered van der Waals Crystals: Opportunities for Tuning Structure and Function in 1D-2D Hybrid Nanostructures	
\$520,000	NSF
Sutter, Eli	Mechanical & Materials Engineering

\*Riemann Surfaces in Layered Van der Waals Nanowires:  
Precision Twist Moires, Nanoscale Solenoids,  
and Screw Dislocation Spin Orbit Coupling  
\$496,037 ..... DoD-ONR  
Sutter, Eli ..... Mechanical & Materials Engineering

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

MENAdrought Empowering and Enhancing Drought Management  
Systems in the Middle East-North Africa (MENA) Region  
\$362,226 ..... USAID through  
International Water Management Institute  
Bathke, Deborah ..... Natural Resources  
Brozovic, Nicholas ..... Robert B. Daugherty Water for Food Institute  
Hayes, Michael ..... Natural Resources  
Jedd, Theresa ..... Natural Resources  
Knutson, Cody ..... Natural Resources  
Neale, Christopher ..... Robert B. Daugherty Water for Food Institute

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

\*Fielding Proof of Concept: En Route Care Acute Respiratory Distress  
System (ARDS) Mitigation Using Oxygenated Microbubbles (OMB)  
\$772,639 ..... DoD-Offutt Air Force Base-STRATCOM through  
National Strategic Research Institute

\*Peritoneal Oxygen Delivery for Treatment of  
Acute Respiratory Distress Syndrome  
\$441,472 ..... NIH-NHLBI through University of Colorado

Development of a Gastrointestinal Tissue Attachment Mechanism  
\$619,776 ..... Progenity, Inc.

**Tsymbal, Evgeny** **Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**

Partnership for Research and Education in Multiferroic  
Polymer Nanocomposites between Tuskegee University  
and University of Nebraska-Lincoln  
\$627,217 ..... NSF through Tuskegee University  
Dowben, Peter ..... Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience  
Ducharme, Stephen ..... Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience  
Shield, Jeffrey ..... Mechanical & Materials Engineering/  
Nebraska Center for Materials and Nanoscience

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

\*MRI: Acquisition of an X-Ray Computed Tomography System at  
the University of Nebraska-Lincoln for Advancing Multidisciplinary  
Research and Education in the Great Plains Region  
\$562,803 ..... NSF  
Lu, Yongfeng ..... Electrical and Computer Engineering  
Rao, Prahalada ..... Mechanical & Materials Engineering  
Shield, Jeffrey ..... Mechanical & Materials Engineering  
Zhu, Jinying ..... Civil and Environmental Engineering

\*Integrated Analysis of the Cell Biological, Biomechanical, and  
Physiological Dynamics of Stomatal Guard Cells in Plants  
\$301,395 ..... NSF

\*STTR: Ultrasonic Method to Quantify Ablative Material Liners  
\$300,000 ..... DoD-NAVSEA through Intelligent Automation, Inc.

PCC-3: Non-Destructive Testing (NDT) Microstructural  
Response Characterization and Impact  
\$500,000 ..... DoD-Air Force Research Lab through  
Rolls Royce Corporation

An Integrated Experimental and Computational Approach  
to Discover Biomechanical Mechanisms  
of Leaf Epidermal Morphogenesis  
\$385,927 ..... NSF

**Twidwell, Dirac Jr.** **Agronomy and Horticulture**

\*Enhancing Livestock Production from Rangelands in the Great Plains  
\$745,202 ..... USDA-NIFA through  
Texas A & M Univ-Texas AgriLife  
Keshwani, Jenny ..... Biological Systems Engineering

Juniper Invasions and Landscape Intervention Potential:  
A Statewide Assessment  
\$967,451 ..... DOI-FWS through  
Nebraska Game and Parks Commission  
Allen, Craig ..... Natural Resources

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

\*Controlled Release of Energy from Nuclear Isomers by Laser-Driven X-Rays  
\$486,275 .....DoD-ARO  
Banerjee, Sudeep ..... Physics and Astronomy  
Golovin, Grigory ..... Physics and Astronomy

Ultra-low Emittance Electron Beams from Laser-Plasma Photo-cathodes  
\$374,844 .....NSF  
Banerjee, Sudeep ..... Physics and Astronomy  
Chen, Shouyuan ..... Physics and Astronomy

**Van Den Broeke, Matthew** **Earth and Atmospheric Sciences**

Aeroecology as a Test-Bed for Interdisciplinary STEM Training  
\$391,463 ..... NSF through University of Oklahoma

**van Dijk, Karin** **Biochemistry**

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

**Vu, Hiep** **Animal Science/Nebraska Center for Virology**

\*Development of a Broadly Protective Vaccine Against Swine Influenza Virus  
\$500,000 ..... USDA-NIFA

Development of a Broadly Protective Diva Marker Vaccine against Porcine Reproductive and Respiratory Syndrome Virus  
\$489,934 ..... USDA-NIFA  
Osorio, Fernando ..... Veterinary Medicine and Biomedical Sciences/  
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, Can** **Computer Science and Engineering**

NeTS: Small: Connected Barriers: Vehicle-to-barrier Communication and Networking for Single-vehicle Crash Safety Facility  
\$319,513 .....NSF  
Faller, Ronald .....Midwest Roadside Safety Facility  
Stolle, Cody .....Midwest Roadside Safety Facility

SpecEES: CoSeC-RAN: Cognitive Secure Cloud RAN for Efficient Spectrum Sharing  
\$435,399 .....NSF  
Batur, Demet. .... Supply Chain Management and Analytics  
Ryan, Jennifer ..... Supply Chain Management and Analytics  
Yan, Qiben ..... Computer Science and Engineering

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

**Wagner, William** **Biological Sciences**

The Consistency of Behavioral Plasticity Across Different Selective Contexts  
\$512,998 .....NSF

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

UNL-VBC Collaboration: Using Plant Phenomics to Capture Dynamic Growth Responses in Maize  
\$521,500 ..... Valent USA

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

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

NSF INCLUDES: WATCH US – Women Achieving Through Community Hubs in the United States  
\$299,024 .....NSF

**Walker, Mark** **Mathematics**

Free Resolutions, K-Theory and dg-Categories  
\$257,571 .....NSF



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

**Wragge, Annette** **Special Education and  
Communication Disorders**  
Nebraska Autism Spectrum Disorders Network,  
State Coordinator Project  
\$357,995 ..... ED through Nebraska Department of Education

**Wu-Smart, Judy** **Entomology**  
Great Plains Regional Training for Beginning Beekeeping Farmers  
\$393,332 ..... USDA-NIFA

**Xiang, Shi-Hua** **Veterinary Medicine and Biomedical Sciences/  
Nebraska Center for Virology**  
Mucosal Delivery and Retention of  
Ebola Inhibitor Scytovirin Using *Lactobacillus*  
\$452,514 ..... NIH-NIAID

**Xu, Changmou** **Food Science and Technology**  
Improving Aronia Berry Sustainability and Fruit Quality  
\$461,983 ..... USDA-AMS through  
Nebraska Department of Agriculture  
Xu, Zheng ..... Statistics  
Zhang, Yue ..... Food Science and Technology

**Xu, Lisong** **Computer Science and Engineering**  
NeTS: Small: Exploring the Design Space of Bandwidth  
Estimation Methods Using Packet Sequence Information  
\$498,878 ..... NSF  
NeTS: Small: Systematically and Scalably Testing  
Network Programs under Packet Dynamics  
\$499,810 ..... NSF

**Xu, Xiaoshan** **Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience**  
\*Non-Volatile Active Control of Spin Transport  
Using Interfaces with Molecular Ferroelectrics  
\$750,000 ..... DOE

Microstructure and Strain Effects on Ferroelectric  
and Transport Properties of HfO<sub>2</sub>-based Thin Films  
\$519,740 ..... NSF  
Gruverman, Alexei ..... Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience  
Tsymbal, Evgeny ..... Physics and Astronomy/  
Nebraska Center for Materials and Nanoscience

**Yan, Qiben** **Computer Science and Engineering**  
SaTC: CORE: Small: URadio: Towards Secure Smart Home  
IoT Communication Using Hybrid Ultrasonic-RF Radio  
\$499,999 ..... NSF  
Zhou, Qin ..... Mechanical & Materials Engineering

**Yang, Jinliang** **Agronomy and Horticulture**  
Rescuing the Fixed Deleterious Alleles for Genome-Enabled  
Micronutrients Improvement in Maize  
\$500,000 ..... USDA-NIFA  
Waters, Brian ..... Agronomy and Horticulture

**Yang, Ruiguo** **Mechanical & Materials Engineering**  
Cell-Cell Adhesion Mechanics and Mechanotransduction  
at the Single Cell Level  
\$439,584 ..... NSF  
Lim, Jung Yul ..... Mechanical & Materials Engineering

**Yang, Yiqi** **Textiles, Merchandising and Fashion Design/  
Biological Systems Engineering**  
\*Protein Fibers from Chicken Feathers for Textile Applications  
via Engineered Pilot-Scale Production  
\$464,434 ..... USDA-NIFA

**Yates, Dustin** **Animal Science**  
\*Abatement of Inflammation as a Means  
to Combat Heat Stress in Finishing Livestock  
\$500,000 ..... USDA-NIFA  
Petersen, Jessica ..... Animal Science  
Schmidt, Ty ..... Animal Science

Recovering Performance and Quality  
in IUGR-born Low-birthweight Livestock  
\$500,000 ..... USDA-NIFA  
Petersen, Jessica ..... Animal Science

**Yoder, Aaron** **Biological Systems Engineering**  
Nebraska AgrAbility  
\$540,000 ..... USDA-NIFA  
Frecks, Nancy ..... West Central Research  
and Extension Center  
Harris-Broomfield, Susan ..... West Central Research  
and Extension Center  
Riley, Mark ..... Biological Systems Engineering

**Yu, Bin** **Biological Sciences/  
Center for Plant Science Innovation**  
Understand the Functional Mechanism of the DSP1 Complex  
in the 3' Maturation of Plant Small Nuclear RNAs  
\$682,608 ..... NSF  
Zhang, Chi ..... Biological Sciences/  
Center for Plant Science Innovation

**Yu, Hongfeng** **Computer Science and Engineering**  
EarthCube IA: Optimal Data Layout for Scalable  
Geophysical Analysis in a Data-Intensive Environment  
\$332,941 ..... NSF  
CGV: Small: A Scalable Visual Analytics Framework  
for Exascale Scientific Simulations  
\$405,378 ..... NSF

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

**Yuill, David** **Durham School of Architectural  
Engineering & Construction**  
A Field Study to Characterize Fault Prevalence  
in Residential Comfort Systems  
\$749,792 ..... DOE

**Zempleni, Janos** **Nutrition and Health Sciences/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules**  
\*Milk Exosome-Driven Evolution of Antibiotic-Resistant Gut Pathogens  
\$500,000 ..... USDA-NIFA  
Auchtung, Jennifer ..... Food Science and Technology/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules  
\*Development of an Exosome and Cargo Tracking Mouse  
\$408,375 ..... DHHS-NIH

Nutritive Value and Potential Health Benefits of LOL-Exosomes  
\$257,886 ..... Purina Mills  
Adamec, Jiri ..... Biochemistry/Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules  
Cui, Juan ..... Computer Science and Engineering/  
Nebraska Center for the Prevention of  
Obesity Diseases through Dietary Molecules

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

**Zeng, Xiao** **Chemistry**  
Exploration of Low-Dimensional Gas Clathrate Hydrates  
\$256,188 ..... NSF  
Cheung, Chin Li (Barry) ..... Chemistry

**Zhu, Jinying** **Civil and Environmental Engineering**  
Online Monitoring System for Concrete Structures  
Affected by Alkali-Silica Reaction (ASR)  
\$800,000 ..... DOE

**Zink, Robert** **Natural Resources/Biological Sciences/  
University of Nebraska State Museum**  
\*Genetic Structure and Function of Nebraska Wildlife  
\$257,421 ..... Nebraska Game and Parks Commission

**Zuhlke, Craig** **Electrical and Computer Engineering**  
\*Femtosecond Streak Camera for Studying the Role of  
Laser-Induced Plasmas in Ultrafast Light-Matter Interactions  
\$385,240 ..... DoD-ONR-DURIP  
Alexander, Dennis ..... Electrical and Computer Engineering  
Argyropoulos, Christos ..... Electrical and Computer Engineering  
Gogos, George ..... Mechanical & Materials Engineering  
Ianno, Natale ..... Electrical and Computer Engineering  
Shield, Jeffrey ..... Mechanical & Materials Engineering

Fundamental Studies on Functionalizing Metallic Surfaces  
using Femtosecond Lasers with Applications  
to Enhanced Heat Transfer; Novel Power  
\$811,826 ..... DoD-ONR  
Alexander, Dennis ..... Electrical and Computer Engineering  
Gogos, George ..... Mechanical & Materials Engineering  
Ianno, Natale ..... Electrical and Computer Engineering  
Shield, Jeffrey ..... Mechanical & Materials Engineering



## Early Career Awards

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

### 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.



#### Alexandrov, Vitali

Chemical and Biomolecular Engineering  
\*CAREER: Advancing Mechanistic Understanding of Nanocrystal Dissolution in Aqueous Environments  
\$520,244 .....NSF



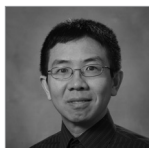
#### Dishari, Shudipto

Chemical and Biomolecular Engineering  
CAREER: Confined Ionometric Systems and Imaging of Ionic Distribution  
\$591,000 .....NSF



#### Duncan, Brittany

Computer Science and Engineering  
CAREER: Drones in Public: Foundational Interaction Research  
\$549,951 .....NSF



#### Guo, Jiantao

Chemistry  
CAREER: Quadruplet Codon Decoding: Mechanistic Studies and Application in Cellular Genetic Code Expansion  
\$634,205 .....NSF



#### Li, Xu

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



#### Libault, Marc

Agronomy and Horticulture/Center for Plant Science Innovation  
CAREER: Exploring the Transcriptional Regulatory Networks Controlling the Early Stages of Legume Nodulation  
\$573,573 .....NSF



#### Louis, Joe

Entomology  
CAREER: Deciphering Sorghum Resistance Mechanisms to Phloem-Feeding Aphids  
\$1,513,415 .....NSF



#### Males, Lorraine

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



#### 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



#### Neta, Maital

Psychology  
CAREER: Functional Brain Networks Mediating Positivity Bias in Healthy Aging  
\$756,711 .....NSF



#### Obata, Toshihiro

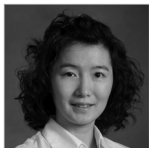
Biochemistry/Center for Plant Science Innovation  
CAREER: Establishing the Roles of Multi-Enzyme Complexes in Metabolic Network Regulation  
\$746,955 .....NSF





**Pedrigi, Ryan**

Mechanical & Materials Engineering  
\*CAREER: Characterizing the Mechanobiological Response of Endothelial Cells to Ultrasound  
\$543,020 .....NSF



**Qu, Liyan**

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



**Rao, Prahalada**

Mechanical & Materials Engineering  
CAREER: Smart Additive Manufacturing  
\$649,731 .....NSF



**Roston, Rebecca**

Biochemistry/Center for Plant Science Innovation  
CAREER: How SFR2 Allows Chloroplast Envelope Membranes to Survive Freezing, from Initial Signal to Molecular Mechanism  
\$846,076.00 .....NSF



**Saha, Rajib**

Chemical and Biomolecular Engineering  
\*CAREER: Dissecting a Metabolically Versatile Non-Model Bacterium's Lignin-Derived Compound Catabolism  
\$747,855 .....NSF



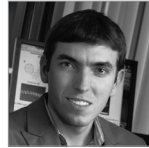
**Sealy, Michael**

Mechanical & Materials Engineering  
CAREER: Hierarchical Structure Integrity of Magnesium Alloys via Asynchronous Laser and Additive Processing  
\$500,000 .....NSF



**Shizuka, Dai**

Biological Sciences  
CAREER: Structure and Resilience of Social Networks under Population Turnover  
\$681,870 .....NSF



**Sinitiskii, Alexander**

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



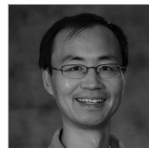
**Wachs, Rebecca**

Biological Systems Engineering  
CAREER: Alternative Non-Opioid Therapies for Low Back Pain  
\$510,389 .....NSF



**Wei, Sheng**

Computer Science and Engineering  
CAREER: Towards the Security of Heterogeneous CPU-FPGA Systems  
\$496,940 .....NSF



**Xu, Xiaoshan**

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



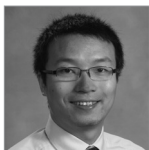
**Yin, Yanbin**

Nebraska Food for Health Center  
CAREER: Evolutionary Genomics of Enzymes for Complex Carbohydrate Metabolism  
\$353,179 .....NSF



**Yu, Hongfeng**

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



**Zhang, Jian**

Chemistry  
CAREER: Tuning Photoredox Properties of  
Carbazolic Porous Organic Frameworks for  
Visible-Light-Mediated Catalysis  
\$527,154 .....NSF



**Zhang, Limei**

Biochemistry/Nebraska Center for Redox Biology/  
Nebraska Center for Integrated Biomolecular  
Communication  
CAREER: Structural and Mechanistic Studies on an  
Iron-Sulfur Cluster-based Nitric Oxide Sensor  
\$600,000 .....NSF

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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.



**Dishari, Shudipto**

Chemical and Biomolecular Engineering  
\*EARLY CAREER: Porin Inspired Ionomers with Sub-  
NM Gated Ion Channels for High Ion Conductivity  
and Selectivity  
\$750,000

DOE



**Kovalev, Alexey**

Physics and Astronomy  
Non-Collinear Magnetism and Dynamic Effects  
in Dzyaloshinskii-Moriya Magnets  
\$750,000 ..... DOE

DOE

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**Office of Naval Research Young Investigator Program**

The Office of Naval Research Young Investigator Program supports academic scientists and engineers who are in their first or second full-time tenure-track academic appointment and who show exceptional promise for doing creative research.



**Argyropoulos, Christos**

Electrical and Computer Engineering  
YIP: Theoretically Modeling the High Thermal  
Emission/Formation Dynamics of Femtosecond  
Laser Functionalized Surfaces to Optimize Surfaces  
\$749,910 ..... DoD-ONR

DoD-ONR

## Arts and Humanities Awards \$250,000 or More

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

### Cohen, Matt

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

\*Walt Whitman Archive Infrastructure Revitalization

\$349,856 ..... NEH  
6/1/20 – 5/31/23

Barney, Brett ..... University Libraries/Center for Digital  
Research in the Humanities  
Dalziel, Karin ..... Center for Digital Research in the Humanities  
Price, Kenneth ..... English/Center for Digital  
Research in the Humanities



With a nearly \$350,000 grant from the National Endowment for the Humanities, Matt Cohen, professor of English, and Kenneth Price, Hillegass University Professor of American literature, are rebuilding the Walt Whitman Archive website, implementing a modern framework and repackaging site content for easier reuse. The long-term goal is

to enhance the archive's accessibility and sustainability by making it easier for users to search and organize materials on the site, which, at nearly 25 years old, is the leading resource for Walt Whitman scholars. The team is improving the website's digital architecture by changing the programming framework; developing a machine-readable interface for the website's code, images and metadata; revising files to improve the metadata; and strengthening existing metadata through a new search engine. The archive is published by the Center for Digital Research in the Humanities.

### Charles Chesnutt: A Digital Archive

\$292,627 ..... NEH  
5/1/19 – 4/30/21  
Price, Kenneth ..... English/Center for Digital  
Research in the Humanities

Through a grant from the National Endowment for the Humanities, the existing Charles Chesnutt Digital Archive will be redesigned, and more works by the African-American author will be added. The project, a collaboration between Nebraska and The New School in New York City, is directed at Nebraska by Matt Cohen, professor of English, and Kenneth Price, Hillegass University Professor of American literature and co-director of CDRH. The project is edited by Stephanie Browner of The New School. Chesnutt is a major figure in American literary studies and was a profound thinker about race and justice in the United States. He wrote six book-length works, more than 80 stories, and many essays and speeches during his career.

### Jacobs, Margaret

### History/Center for Digital Research in the Humanities

Genoa Indian School Digital Reconciliation Project

\$349,899 ..... NEH  
6/1/19 – 5/30/22

Lorang, Elizabeth ..... University Libraries/Center for Digital  
Research in the Humanities

Genoa Indian School Digital Reconciliation Project

\$290,123 ..... Council on Library and Information Resources  
6/1/18 – 5/31/21

Lorang, Elizabeth ..... Center for Digital Research in the Humanities



With funding from the National Endowment for the Humanities and the Council on Library and Information Resources, Margaret Jacobs, professor of history and director of the Women's and Gender Studies program, and Elizabeth Lorang, associate professor of University Libraries, are compiling, digitizing and making accessible records and other

materials from the Genoa Indian Industrial School in Nebraska, one of more than 150 boarding schools designed to assimilate indigenous American people into Euro-American culture near the end of the 19th century. They are working closely with Nancy Carlson and the Genoa U.S. Indian School Foundation in Genoa. The university's Center for Digital Research in the Humanities hosts the Genoa Indian School Digital Reconciliation Project. In order to move the project forward with sensitivity and respect, Jacobs and Lorang are working with an advisory council that includes representatives from the Ponca, Pawnee, Omaha and Winnebago nations and UNITE, the university's Native American student group.

**Jagodinsky, Katrina**

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

\*Petitioning for Freedom:

Habeas Corpus and Liberty in the American West

\$460,410 ..... NSF  
6/1/20 - 5/31/23



With a grant from the National Science Foundation, historian Katrina Jagodinsky is exploring how various marginalized groups – immigrants, women, and indigenous and enslaved people, for example – used habeas corpus, a longstanding legal principle enabling prisoners to challenge the legality of their detentions, to claim freedom and establish

their rights between 1812 and 1924. In collaboration with the Center for Digital Research in the Humanities, Jagodinsky, the Susan J. Rosowski Associate Professor of History, is developing a first-of-its-kind digital database archiving roughly 6,000 previously unpublished habeas petitions, which will be searchable by demographic

**Jewell, Andrew**

**Center for Digital Research in the Humanities**

Complete Letters of Willa Cather: Stage 2

\$278,000 ..... NEH  
1/1/19 - 12/31/21  
Homestead, Melissa ..... English/Center for Digital

Research in the Humanities



The National Endowment for the Humanities is supporting the work of Andrew Jewell, professor of University Libraries in the Center for Digital Research in the Humanities, to digitally publish the complete correspondence of Willa Cather on the open-access Willa Cather Archive ([cather.unl.edu](http://cather.unl.edu)). Publication on the archive will allow interoperation of the

edition with other Cather documents (photographs, texts, published scholarship and archival materials) and wide accessibility as data for humanities scholars doing various kinds of research. When finished, *The Complete Letters of Willa Cather* will bring unprecedented access to the revealing personal voice of one of the most important figures in American literary history and will dramatically expand the body of Cather materials available to scholars, teachers, students and general readers.

**Kooser, Ted**

**English**

American Life in Poetry Project

\$575,739 ..... Poetry Foundation  
1/1/05 - 12/31/20



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

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

**Lorang, Elizabeth**

**Center for Digital Research in the Humanities**

Extending Image Analysis for Archival Discovery (Aida)

\$462,317 ..... IMLS  
12/1/16 - 11/30/20  
Soh, Leen-Kiat ..... Computer Science and Engineering



The Image Analysis for Archival Discovery (Aida) research team investigates the use of image analysis to identify, describe and retrieve information from digital libraries and other digitized collections. Using machine learning, Elizabeth Lorang, associate professor of University Libraries, and colleagues in the Center for Digital Research in the Humanities

are building an intelligent computational system that can recognize visual cues in digital images and identify similar content in new images. Digital images created by libraries, archives, museums and other groups represent a largely underutilized digitized cultural record – particularly digital images of textual materials. One goal of the project is to develop a new digital collection using the extracted content.

**Price, Kenneth**

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

Unearthing the “Buried Masterpiece” of American Literature:  
A Digital Variorum of the 1855 *Leaves of Grass*

\$300,000 ..... NEH  
7/1/17 – 6/30/20



Kenneth Price, Hillegass University Professor of American literature and co-director of the Center for Digital Research in the Humanities, directs the Walt Whitman Archive, a digital archive that makes Whitman’s vast work easily and conveniently accessible to scholars, students, and general readers alike. With support from the National Endowment for the

Humanities, the first edition of *Leaves of Grass*, along with the constellation of draft documents that contributed to it, has been developed into a digital variorum from manuscript and notebook beginnings through its many variations in print. The goal of the project is to advance understanding of this paradigm-shifting book and to enable future scholarship by drawing on some of the opportunities for representation unique to digital editing.

**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 – 12/31/21



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

\$981,012 ..... NEH  
9/1/07 – 12/31/20  
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.

# Arts and Humanities Awards \$50,000 to \$249,999

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

## Cohen, Matt English/Center for Digital Research in the Humanities

Walt Whitman's Annotations  
\$125,961 ..... NEH  
Gray, Nicole ..... English/Center for Digital  
Research in the Humanities

## Dawes, Kwame English

African Poetry Digital Project  
\$150,000 ..... Ford Foundation  
Dawes, Lorna ..... University Libraries

## Eckstrom, Mikal Brotnov Center for Great Plains Studies

\*Staking Their Claim: Great Plains Black Homesteaders  
\$75,000 ..... NEH  
Edwards, Richard ..... Center for Great Plains Studies

## Edwards, Richard Center for Great Plains Studies

African American Homesteaders Historic Resource Study  
\$198,986 ..... DOI-NPS

## Hoff, Michael Art, Art History and Design

Antiochia ad Cragum Excavations: 2019 Season  
\$90,045 ..... Merops Foundation

## Homestead, Melissa English

The Creative Partnership of Willa Cather and Edith Lewis  
\$50,400 ..... NEH

## Jockers, Matthew English/Center for Digital Research in the Humanities

Text Mining the Novel:  
Establishing the Foundations of a New Discipline  
\$88,233 ..... Government of Canada-SSHRC through  
McGill University

## Jones, Jeannette Institute for Ethnic Studies/History/ Center for Digital Research in the Humanities

To Enter Africa from America:  
The United States, Africa and the New Imperialism, 1862-1919  
\$216,106 ..... NEH

## Krehbiel, Michelle Extension

Library Innovation Studios: Transforming Rural Communities  
\$236,771 ..... IMLS through Nebraska Library Commission  
Barker, Bradley ..... Extension  
Farritor, Shane ..... Mechanical & Materials Engineering

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

Fame and Infamy: Walt Whitman's Old-Age Correspondence  
\$59,561 ..... National Historical Publications and Records  
Commission through University of Iowa  
McMullen, Kevin ..... English/Center for Digital  
Research in the Humanities

## Richards-Risetto, Heather Anthropology/Center for Digital Research in the Humanities

\*Revitalizing and Enhancing the Open Source  
3D WebGIS of the MayaArch3D Project  
\$50,000 ..... NEH  
Dalziel, Karin ..... Center for Digital Research in the Humanities  
Tunink, Greg ..... Center for Digital Research in the Humanities

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

\*The Bell Affair: A Film Reframing American Slavery and Freedom  
\$200,000 ..... NEH  
Burton, Michael ..... Textiles, Merchandising and Fashion Design/  
Center for Digital Research in the Humanities  
Dreher, Kwakiutl ..... English/Institute for Ethnic Studies/  
Center for Digital Research in the Humanities

## Walter, Katherine Center for Digital Research in the Humanities

From Prairie to Palace: Buffalo Bill's Wild West in Europe  
\$52,711 ..... NEH through Buffalo Bill Center of the West

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

Active awards, July 1, 2019–June 30, 2020

\* Indicates new in 2019–2020

**Aguilar, Dee** **Education and Human Sciences**  
\*Celebrating the 19th Amendment:  
Women's Rights Here and Abroad  
\$7,750 ..... Humanities Nebraska

**DeLaPort, Dijon** **Center for Great Plains Studies**  
\*Climate Change and Culture in the Great Plains  
\$5,800 ..... Humanities Nebraska

**Eckstrom, Mikal Brotnov** **Center for Great Plains Studies**  
\*400 Years of African American History:  
Black Homesteading in the Great Plains  
\$20,000 ..... National Alliance of Faith and Justice

**Engen-Wedin, Nancy** **Lied Center for Performing Arts**  
\*LPS Arts for ALL  
\$25,000 ..... Woods Charitable Fund

\*Inclusion through Movement:  
Bill T. Jones and Nebraska's Global Community  
\$15,000 ..... NEA

\*Lincoln Youth Symphony Learning with St. Louis Symphony Orchestra  
\$5,000 ..... NEA through Mid-America Arts Alliance

**Jacobs, Margaret** **History**  
\*Return of the Pawnees  
\$9,698 ..... Humanities Nebraska

**Jones, Patrick** **History**  
The Classroom and the Future of the Historical Record: Humanities  
Education in a Changing Climate for Knowledge Production  
\$41,906 ..... Andrew W. Mellon Foundation through  
University of Illinois  
Johnson, Aaron ..... Teaching, Learning and Teacher Education  
Thomas, William ..... History

**Nicholas, Claire** **Textiles, Merchandising and Fashion Design**  
Crafting Culture in the Middle of Everywhere: An Arts-Based  
Project on Intercultural Empathy Building and Entrepreneurship  
\$9,561 ..... Pearle Francis Finigan Foundation  
Kim, Surin ..... Textiles, Merchandising and Fashion Design

**Ramsay, Stephen** **English/Center for Digital  
Research in the Humanities**  
\*Digital Notation Across the Movement-Based Arts  
\$15,800 ..... NEH  
Pytlík Zillig, Brian ..... Center for Digital Research in the Humanities

**Riehle, Catherine** **University Libraries**  
\*Academic Librarian Curriculum Developers: Building Capacity to  
Integrate Information Literacy Across the University (ALCD)  
\$33,480 ..... Institute of Museum and Library Services through  
Purdue University

**Shank, Nancy** **Public Policy Center**  
Lincoln Reads Aloud: A Collective Impact Model  
\$15,666 ..... Institute of Museum and Library Services through  
Lincoln Community Foundation

**Shear, Donna** **University of Nebraska Press**  
Early American Regions  
\$30,100 ..... University of Georgia

**Thomas, William** **History/Center for Digital  
Research in the Humanities**  
\*The Bell Affair: A Film Reframing American Slavery and Freedom  
\$8,399 ..... Maryland Humanities  
Burton, Michael ..... Textiles, Merchandising and Fashion Design/  
Center for Digital Research in the Humanities  
Dreher, Kwakiutl ..... Institute for Ethnic Studies/  
Center for Digital Research in the Humanities

**Yang, Shuling** **Teaching, Learning and Teacher Education**  
Coaching Preschool Teachers to Ask  
Higher-Level Questions in Dialogic Reading  
\$5,000 ..... International Literacy Association

**Zeleny, Michael** **Chancellor's Office**  
\*NE 150 to N 150  
\$15,000 ..... Humanities Nebraska  
Jewell, Andrew ..... Center for Digital Research in the Humanities  
Lauerman, Meg ..... Chancellor's Office  
Walter, Katherine ..... University Libraries





Pioneering Partnerships for Innovation

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

## Patents Issued in 2019-2020

Recognition for faculty and other university personnel  
who received patents for their inventions

July 1, 2019–June 30, 2020

**Thomas E. Clemente, Aleel K. Grennan, Donald Ort, Stephen Patrick Moose, Damla D. Bilgin, Fredy Altpeter, Stephen P. Long**

*Agronomy and Horticulture*

**Title:** Plants Having Increased Biomass and Methods for Making the Same

**Date:** 3/3/2020

**Number:** 10577617

**Country:** United States

**Stephen G. DiMagno, Bao Hu**

*Chemistry*

**Title:** Radioiodinated Compounds

**Date:** 8/2/2019

**Number:** 6563401

**Country:** Japan

**Date:** 9/19/2019

**Number:** 2015237282

**Country:** Australia

**Concetta C. DiRusso, Nishikant Wase**

*Biochemistry*

**Title:** Compounds for Increasing Lipid Synthesis and Storage

**Date:** 7/16/2019

**Number:** 10351883

**Country:** United States

**Peter A. Dowben, Xia Hong, Jonathan P. Bird, Christian Binek, Dmitri E. Nikonov, Kang L. Wang**

*Physics and Astronomy*

**Title:** Magneto-Electric Logic Devices Using Semiconductor Channel with Large Spin-Orbit Coupling

**Date:** 7/23/2019

**Number:** 10361292

**Country:** United States

**Patrick H. Dussault, Wantanee Sittiwong, Robert Powers, Raul Barletta**

*Chemistry, Veterinary Medicine and Biomedical Sciences*

**Title:** Amphiphilic Cyclobutenes and Cyclobutanes

**Date:** 1/21/2020

**Number:** 10538475

**Country:** United States

**Shane M. Farritor, Thomas Frederick, Joe Bartels**

*Mechanical & Materials Engineering*

**Title:** Methods, Systems and Devices Relating to Surgical End Effectors

**Date:** 7/16/2019

**Number:** 10350000

**Country:** United States

**Shane M. Farritor, Amy Catherine Lehman, Mark Rentschler, Nathan Wood, Jason James Dumpert, Dmitry Olevnikov**

*Mechanical & Materials Engineering*

**Title:** Multifunctional Operational Component for Robotic Devices

**Date:** 8/13/2019

**Number:** 10376323

**Country:** United States



**Shane M. Farritor, Thomas Frederick, Joe Bartels,  
Jack Mondry, Eric Markvicka**

Mechanical & Materials Engineering

**Title:** Methods, Systems, and Devices Related to Robotic Surgical Devices, End Effectors and Controllers

**Date:** 3/31/2020

**Number:** 10603121

**Country:** United States

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**Shane M. Farritor, Jason James Dumpert, Yutaka Tsutano,  
Erik Mumm, Philip Chu, Nishant Kumar**

Mechanical & Materials Engineering, Computer Science

**Title:** Robotic Devices with On-Board Control and Related Systems and Devices

**Date:** 4/21/2020

**Number:** 10624704

**Country:** United States

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**Thomas Frederick, Shane M. Farritor, Eric Markvicka,  
Dmitry Oleynikov**

Mechanical & Materials Engineering

**Title:** Robotic Device with Compact Joint Design and Related Systems and Methods

**Date:** 8/13/2019

**Number:** 10376322

**Country:** United States

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**Ming Han, Matthew Reinke**

Electrical and Computer Engineering

**Title:** Fiber Optic Bolometer

**Date:** 7/23/2019

**Number:** 10359316

**Country:** United States

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**Ming Han, Weilin Hou, Guigen Liu, Qiwen Sheng**

Electrical and Computer Engineering

**Title:** Fiber-Optic Temperature and Flow Sensor System and Methods

**Date:** 12/31/2019

**Number:** 10520355

**Country:** United States

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**Edward N. Harris, Jian Liu, Robert J. Linhardt, Yongmei Xu**

Biochemistry

**Title:** Reversible Heparin Molecules and Methods of Making and Using the Same

**Date:** 3/3/2020

**Number:** 6670235

**Country:** Japan

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**Mark Alan Helle, Chin Li “Barry” Cheung**

Chemistry

**Title:** Methods of Making and Using Lignin Derivatives

**Date:** 1/14/2020

**Number:** 10533031

**Country:** United States

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**Jinsong Huang, Yanjun Fang**

Mechanical & Materials Engineering

**Title:** Narrow Band Perovskite Single Crystal Photodetectors with Tunable Spectral Response

**Date:** 4/14/2020

**Number:** 10622161

**Country:** United States

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**Jinsong Huang, Liang Shen, Fawen Guo**

Mechanical & Materials Engineering

**Title:** Narrowband Nanocomposite Photodetector

**Date:** 5/12/2020

**Number:** 10651409

**Country:** United States

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**Jinsong Huang, Baodong Mao, Christopher L. Exstrom**

Mechanical & Materials Engineering, Chemistry (UNK)

**Title:** Iron Pyrite Nanocrystals

**Date:** 6/9/2020

**Number:** 10680125

**Country:** United States

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**Sally Mackenzie, Roberto De la Rosa Santamaria**

Agronomy and Horticulture, Center for Plant Science Innovation

*Title:* Plants with Useful Traits and Related Methods

*Date:* 7/9/2019

*Number:* 10344340

*Country:* United States

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*Date:* 4/7/2020

*Number:* BR1120130283068

*Country:* Brazil

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**Sally Mackenzie, Kamaldeep S. Virdi**

Agronomy and Horticulture, Center for Plant Science Innovation

*Title:* Methods and Compositions for Obtaining Useful Plant Traits

*Date:* 7/30/2019

*Number:* 10364438

*Country:* United States

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**Eric Markvicka, Thomas Frederick, Shane M. Farritor,**

**Jack Mondry, Joe Bartels**

Mechanical & Materials Engineering

*Title:* Local Control Robotic Surgical Devices and Related Methods

*Date:* 11/12/2019

*Number:* 10470828

*Country:* United States

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**Dimitrios Miserlis, Suzanne Higgins, Abby Kelly,**

**Max Hopkins Twedt, Kim Cluff**

Biological Systems Engineering

*Title:* System and Method for Monitoring Pleural Fluid

*Date:* 10/29/2019

*Number:* 10456063

*Country:* United States

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**George Morcoux, Raed Tawadrous**

Architectural Engineering, Construction Management

*Title:* Mechanical Connection for Concrete Structures

*Date:* 12/17/2019

*Number:* 10508434

*Country:* United States

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**Nicole Buan Murphy, Karrie A. Weber, Jared T. Aldridge, Sean R. Carr**

Biochemistry, Biological Sciences

*Title:* Production of Isoprene by Methane-Producing Archaea

*Date:* 1/14/2020

*Number:* 10533192

*Country:* United States

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**Carl A. Nelson, Dmitry Oleynikov, Benjamin S. Terry, Hossein Behghani, Prithviraj (Raj) Dasgupta, Abolfazl (Sina) Pourghodrat**

Mechanical & Materials Engineering

*Title:* Disposable Fluidic Self-Propelling Robot for Traversing a Tubular Passage

*Date:* 9/24/2019

*Number:* 10420916

*Country:* United States

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**Carl A. Nelson, Judith M. Burnfield, Peter Shu, Thad Buster, Adam Taylor**

Mechanical & Materials Engineering

*Title:* ICARE: Intelligently Controlled Assistive Rehabilitation Elliptical Machine

*Date:* 1/14/2020

*Number:* BR112012008610

*Country:* Brazil

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**Benjamin J. Pavlik, Paul Blum, Kevin Van Cott**

Chemical and Biomolecular Engineering, Biological Sciences

*Title:* Engineered Clostridium Botulinum Toxin Adapted to Deliver Molecules into Selected Cells

*Date:* 4/28/2020

*Number:* 10633643

*Country:* United States

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**Wei Qiao, Xiang Gong**

Electrical and Computer Engineering

*Title:* Detecting Faults in Turbine Generators

*Date:* 7/23/2019

*Number:* 10359473

*Country:* United States

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*Date:* 3/17/2020

*Number:* 10591519

*Country:* United States

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**Wei Qiao, Yue Zhao, Long Wu,**

Electrical and Computer Engineering

**Title:** Drive Systems Including Sliding Mode Observers and Methods of Controlling the Same

**Date:** 7/24/2019

**Number:** GB2512001

**Country:** United Kingdom

**Date:** 7/30/2019

**Number:** GB2512002

**Country:** United Kingdom

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**Wei Qiao, Liyan Qu, Fa Chen**

Electrical and Computer Engineering

**Title:** Scalable Universal Space Vector Pulse Width Modulation Scheme for Multilevel Inverters

**Date:** 2/25/2020

**Number:** 10574154

**Country:** United States

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**Mark Rentschler, Shane M. Farritor**

Mechanical & Materials Engineering

**Title:** Medical Inflation, Attachment and Delivery Devices and Related Methods

**Date:** 7/2/2019

**Number:** 10335024

**Country:** United States

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**Patricia Jane Sollars, Ekaterina Heldwein,  
Gregory Allan Smith, Gary Edward Pickard**

Veterinary Medicine and Biomedical Sciences

**Title:** Non-Neuroinvasive Viruses and Uses Thereof

**Date:** 5/12/2020

**Number:** 10647964

**Country:** United States

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**Chao Tai, Deepak Keshwani**

Biological Systems Engineering

**Title:** System for Optimizing Fed-Batch Hydrolysis of Biomass

**Date:** 12/10/2019

**Number:** 10501766

**Country:** United States

**Christopher Y. Tuan, Lim Nguyen**

Civil and Environmental Engineering,

Electrical and Computer Engineering

**Title:** Systems and Methods for Construction of Electrically Conductive Concrete Slab with Protection from Current Leakage

**Date:** 8/20/2019

**Number:** 10385519

**Country:** United States

## 2019-2020 License Agreements

Recognition for faculty whose technologies formed the basis of licensing agreements with industry partners  
July 1, 2019–June 30, 2020

### David Andrews

Agronomy and Horticulture  
*Technology:* Food Colorant

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### Atorod Azizinamini

Civil and Environmental Engineering  
*Technology:* Short Span Bridge Construction

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### P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn

Agronomy and Horticulture  
*Technology:* Barley

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### Steven Barlow, Chunxiao Liao

Special Education and Communication Disorders, Computer Science and Engineering  
*Technology:* NICU Software

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### Robert Bielenberg, Ronald Faller, Scott K. Rosenbaugh, Jennifer D. Rasmussen (Schmidt)

Midwest Roadside Safety Facility  
*Technology:* Barrier System

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### Paul Black, James Allen, Timothy Nicodemus

Biochemistry  
*Technology:* Ground Water Remediation

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### Paul Blum

Biological Sciences  
*Technology:* Cellulosic Biomass Technology

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### Stephen DiMagno, Haorun Sun, Bao Hu

Chemistry  
*Technology:* Radiopharmaceutical Method and Agents

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### Concetta DiRusso, Nishikant Wase

Nutrition and Health Sciences, Biochemistry  
*Technology:* Lipid Synthesis and Storage

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### Concetta DiRusso, Paul Black, Angel Sandoval-Alvarez

Nutrition and Health Sciences, Biochemistry  
*Technology:* Fatty Acid Uptake

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### Achim Dobermann, Tri Setiyono, James Specht, Kenneth Cassman, Albert Weiss

Agronomy and Horticulture, College of Agricultural Sciences and Natural Resources  
*Technology:* SoySim Software

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### George Graef

Agronomy and Horticulture  
*Technology:* Soybean Varieties  
*Technology:* Soybean  
*Technology:* Soybean  
*Technology:* Soybean

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### George Graef, Leslie Korte, Orlando Zapata, Rebecca Ott, Shawn Jenkins, Tyler Frederick, Aaron Hoagland

Agronomy and Horticulture  
*Technology:* Soybean  
*Technology:* Soybean

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### David Hage

Chemistry  
*Technology:* Covid-19 Antibody Technology

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**Jinsong Huang**

Mechanical & Materials Engineering

*Technology:* Solar Panel Technology

*Technology:* Solar Cell Technology

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**Robert Hutkins**

Food Science and Technology

*Technology:* Prebiotics

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**Sibel Irmak**

Biological Systems Engineering

*Technology:* Edible Bale Wrap

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**Yongfeng Lu, Leimin Deng, Chenfei Zhand, Shiding Sun, Lei Liu**

Electrical and Computer Engineering

*Technology:* Laser Technology

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**Lim Nguyen**

Electrical and Computer Engineering

*Technology:* Conductive Concrete

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**Carlos Urrea**

Panhandle Research and Extension Center

*Technology:* Garbanzo Bean

*Technology:* “Coyne” Great Northern Bean

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**Hiep Vu**

Veterinary Medicine and Biomedical Sciences

*Technology:* Pig Vaccine

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**Yiqi Yang, Narenda Reddy**

Textiles, Merchandising and Fashion Design

*Technology:* Fabric Manufacturing

*Technology:* Fabric Manufacturing

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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, 2019–June 30, 2020

Submitted by faculty, chairs/heads or deans

### Byron J. Anway

### Art, Art History and Design

Artist. Painting and drawing exhibition. "Gatherings." Viterbo University Gallery, Lacrosse, Wisconsin.

### Diane Barger

### Glenn Korff School of Music

Artist. Clarinet, CD recording. "Play Pretty." Amicitia Duo, published by Potenza Music, Anniston, Alabama.

Performer. Clarinet. "Etudes Concertantes by Alexis Ciesla for E-flat and B-flat clarinets." Amicitia Duo featured recital, International Clarinet Association ClarinetFest®, Knoxville, Tennessee.

### Paul Barnes

### Glenn Korff School of Music

Artist. Piano. "Piano Quintet 'Annunciation' by Philip Glass; 'Pendulum' for Piano and Violin by Philip Glass." World premiere recording with Brooklyn Rider; produced by Orange Mountain Music, Oktaven Audio, Mt. Vernon, New York.

### Christopher Bilder

### Statistics

App developer, with McMahan, C., and Tebbs, J. "A Shiny App for Pooled Testing." (From April 12 to the end of June, this app, which helps laboratories increase their testing capacity for SARS-CoV-2, the virus that leads to COVID-19, had been used in at least 69 countries and 41 states in the U.S.)

App developer, with Hitt, B., Schaarschmidt, F., Biggerstaff, B., McMahan, C., and Tebbs, J. "binGroup2: Identification and estimation for group testing." R package version 1.0.

### Dana Fritz

### Art, Art History and Design

Artist. Photography exhibition. Work from "Terraria Gigantica." Terraria Gigantica: The World under Glass, Bradley University, Peoria, Illinois.

Artist. Photography exhibition. "Exterior Maintenance, Eden Project." Over the Structures, CICA Museum, Gyeonggi-do, South Korea.

### Marques L.A. Garrett

### Glenn Korff School of Music

Conductor. Group choir performance. Montana Men's Vocal Festival, University of Montana, Bozeman, Montana.

Conductor. Group choir performance. Georgia Music Educators Association District IV Honor Chorus, Avondale Estates, Georgia.

Composer. Choir performance. "Sing Out, My Soul." Eastern Region American Choral Directors Association Junior High Honor Choir, Rochester, New York.

### Nathan Koch

### Glenn Korff School of Music

Performer. Bassoon solo performance. "The Music of Henri Busser." The University of South Florida, Tampa, Florida.

### Katie Kreमारik

### Advertising

Artist. Installation. "A Space of Their Own: A Monument to Women in Design." Goodall Gallery, Columbia, South Carolina.

### Tom Larson

### Glenn Korff School of Music

Composer. Documentary feature film. "The Art of Dissent." Co-production between Czech TV in Prague and NUtech Ventures at UNL. Debuts at Middlebury New Filmmakers Festival, Middlebury, Vermont, and Newburyport Documentary Film Festival, Newburyport, Massachusetts.

### James D. Le Sueur

### History

Director. Documentary feature film. "The Art of Dissent." Co-production between Czech TV in Prague and NUtech Ventures at UNL. Debuts at Middlebury New Filmmakers Festival, Middlebury, Vermont, and Newburyport Documentary Film Festival, Newburyport, Massachusetts.

### Christopher Marks

### Glenn Korff School of Music

Performer. Organ, CD recording. "Two American Organ Symphonies, One American Classic Organ." Produced by the Roy Perry American Classic Organ Foundation in conjunction with the Leo Sowerby Foundation. Recorded at St. Mark's Cathedral, Shreveport, Louisiana.

### Bernard R. McCoy

### Broadcast Journalism

Director. Television broadcast. "Nebraska Stories: D-Day And The Oldfield Effect." Nebraska Educational Telecommunications, Lincoln, Nebraska.

**Francisco Souto****Art, Art History and Design**

Artist. Drawing exhibition. "Diaspora." Kiechel Fine Arts, Lincoln, Nebraska.

Artist. Drawing exhibition. "State of the Art 2020: Discovering American Art Now." Crystal Bridges Museum of American Art, Lincoln, Nebraska.

**Hendrik Viljoen****Chemical Engineering**

Designer. Philisa thermal cyclor. In partnership with Streck, Omaha, Nebraska.

**Yujia Wang****Landscape Architecture**

Designer. "Portal: An Exploration of Mind-Reality-Space." 2019 Bi-City Biennale of Urbanism/Architecture, Shenzhen Museum of Contemporary Arts, Shenzhen, China.

**Tyler G. White****Glenn Korff School of Music**

Composer. "The Gambler's Son: An Opera." World premiere, Kimball Recital Hall, Lincoln, Nebraska; Cozad High School, Cozad, Nebraska.

**Sandra Williams****Art, Art History and Design**

Artist. Cut paper exhibition. International artist residency, the Studios of Key West, Key West, Florida.

Artist. Cut paper exhibition. Artist residency, Arquetopia, Puebla, Mexico.

Artist. Cut paper exhibition. Anthropocene Blues, the Museum of Nebraska Art, Kearney, Nebraska.

## Published Books

Faculty who wrote or edited books published July 1, 2019–June 30, 2020

UNL co-authors/editors (identified by those who submitted items for inclusion) designated in red

Submitted by faculty, chairs/heads or deans

### John R. Bender Journalism/Broadcasting

Author, with Lucinda Davenport and Michael Drager. *Writing & Reporting for the Media*. New York, NY: Oxford University Press.

Author. *Law for Media Professionals*. Dubuque, IA: Great River Learning.

### Christopher A. Bohn Computer Science and Engineering

Author. *Programming at the Hardware/Software Interface*. Dubuque, IA: Great River Learning.

### Tim Borstelmann History

Author. *Just Like Us: The American Struggle to Understand Foreigners*. New York, NY: Columbia University Press.

### Sruti Das Choudhury Natural Resources/ Computer Science and Engineering

Editor, with Ashok Samal. *Intelligent Image Analysis for Plant Phenotyping*. Boca Raton, FL: CRC Press, Taylor and Francis Group.

### Matt Cohen English

Editor. *The New Walt Whitman Studies*. New York, NY: Cambridge University Press.

### Rochelle L. Dalla Child, Youth and Family Studies

Editor, with Donna Sabella. *Routledge International Handbook of Human Trafficking: A Multi-Disciplinary and Applied Approach*. New York, NY: Routledge/Taylor & Francis.

### Judy Diamond University Libraries/ University of Nebraska State Museum

Author, with Alan B. Bond. *Thinking Like a Parrot: Perspectives from the Wild*. Chicago, IL: University of Chicago Press.

Editor, with Hooley McLaughlin. *Science Museums in Transition: Unheard Voices*. Oxford, UK: Routledge.

### William Grange Johnny Carson School of Theatre and Film

Author. *The Business of American Theatre*. Oxford, UK: Routledge.

### Chris Harding Thornton English

Author. *Pickard County Atlas*. New York, NY: MCD/Farrar, Straus & Giroux.

### Wendy J. Katz Art, Art History and Design

Author. *Humburg: The Politics of Art Criticism in New York's Penny Press*. New York, NY: Fordham University Press.

### Kenneth A. Kiewra Educational Psychology

Author. *SOAR to College Success and Beyond*. San Diego, CA: Cognella.

### Suping Lu University Libraries

Editor. *A Dark Page in History: The Nanjing Massacre and Post-Massacre Social Conditions Recorded in British Diplomatic Dispatches, Admiralty Documents, and U.S. Naval Intelligence Reports (updated edition)*. Lanham, MD: Hamilton Books.

### Kate Lyons Biological Sciences

Editor, with Anna K. Behrensmeyer and Peter J. Wagner. *Foundations of Paleocology*. Chicago, IL: University of Chicago Press.

### Maria B. Marron Journalism

Editor. *Misogyny and Media in the Age of Trump*. Lanham, MD: Lexington Books.

### David L. Olson Supply Chain Management and Analytics

Author, with Desheng Wu. *Enterprise Risk Management Models, 3rd edition*. Berlin, Germany: Springer.

Author, with Desheng Wu. *Predictive Data Mining Models, 2nd edition*. Berlin, Germany: Springer.

Author. *Core Concepts in Project Management*. New York, NY: Business Expert Press.

Author. *Quantitative Tools of Project Management*. New York, NY: Business Expert Press.

### Kristen Olson Sociology

Editor, with Jolene D. Smyth, Jennifer Dykema, Allyson L. Holbrook, Frauke Kreuter and Brady T. West. *Interviewer Effects from a Total Survey Error Perspective*. Boca Raton, FL: Chapman and Hall/CRC Press.



**Larkin A. Powell** **Natural Resources**

Author. *Great Plains Birds*. Lincoln, NE: University of Nebraska Press.

Author. *Principles for Management of Fisheries and Wildlife: The Manager as Decision-maker*. San Diego, CA: Cognella.

**Guy Reynolds** **English/Cather Project**

General Editor. *Cather Studies, Volume 12: Willa Cather and the Arts*. Lincoln, NE: University of Nebraska Press.

**Luis Othoniel Rosa** **Modern Languages and Literatures/  
Center for Ethnic Studies**

Author. *Comienzos Para Una Estética Anarquista: Borges con Macedonio, 2nd edition*. Buenos Aires, Argentina: Editorial Corregidor.

Author. *Down with Gargamel!* Translated by Noel Black. USA: Argos Books.

**Rachael Shah** **English**

Author. *Rewriting Partnerships: Community Perspectives on Community-Based Learning*. Louisville, CO: University Press of Colorado.

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

Editor, with McWayne, C.M., and Doucet, F. *Understanding Ethnocultural Diversity and the Home-To-School Link (Vol. 4)*. New York, NY: Springer.

**Daniel D. Snow** **Nebraska Water Center/Natural Resources**

Editor, with Ryo Honda and Manish Kumar. *Emerging Issues in the Water Environment During Anthropocene: A South East Asian Perspective*. Singapore: Springer.

Editor, with Manish Kumar, Ryo Honda and Santanu Mukherjee. *Contaminants in Drinking and Wastewater Sources*. Singapore: Springer.

**Jordan Soliz** **Communication Studies**

Editor, with Colleen Warner Colaner. *Navigating Relationships in the Modern Family: Communication, Identity, and Difference*. New York, NY: Peter Lang.

**Shari J. Stenberg** **English/Women's and Gender Studies**

Editor, with Charlotte Hogg. *Persuasive Acts: Women's Rhetorics in the Twenty-first Century*. Pittsburgh, PA: University of Pittsburgh Press.

**Roland Végső** **English**

Author. *Worldlessness After Heidegger: Phenomenology, Psychoanalysis, Deconstruction*. Edinburgh, Scotland: Edinburgh University Press.

Editor, with Zoltán Kulcsár-Szabó, Tamás Lénárt and Attila Simon. *Life After Literature: Perspectives on Biopoetics in Literature and Theory*. Cham, Switzerland: Springer.

**Robert H. Woody** **Glenn Korff School of Music**

Author. *Becoming a Real Musician: Inspiration and Guidance for Teachers and Parents of Musical Kids*. Lanham, MD: Rowman & Littlefield.

## Recognitions and Honors

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

July 1, 2019–June 30, 2020

Submitted by faculty, chairs/heads or deans

**Donald Cox** **Electrical and Computer Engineering**  
National Academy of Sciences

**Raymond Hames** **Anthropology**  
National Academy of Sciences

**James Van Etten** **Plant Pathology**  
National Academy of Sciences

**Katherine Ankersen** **Architecture**  
Educator of the Year, International Interior Design Association  
Fellow, International Interior Design Association

**Christos Argyropoulos** **Electrical and Computer Engineering**  
HOT Article Collection, *Nanoscale*  
Article featured in Spotlight on Optics, Optical Society of America

**Wayne Babchuk** **Educational Psychology**  
2020 McGraw Hill Distinguished Scholar Award, Ethnographic and Qualitative Research Conference

**Andrew Benson** **Food Science and Technology**  
Fellow, American Academy of Microbiology

**Robert W. Bielenberg** **Midwest Roadside Safety Facility**  
Best Paper Award, Transportation Research Board AFB20 Committee

**Christopher Bilder** **Statistics**  
Statistical Significance Poster Award, Scientific and Public Affairs Advisory Committee for the American Statistical Association

**Paul Black** **Biochemistry**  
Award for Exemplary Contributions to Education, American Society for Biochemistry and Molecular Biology

**Erin Blankenship** **Statistics**  
Best Contributed Presentation Award, American Statistical Association Section on Teaching Statistics in the Health Sciences

**Jocelyn Bosley** **Materials Research Science and Engineering Center**  
IF/THEN Ambassador, American Association for the Advancement of Science

**Dawn O. Braithwaite** **Communication Studies**  
B. Aubrey Fisher Article of the Year Award, *Western Journal of Communication* (with Bergquist, G., Soliz, J., Everhart, K., and Kreimer, L.), Western States Communication Association  
Inaugural Award for Communication Administrator Excellence, Association for Communication Administration

**Eve Brank** **Center on Children, Families and the Law/ Psychology**  
Fellow, American Psychological Association

**Amy Nelson Burnett** **History**  
John Simon Guggenheim Fellowship, John Simon Guggenheim Memorial Foundation  
Solmsen Fellowship, Institute for Research in the Humanities, University of Wisconsin-Madison

**Edgar Cahoon** **Biochemistry**  
Fellow, American Association for the Advancement of Science

**Chris Calkins** **Animal Science**  
Meat Industry Hall of Fame – 2019 Class, Meat Industry Hall of Fame Board of Trustees

**Jennine Capó Cruet** **English/Ethnic Studies**  
Longlisted for the PEN/Open Book Award for *My Time Among the Whites*

**Bertrand Clarke** **Statistics**  
Top Ten Most Downloaded Papers (with Amiri, S. and Clarke, J.) Since 1992, *Journal of Computational and Graphical Statistics*

**Thomas Clemente** **Agronomy and Horticulture**  
Fellow, American Association for the Advancement of Science

**Brian Couch** **Biological Sciences**  
Four-Year College and University Research in Biology Education  
Award, National Association of Biology Teachers

**Cody Creech** **Panhandle Research and Extension Center**  
Early Career Award, Crop Science Society of America

**Maria de Guzman** **Child, Youth and Family Studies**  
Ursula Gielen Global Psychology Award, American Psychological  
Association

**Dipti A. Dev** **Child, Youth and Family Studies**  
Early Childhood Child Care Training Award, National Extension  
Association for Family and Consumer Sciences

**Judy Diamond** **University Libraries/  
University of Nebraska State Museum**  
Outstanding Administrative Support Award, National Science  
Education Leadership Association

**Kate Engel** **Nebraska Innovation Campus**  
Rising Star Award, Association of University Research Parks

**Ronald K. Faller** **Civil and Environmental Engineering/  
Midwest Roadside Safety Facility**  
Best Paper Award, Transportation Research Board AFB20 Committee  
Kenneth A. Stonex Roadside Safety Award, Transportation Research  
Board

**Christopher R. Fielding** **Earth and Atmospheric Sciences**  
International Distinguished Lecturer, International Association  
of Sedimentologists

**Jean Ann Fischer** **Nutrition and Health Sciences**  
Excellence in Expanded Food and Nutrition Education Program,  
National Institutes of Food and Agriculture

**Lisa Franzen-Castle** **Nutrition and Health Sciences**  
Early Professional Achievement Award, Society for Nutrition  
Education and Behavior

**Sherilyn Fritz** **Earth and Atmospheric Sciences/  
Biological Sciences**  
Fellow, Geological Society of America

**Marc Garcia** **Sociology/Institute for Ethnic Studies**  
Emerging Scholar in Interdisciplinary Aging Research to Address  
Health Disparities in Alzheimer's Disease and Related Dementias,  
National Institute on Aging  
Butler-Williams Scholars Program, National Institute on Aging  
Program Scholar, New Connections: Increasing Diversity, Robert  
Wood Johnson Foundation

**Keith Glewen** **Eastern Nebraska Research and Extension Center**  
Digital Communications Award (with **Steve Melvin**, **Nathan Mueller**,  
**Tyler Williams**, **Ashley Mueller** and **Ron Seymour**), American Society of  
Agronomy Education Community

**Patricio Grassini** **Agronomy and Horticulture**  
Highly Cited Researcher of 2019, Web of Science Group

**Mark Griep** **Chemistry**  
Champion of History Award, History Nebraska

**Jason Griffiths** **Architecture**  
Design-Build Award, Association of Collegiate Schools of Architecture

**Edmund 'Ted' Hamann** **Teaching, Learning and Teacher Education**  
Fellow, American Educational Research Association  
Fulbright Garcia-Robles U.S. Scholar Award, Fulbright Program  
David G. Imig Distinguished Service Award, Carnegie Project on the  
Education Doctorate

**Bob Harveson** **Panhandle Research and Extension Center**  
Distinguished Service Award, American Phytopathological Society,  
North Central Division

**Cody Hollist** **Child, Youth and Family Studies**  
Fulbright Scholar Award, Brazil, Council for International Exchange of  
Scholars

**Soo-Young Hong** **Child, Youth and Family Studies**  
2020 Faculty Excellence Award, Great Plains Interactive Distance  
Education Alliance

**Terry J. Housh** **Nutrition and Health Sciences**  
Lifetime Achievement Award, National Strength and Conditioning Association

**Nicholas Husbye** **Teaching, Learning, and Teacher Education**  
Elizabeth G. Sturtevant Exemplary Article Award, Association of Literacy Educators and Researchers

**Suat Irmak** **Biological Systems Engineering**  
Standard Development Award, American Society of Agricultural and Biological Engineers

Award of Excellence for Extension Education Materials In Extension Education Community, American Society of Agronomy

Education and Public Service Award, Universities Council on Water Resources

**Amit Jhala** **Agronomy and Horticulture/Extension**  
Early Career Outstanding Extension Leadership Award, Nebraska's Alpha Upsilon Chapter of Epsilon Sigma Phi

**Sherri Jones** **Education and Human Sciences**  
Honors of the Association, American Speech-Language-Hearing Association

**Jennifer Johnson Jorgensen** **Textiles, Merchandising and Fashion Design**  
Influential article of 2019, American Academy of Advertising Journals

**Casey Kelly** **Communication Studies**  
Outstanding Article of the Year Award, National Communication Association Visual Communication Division

**Deepak Keshwani** **Biological Systems Engineering**  
A.W. Farrell Young Educator Award, American Society of Agricultural and Biological Engineers

**Kenneth Kiewra** **Educational Psychology**  
Chess Educator of the Year, University of Texas at Dallas Chess Program

**Lydiah Kiramba** **Teaching, Learning and Teacher Education**  
Carlos J. Vallejo Memorial Award for Emerging Scholarship, American Educational Research Association

**Paul Kononoff** **Animal Science**  
Applied Dairy Nutrition Award, American Dairy Science Association

**Marjorie Kostelnik** **Child, Youth and Family Studies**  
Distinguished Achievement in Agriculture, Gamma Sigma Delta

**Natalie A. Koziol** **Nebraska Center for Research on Children, Youth, Families and Schools**

Gayle G. Arnold Award for the Best Scientific Paper (with Regina Harbourne, James A. Bovaird, Susan Sheridan et al.), American Academy for Cerebral Palsy and Developmental Medicine

**Alok Kumar** **Marketing**  
Top 50 Most Productive Authors (2014-2019), American Marketing Association

**Brian Larkins** **Emeritus Associate Vice Chancellor for Life Sciences/ Agronomy and Horticulture**  
Charles Reid Barnes Life Membership Award, American Society of Plant Biologists

**Richard Leiter** **Schmid Law Library**  
Frederick Charles Hicks Award for Outstanding Contributions to Academic Law Librarianship, American Association of Law Libraries Special Interest Section

**Joe Louis** **Entomology**  
Early Career Innovation Award, Entomological Society of America  
Scientist to Watch, *The Scientist* magazine

**John Dustin Loy** **Veterinary Medicine and Biomedical Sciences**  
Award for Excellence in Diagnostic Microbiology, American Association of Veterinary Laboratory Diagnosticians

**Joe D. Luck** **Biological Systems Engineering**  
Superior Paper Award, American Society of Agricultural and Biological Engineers

**Kurt Mantonya** **Eastern Nebraska Research and Extension Center**  
Innovative Program Award (with Jenny Nixon), Community Development Society

**Greg McKee** **Agricultural Economics**  
Distinguished Extension/Outreach Program Award, Agricultural and Applied Economics Association

**Justin McMechan** **Entomology**  
Abbey-Young Alumni Award, University of Minnesota-Crookston  
New Investigator Award, FMC Corporation

**Amanda Morales** **Teaching, Learning and Teacher Education**  
Early Career Scholar Award, American Educational Research Association's Latina/o/x Research Issues Special Interest Group

**Rodney Moxley** **Veterinary Medicine and Biomedical Sciences**  
Award for Best JVDI Manuscript (with **David Steffen**), American Association of Veterinary Laboratory Diagnosticians

**Elizabeth Niehaus** **Educational Administration**  
Fellowship, University of California National Center for Free Speech and Civic Engagement

**Kristen Olson** **Sociology**  
Editor-in-Chief (survey methodology side), *Journal of Survey Statistics and Methodology*

**Kendra L. Ordia** **Interior Design**  
Ones to Watch Award Scholar, American Society of Interior Designers

**Morgan E. Palmer** **Classics and Religious Studies/  
Women's and Gender Studies**  
Residency for the Study of Classical Antiquity, Vandœuvres, Switzerland, The Hardt Foundation for the Study of Classical Antiquity

**Lance C. Pérez** **Electrical and Computer Engineering**  
Distinguished Member Award, Education Society of the Institute of Electrical and Electronics Engineers

**Kevin Pope** **Natural Resources**  
Award of Excellence, Fisheries Management Section, American Fisheries Society

**Larkin A. Powell** **Natural Resources**  
Excellence in Wildlife Education Award, The Wildlife Society

**Shelia Purdum** **Animal Science**  
American Egg Board Research Award, Poultry Science Association  
Award for Excellence in Multistate Research, Northeastern Regional Association of State Agricultural Experiment Station Directors

**Wei Qiao** **Electrical and Computer Engineering**  
Fellow, Institute of Electrical and Electronics Engineers

**Jennifer D. Rasmussen** **Civil and Environmental Engineering/  
Midwest Roadside Safety Facility**  
Best Paper Award, Transportation Research Board AFB20 Committee

**Brett Ratcliffe** **University of Nebraska State Museum**  
J.O. Westwood Medal for Excellence in Insect Taxonomy, Royal Entomological Society of the United Kingdom

**Laurence R. Rilett** **Civil and Environmental Engineering/  
Nebraska Transportation Center**  
Arthur M. Wellington Prize for Best Transportation Paper in an ASCE Journal, American Society of Civil Engineering

Best Paper Award (with Ernest Tufuor), Transportation Research Board Committee on Highway Capacity and Quality of Service  
Workforce Development and Technology Transfer Leadership Award (accepted by Dr. Rilett on behalf of all the MATC staff, faculty and students from UNL and consortium partners), Council of University Transportation Centers

**Scott K. Rosenbaugh** **Midwest Roadside Safety Facility**  
Best Paper Award, Transportation Research Board AFB20 Committee

**James C. Schnable** **Agronomy and Horticulture/  
Center for Plant Science Innovation**  
Outstanding Scientific Article (Asia), International Crops Research Institute for the Semi-Arid Tropics  
Early Career Award, American Society of Plant Biologists  
Early Career Award, North American Plant Phenotyping Network

**Michael Sealy** **Mechanical & Materials Engineering**  
2020 Outstanding Young Manufacturing Engineer Award, Society of Manufacturing Engineers

**Charles Shapiro** **Agronomy and Horticulture** (*emeritus*)  
Fellow, Soil Science Society of America

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

Gayle G. Arnold Award for the Best Scientific Paper (with Regina Harbourne, James A. Bovaird and Natalie A. Koziol et al.), American Academy for Cerebral Palsy and Developmental Medicine

**Jolene D. Smyth** **Sociology**  
John M. Kennedy Achievement Award, Association of Academic Survey Research Organizations

**Francisco Souto** **Art, Art History and Design**  
Lorenzo il Magnifico Award for Works on Paper, Florence Biennale International Contemporary Art Exhibition

**Joshua S. Steelman** **Civil and Environmental Engineering/Midwest Roadside Safety Facility**  
Best Paper Award, Transportation Research Board AFB20 Committee

**David Steffen** **Veterinary Medicine and Biomedical Sciences**  
E. P. Pope Award, American Association of Veterinary Laboratory Diagnosticians

**Richard K. Sutton** **Agronomy and Horticulture** (*emeritus*)  
Career Research Award in Green Roof Research, Green Roofs for Healthy Cities Research Committee

**Zhenghong Tang** **Community and Regional Planning Program/Natural Resources**  
Chester Rapkin Award, Association of Collegiate Schools of Planning

**Laura Thompson** **Eastern Nebraska Research and Extension Center**  
Excellent Audiovisual for Digital Ag Online Course: "Yield Data Post Processing," Agronomy Society of America Extension Education Community

Excellent Digital Communication for Nebraska On-Farm Research Website, Agronomy Society of America Extension Education Community

**Isabel Velázquez** **Modern Languages and Literatures**  
Fulbright Scholar Award, Brazil, Council for International Exchange of Scholars

**Kara Viesca** **Teaching, Learning and Teacher Education**  
Outstanding Leadership Certificate, American Educational Research Association's Bilingual Education Research Special Interest Group

**Hope Wabuke** **English**  
National Library of Scotland Scholar Award, Fulbright Residency, SPACE at Ryder Farm  
Fellow, Poetry Foundation's Poetry Incubator for Community Engaged Poets

**Mark Walker** **Mathematics**  
Fellow, American Mathematical Society

**Tyler G. White** **Glenn Korff School of Music**  
First Place, Orchestral Composition, The American Prize

**Jack Whittier** **Panhandle Research and Extension Center**  
Fellow, American Society of Animal Science

**Cynthia Willis-Esqueda** **Psychology/Institute for Ethnic Studies**  
Certificate of Appreciation, United States Air Force  
Fellow, Society of Personality and Social Psychology, Division 8, American Psychological Association

**Robert Wright** **Entomology**  
C.V. Riley Award, North Central Branch of the Entomological Society of America

**Judy Wu-Smart** **Entomology**  
Patriot Award, Nebraska National Guard

**Yan Xia** **Child, Youth and Family Studies**  
2018-2019 Fulbright Distinguished Chair in Social Sciences, China, Bureau of Educational and Cultural Affairs, U.S. State Department and Fulbright Scholarship Board

**David P. Yuill**

**Durham School of Architectural  
Engineering & Construction**

Science and Technology for the Built Environment Best Paper Award,  
American Society of Heating, Refrigerating and Air-Conditioning  
Engineers

**Janos Zempleni**

**Nutrition and Health Sciences**

Osborne and Mendel Award, American Society for Nutrition

**Xiao Cheng Zeng**

**Chemistry**

Highly Cited Researcher of 2019, Web of Science Group

**Ruizhi Zhang**

**Statistics**

Pritzker Doctoral Dissertation Award, Institute of Industrial and  
Systems Engineers

## Publications in Scholarly Journals

Faculty who have published in peer-reviewed scholarly journals  
July 1, 2019–June 30, 2020

*UNL co-authors (identified by those who submitted articles for inclusion) designated in red*

*Submitted by faculty, chairs/heads or deans*

### Mirzokhidjon Abdurakhmonov

### Management

With J. Ridge, A. Ingram and D. Hasija. Market reactions to non-market strategy: Congressional testimony as an indicator of firm political influence. *Strategic Management Journal*.

### Herita Akamah

### Accountancy

Severance and bad news disclosures. *Journal of Accounting, Auditing and Finance*.

### Arthur C. Allen

### Accountancy

With Brian McAllister. How financial information is used by private foundations to make capital campaign grants. *Journal of Governmental and Nonprofit Accounting*.

### Sam A. Allgood

### Economics

Age discrimination and academic labor markets. *Journal of Economic Behavior and Organization*.

With Georg Schaur. 50 years of research in the Journal of Economic Ed. *The Journal of Economic Education*.

With KimMarie McGoldrick. Setting an agenda for the future. *The Journal of Economic Education*.

### Katie Anania

### Art, Art History and Design

Walk with me: William Anastasi's stenography of the street. *Panorama: Journal of the Association of Historians of American Art*.

### John E. Anderson

### Economics

Real estate ownership and life satisfaction in transition countries. *Journal of European Real Estate Research*.

With Wenjing Li and James R. Schmidt. The effect of deed taxes on real estate prices in China. *Asia-Pacific Journal of Regional Science*.

With Junpyo Park and Eric C. Thompson. Land use, crop choice, and proximity to ethanol plants. *Land*.

### Trey Andrews

### Psychology/Institute for Ethnic Studies

With Acosta, L.M., Acosta Canchila, M.N., Estrada, S.E., and Ramos, A. Testing machismo and the gender role strain theory with Latino migrant farmworkers. *Hispanic Journal of Behavioral Sciences*.

With Haws, J.K., Acosta, L.M., Acosta Canchila, M.N., et al. Combinatorial effects of discrimination, legal status fears, adverse childhood experiences, and harsh working conditions among Latino migrant farmworkers: Testing learned helplessness hypotheses. *Journal of Latinx Psychology*.

With Vásquez, D., Ponte, L., et al. Más allá de las barreras: Competency and practice considerations in language, cultural, and social issues when delivering group CPT to Hispanic immigrants. *International Journal of Group Psychotherapy*.

With López, C.M., Snyder, A., et al. Polyvictimization, related symptoms, and familial and neighborhood contexts as longitudinal mediators of racial/ethnic disparities in violence exposure across adolescence. *Journal of Immigrant and Minority Health*.

### Troy D. Anderson

### Entomology

With J.R. Williams and D.R. Swale. Comparative effects of technical and formulated chlorantraniliprole to survivorship and locomotor activity of the honey bee (*Apis mellifera* L.). *Pest Management Science*.

### Özgür Araz

### Supply Chain Management and Analytics

Community supported agriculture: Systems thinking in action. *American Journal of Public Health*.

With N.A. Ramirez and J.W. Fowler. Decision assessment algorithms for location and capacity optimization under resource shortages. *Decision Sciences*.

With Tsan-Ming Choi, David Olson and Sibel Salman. Role of analytics for operational risk management in the era of big data. *Decision Sciences*.

With Tsan-Ming Choi, David Olson and Sibel Salman. Data analytics for operational risk management. *Decision Sciences*.

With Adrian Ramirez-Nafaratte, Megan Jehn and Fernando Wilson. The importance of widespread testing for COVID-19 pandemic: Systems thinking for drive-through testing sites. *Health Systems*.

With M. Yardim, H. Ozcebe and S. Uner. Alarming prevalence of childhood obesity and related parental factors across three socioeconomic strata in Ankara, Turkey. *Eastern Mediterranean Health Journal*.



With L. Frerichs, L. Calancie and T.T.K. Huang. Dynamic empirically-based model for understanding future trends in U.S. obesity prevalence in the context of social influences. *Obesity*.

With S. Haley, S. Li, M. Yardim and S. Uner. Perceptions of obesity prevention policies: Socioeconomic assessment in the Turkish capital. *Journal of Pediatric Nursing*.

With D. Olson and N.A Ramirez. Predictive analytics for hospital admissions from the emergency department using triage information. *International Journal of Production Economics*.

With L. Baccaglini, M. Beachy and M. Ash. Predictive factors associated with in-hospital mortality for patients across the sepsis spectrum. *Infectious Diseases in Clinical Practice*.

### **Christos Argyropoulos**      **Electrical and Computer Engineering**

With B. Jin. Self-Induced passive nonreciprocal transmission by nonlinear bifacial dielectric metasurfaces. *Physical Review Applied*.

With D.S. Khatri, Y. Li et al. Plasmonic random laser on an optical fiber tip. *Optics Express*.

With B. Jin. Nonreciprocal transmission in nonlinear PT-symmetric metamaterials using Epsilon-near-zero media doped with defects. *Advanced Optical Materials*.

With T. Guo. Tunable and broadband coherent perfect absorption by ultrathin black phosphorus metasurfaces. *Journal of the Optical Society of America*.

With Y. Li and A. Nemilentsau. Resonance energy transfer and quantum entanglement mediated by Epsilon-near-zero and other plasmonic waveguide systems. *Nanoscale*.

With N. Charchi, Y. Li et al. Small mode volume plasmoci film-coupled nanostar resonators. *Nanoscale Advances*.

### **Jena Asgarpoor**      **Master of Engineering Management Program**

An integrated platform of active learning techniques in a supply chain management program. *Proceedings of the American Society for Engineering Education*.

Asynchronous course design 101. *Proceedings of the American Society for Engineering Management International Annual Conference*.

With **Majid Nabavi**, Julia Cronin-Gilmore and Diana Maguire. Building a woman's brand through serving on nonprofit boards. *Journal of Brand Strategy*.

With Yuting Chen, **Shannon Bartelt-Hunt** et al. Managing dual academic careers. *Proceedings of the American Society for Engineering Education*.

### **Steven M. Barlow**      **Special Education and Communication Disorders/ Biological Systems Engineering/ Center for Brain, Biology and Behavior**

With Shinying Chu, Jaehoon Lee and Jingyan Wang. Effects of utterance rate and length on the spatiotemporal index in Parkinson's disease. *International Journal of Speech-Language Pathology*.

With Rebecca Custead, Jaehoon Lee et al. Wireless sensing of lower lip and thumb-index finger 'ramp-and-hold' isometric force dynamics in a small cohort of unilateral MCA stroke. *Sensors*.

### **Matthew A. Barlow**      **Management**

With J. Cameron Verhaal and Ryan W. Angus. Optimal distinctiveness, strategic categorization, and product market entry on the Google Play app platform. *Strategic Management Journal*.

### **Demet Batur**      **Supply Chain Management and Analytics**

With F. Choobineh. Selecting the best alternative based on its quantile. *INFORMS Journal on Computing*.

With Jennifer Ryan, Z. Zhao and M.C. Vuran. Dynamic pricing for wireless internet based on changing capacity and usage. *Manufacturing and Service Operations Management*.

### **Stephen Behrendt**      **English**

This is not an improvisation: Letitia Landon and the slipperiness of taxonomy. *The European Legacy: Toward New Paradigms*.

### **Andreia Bianchini**      **Food Science and Technology**

With K.C. Massarolo, C.F.J. Ferreira et al. Resistant starch and hydrothermal treatment of cornmeal: Factors in aflatoxins and fumonisin B1 reduction and bioaccessibility. *Food Control*.

With E. Valverde-Bogantes, **J. Herr** et al. Recent population changes of *fusarium* head blight pathogens: Drivers and implications. *Canadian Journal of Plant Pathology*.

### **Nathan Bicak**      **Interior Design**

Affordable access: The economic impacts of makerspaces. *Magazine on Urbanism #32: Affordable Urbanism (MONU)*.

**Christopher Bilder****Statistics**

With B. Abdalhamid, E. McCutchen et al. Assessment of specimen pooling to conserve SARS CoV-2 testing resources. *American Journal of Clinical Pathology*.

With P. Iwen, B. Abdalhamid et al. Tests in short supply? Try group testing. *Significance*.

With B. Hitt, J. Tebbs and C. McMahan. The objective function controversy for group testing: Much ado about nothing? *Statistics in Medicine*.

With P. Hou, J. Tebbs et al. Array testing with multiplex assays. *Biostatistics*.

**Dirk Black****Accountancy**

With T.E. Christensen and J.T. Ciesielski. Non-GAAP earnings: A consistency and comparability crisis? *Contemporary Accounting Research*.

CEO risk-taking incentives and relative performance evaluation. *Accounting & Finance*.

**Jeff Bradshaw****Entomology**

With G.W. Hergert, R. Wilson, R. Harveson, R. Nielsen et al. Agronomic utilization of precipitated calcium carbonate — effect of PCC on sugar beet root aphid control and herbicide dose response of kochia grown on PCC piles. *Agronomy*.

**Dawn O. Braithwaite****Communication Studies**

With Bergquist, G., Soliz, J., Everhart, K.L., and Kreimer, L. Investigating layers of identity and identity gaps in refugee resettlement experiences in the Midwestern United States. *Western Journal of Communication*.

**Anita Breckbill****University Libraries**

With Hannah Jo Smith. Follow the baton: The story of the Wagner Siegfried Idyll baton. *Fontes Artis Musicae*.

**Gary J. Brewer****Entomology**

With Florez-Cuadros, M., Berkebile, D., and Taylor, D. Effects of diet quality and temperature on stable fly (Diptera: Muscidae) development. *Insects*.

**Tami M. Brown-Brandl****Biological Systems Engineering**

Development and application of an image acquisition system for characterizing sow behaviors in farrowing stalls. *Computers and Electronics in Agriculture*.

With Leonard, S.M., H. Xin H., and B.C. Ramirez. Development and application of an image acquisition system for characterizing sow behaviors in farrowing stalls. *Computers and Electronics in Agriculture*.

With Leonard, S.M., Xin, H., et al. Effects of farrowing stall layout and number of heat lamps on sow and piglet production performance. *Animals*.

With Morris, D., Hales, K., et al. The effects of isoenergetic high-starch or high-fat diets on energy and nitrogen partitioning and utilization in lactating Jersey cows. *Journal of Dairy Science*.

With Condotta, I.C.F.S., Pilta, S.K., et al. Evaluation of low-cost depth cameras for agricultural applications. *Computers and Electronics in Agriculture*.

With Cross, A.J., Keel, B.N., et al. Feeding behavior of grow-finish swine and the impacts of heat stress. *Translational Animal Science*.

With Baber, J.R., Wickersham, T.A., et al. Effects of diet type on nutrient utilization and energy balance in drylot heifers. *Journal of Animal Science*.

With Adrion, F., Maselyne, J., et al. A review of passive radio frequency identification systems for animal monitoring in livestock facilities. *Applied Engineering in Agriculture*.

**Kelsy Burke****Sociology**

With Amy McDowell. White women who lead: God, girlfriends, and diversity projects in a national evangelical ministry. *Sociology of Race and Ethnicity*.

With Trenton Haltom. Created by God and wired to porn: Redemptive masculinity and gender beliefs in narratives of religious men's pornography addiction recovery. *Gender & Society*.

With Alice MillerMacPhee. Constructing pornography addiction's harms in science, news media, and politics. *Social Forces*.

**Anthony J. Bushard****Glenn Korff School of Music**

(Backstage) Preservation (At Kimball) Hall. *Material Reflections at Documenting Jazz: A Collection of Short Reflections on Jazz as Material Culture*.

"What to do over the week-end": Towards an understanding of distraction, advertising and newspaper coverage of the Kansas City jazz scene in the 1930s. *Jazz Research Journal*.

**Robert J. Campbell** **Management**

Born to take risk? The effect of CEO birth order on strategic risk taking. *Academy of Management Journal*.

**Janet F. Carlson** **Buros Center for Testing/Educational Psychology**

Context and regulation of homeschooling: Issues, evidence, and assessment practices. *School Psychology*.

**Les Carlson** **Marketing**

With J. Zeiss and D. Walker. Reassessing the influence of parents and advertising on children's BMI. *Journal of Current Issues & Research in Advertising*.

With J. Skiba and R. Petty. Beyond deception: Potential unfair consumer injury from various types of covert marketing. *Journal of Consumer Affairs*.

**Theresa Catalano** **Teaching, Learning, and Teacher Education**

The visual representation of dual language education. *Visual Communication*.

With L.K. Kiramba and K. Viesca. Transformative interviewing and the experiences of multilingual learners not labeled ELL in U.S. schools. *Bilingual Research Journal*.

With Ari Kohen. Googly eyes and yard signs: Deconstructing one professor's successful rebuffing of a right-wing attack on an academic institution. *Discourse & Society*.

With Fucci, T. Missing the (turning) point: The erosion of democracy at an American university. *Journal of Language and Politics*.

With Traore Moundiba, H.C. and Pir, H. "I felt valued": Multilingual microteachings and the development of teacher agency in a teacher education classroom. *Critical Multilingualism Studies*.

With Musolff, A. "Taking the shackles off": Metaphor and metonymy of migrant children and border officials in the U.S. *Metaphorik.de*.

**Heng Chen** **Supply Chain Management and Analytics**

With Senay Solak. Lower cost departures for airlines: Optimal policies under departure metering. *Transportation Research Part C: Emerging Technologies*.

**Alan C. Christensen** **Biological Sciences**

With Alexander Kozik, Beth A. Rowan et al. The alternative reality of plant mitochondrial DNA: One ring does not rule them all. *PLOS Genetics*.

**Bertrand Clarke** **Statistics**

With T. Le. In praise of partially interpretable predictors. *Journal of Statistical Analysis and Data Mining*.

With S. Amiri, J. Clarke and H. Koepke. A stabilized hybrid clustering strategy. *Journal of Computational and Graphical Statistics*.

**Jennifer Clarke** **Statistics**

With J. Ortuzar, O. Dogan et al. Quantitative assessment of microbial quality and safety risk: A preliminary case study of strengthening raspberry supply system in Chile. *Food Control*.

With K. Min, A. Galvis et al. Association between baseline abundance of *Peptoniphilus*, a Gram-positive anaerobic coccus, and wound healing outcomes of DFUs. *PLOS ONE*.

With A. Petrosyan, C. Frisbie et al. Post-ER stress biogenesis of Golgi is governed by giantin. *Cells*.

With M. Adamowicz, T. Rambo et al. Validation of MaSTR Software: Extensive study of fully-continuous probabilistic mixture analysis using PowerPlex Fusion 2-5 contributor mixtures. *Forensic Science International: Genetics Supplement Series*.

With M. Rezapour, M.A. Quintero et al. Reclassifying pseudopolyps in inflammatory bowel disease: Histologic and endoscopic description in the new era of mucosal healing. *Crohn's and Colitis*.

With E. Dutta, K. Shao et al. Dose-response assessment between folate exposure and risk of cognitive impairment: Synthesizing data from documented studies. *Risk Analysis*.

With O. Dogan, F. Mattos and B. Wang. A quantitative microbial risk assessment model of *Campylobacter* in broiler chickens: Evaluating processing interventions. *Food Control*.

With C. Penas, M. Maloof et al. Time series modeling of cell cycle exit identifies Brd4-dependent regulation of cerebellar neurogenesis. *Nature Communications*.

**Matt Cohen** **English**

Time and the bibliographer: A meditation on the spirit of book studies. *Textual Cultures*.

**Andrea S. Cupp****Animal Science**

With M.R. Plewes, J.R. Wood et al. Luteinizing hormone regulates the phosphorylation and localization of the mitochondrial effector dynamin-related protein-1 (DRP1) and steroidogenesis in the bovine corpus luteum. *Federation of American Societies for Experimental Biology Journal*.

With M.A. Abedal-Majed, J.R. Wood et al. Vascular endothelial growth factor A isoforms modulate follicle fate independent of diet through diverse signal transduction pathways. *Biology of Reproduction*.

With M.R. Plewes, J.R. Wood et al. Yes-associated protein (YAP) is required for proliferation and function of bovine granulosa cells. *Biology of Reproduction*.

**Rochelle Dalla****Child, Youth and Family Studies**

With T. Jhaveri Panchal, S. Erwin et al. Structural vulnerabilities, personal agency, and caste: Child sex trafficking in rural India. *Violence and Victims*.

With S. Erwin and L. Kreimer. Children of Mumbai's brothels: Investigating developmental prospects, primary relationships, and service provision. *Family Relations: Interdisciplinary Journal of Applied Family Science*.

**Lory J. Dance****Sociology/Institute for Ethnic Studies**

With L.A. Johnson. Ideal dialogues with immigrants of color in Sweden and the United States: A participatory-ethnographic approach. *Journal of Ethnographic and Qualitative Research*.

**Dipti A. Dev****Child, Youth, and Family Studies**

With Kailey Snyder, Zainab Rida et al. Exploring rural and urban Go NAP SACC trained child care providers' perceptions and needs regarding the promotion of physical activity and healthy eating. *Cogent Social Sciences*.

With Holly Hatton-Bowers, Lisa Franzen-Castle, Linda Reddish, Donnia Behrends, Susan M. Sheridan et al. Contextual factors influence professional development attendance among child care providers in Nebraska. *Journal of Nutrition Education and Behavior*.

With Kaysha Sleet, Susan B. Sisson et al. The impact of responsive feeding practice training on teacher feeding behaviors in tribal early care and education: The FRESH Study. *Current Developments in Nutrition*.

With Lisa Franzen-Castle, Natalie A. Williams, Donnia Behrends et al. Provider reported implementation of nutrition-related practices in childcare centers and family childcare homes in rural and urban Nebraska. *Preventive Medicine Reports*.

With Saima Hasnin and Alison Tovar. Participation in the CACFP ensures availability but not intake of nutritious foods at lunch in preschool children in child-care centers. *Journal of the Academy of Nutrition and Dietetics*.

With Carlyn Graham, Eric N. Reither et al. Does context matter? A multilevel analysis of neighborhood disadvantage and children's sleep health. *Sleep Health*.

**Angela M. Dietsch** **Special Education and Communication Disorders**

With Ross Westemeyer, William G. Pearson Jr. and Douglas H. Schultz. Genetic taster status as a mediator of neural activity and swallowing mechanics in healthy adults. *Frontiers in Neuroscience*.

With H.D. Dorris, William G. Pearson Jr. et al. Taste manipulation and swallowing mechanics in trauma-related sensory-based dysphagia. *Journal of Speech, Language, and Hearing Research*.

**Shudipto Dishari****Chemical and Biomolecular Engineering**

With S. Farzin, A. Sarella et al. Fluorocarbon based ionomers with single and multi-acid side chains at nanoscale interfaces. *Journal of Physical Chemistry C*.

With E. Zamani, R. Saha et al. Mechanistic understanding of the interactions of cationic conjugated oligo- and polyelectrolytes with wild-type and ampicillin-resistant *Escherichia coli*. *Scientific Reports*.

**Thomas Dotzel****Marketing**

With Venkatesh Shankar. The relative effects of business-to-business (vs. business-to-business consumer) service innovations on firm value and firm risk: An empirical analysis. *Journal of Marketing*.

**Jimmy Downes****Accountancy**

With Matt Bjornsen and Tom Omer. The consequences of deviating from financial reporting industry norms: Evidence from the disclosure of foreign cash. *Journal of Accounting and Public Policy*.

With John Abernathy, Brooke Beyer and Eric Rapley. High-quality information technology and capital investment decisions. *Journal of Information Systems*.

With Mollie Mathis and Lisa Kutcher. Firm-specific currency exposure, repatriation, and the market value of repatriation taxes. *Journal of the American Taxation Association*.

**Patrick H. Dussault****Chemistry**

With Moriah Locklear. The chemistry of peresters. *European Journal of Organic Chemistry*.

With Horn, Alissa. Synthesis of alpha-cyano and alpha-sulfonyl cyclic ethers via intramolecular reactions of peroxides with sulfone- and nitrile-stabilized carbanions. *The Journal of Organic Chemistry*.

**Bruce Dvorak****Civil and Environmental Engineering/  
Biological Systems Engineering**

With Shaobin Li and Jeyam Subbiah. Environmental and occupational impacts from U.S. beef slaughtering are of same magnitude of beef foodborne illnesses on human health. *Environment International*.

With **Chris Duerschner** and **Ashraf Aly Hassan**. Biofiltration of acetaldehyde resulting from ethanol manufacturing facilities. *Chemosphere*.

With **Matthew Thompson**, **Mohamed Dahab** and **Robert Williams**. Opportunities and barriers to improving the energy efficiency of small water resource recovery facilities: Case studies within Nebraska. *Journal of Environmental Engineering, AS*.

With Jian Li, R. Ziara et al. Understanding the sustainability niche of continuous flow tubular microbial fuel cells on beef packing wastewater treatment. *Journal of Cleaner Production*.

With Shaobin Li, Y.Qin and Jeyam Subbiah. Life cycle assessment of the U.S. beef processing through integrated hybrid approach. *Journal of Cleaner Production*.

**Katie Edwards****Nebraska Center for Research on  
Children, Youth, Families and Schools**

With Banyard, V.L., and Kirkner, A. Parents matter: Rates and correlates of parental discussions with teens about prevention topics. *Journal of Interpersonal Violence*.

With Orchowski, L.M., Hollander, J.A., et al. Integrating sexual assault resistance, bystander and men's social norms strategies to prevent sexual violence on college campuses: A call to action. *Trauma, Violence & Abuse*.

With Waterman, E.A., Makoni, E.I., et al. Zimbabwean stakeholders' perspectives on causes of and solutions to gender-based violence in their community: A focus group. *Violence Against Women*.

With Banyard, V., Jones, L., and Mitchell, K. Poly-strengths and peer violence perpetration: What strengths can add to risk factor analyses. *Journal of Youth and Adolescence*.

With Banyard, V., Mitchell, K., et al. Context matters: Reactive and proactive bystander action to prevent sexual and dating violence in high schools. *Journal of School Violence*.

With Banyard, V.L., and Rizzo, A.J. Community actionists: Understanding adult bystanders to sexual and domestic violence prevention in communities. *Psychology of Violence*.

With Banyard, V.L. Prevalence and correlates of sexual revictimization in middle and high school youth. *Journal of Interpersonal Violence*.

With Rizzo, A., and Banyard, V.L. Unpacking adolescent masculinity: Relations between boys' sexual harassment victimization, perpetration, and gender role beliefs. *Journal of Family Violence*.

With Waterman, E.A., Baker, M.J., et al. A mixed-method process evaluation of an intervention to improve social reactions to disclosures of sexual assault and partner abuse. *Journal of Interpersonal Violence*.

With Waterman, E.A., Rodriguez, L.M., et al. Predictors of uptake and retention in an intervention to improve social reactions to disclosures of sexual assault and partner abuse. *Journal of American College Health*.

With Waterman, E.A., Siller, L., and Dworkin, E.R. The association of stalking victimization with adolescents' depressed mood and school mattering. *Journal of Interpersonal Violence*.

**Lynne Elkins****Earth and Atmospheric Sciences**

With C.M. Meyzen, S. Callegaro et al. Assessing origins of end-Triassic tholeiites from Eastern North America using hafnium isotopes. *Geochemistry, Geophysics, Geosystems*.

**Kent Eskridge****Statistics**

With Kismiantini, S. Zhang et al. Comparing piecewise regression and hysteresis models in assessing beef cattle heat stress. *Transactions of the ASABE*.

With R. Mugabi, Y.B. Byaruhanga and C.L. Weller. Performance evaluation of a hammer mill during grinding of maize grains. *Agricultural Engineering International: CIGR Journal*.

With C. Mukuma, G. Godoy-Lutz et al. Use of culture and molecular methods for identification and characterization of dry bean fungal root rot pathogens in Zambia. *Tropical Plant Pathology*.

With C. Liu, M. Guttieri et al. Selection of bread wheat for low grain cadmium concentration at the seedling stage using hydroponics versus molecular markers. *Crop Science*.

With M. Li, E. Liu and M. Wilkins. Enhancement of polyhydroxybutyrate (PHB) production by 10-fold from alkaline pretreatment liquor with an oxidative enzyme-mediator-surfactant system under Plackett-Burman and central composite designs. *Bioresource Technology*.

With M. Li and M.R. Wilkins. Optimization of polyhydroxybutyrate production by experimental design of combined ternary mixture (glucose, xylose and arabinose) and process variables (sugar concentration, molar C: N ratio). *Bioprocess and Biosystems Engineering*.

### **Ilya I. Fabrikant** **Physics and Astronomy**

With H. Ambalampitiya. Classical theory of laser-assisted spontaneous bremsstrahlung. *Physical Review A*.

With H.B. Ambalampitiya, D.V. Fursa et al. Charge transfer in positronium-proton collisions: Comparison of classical and quantum-mechanical theories. *Journal of Physics B: Atomic, Molecular and Optical Physics*.

With H. Ambalampitiya. Semiclassical theory of laser-assisted radiative recombination. *Physical Review A*.

With Stanislav A. Pshenichnyuk, Alberto Modelli et al. Resonance electron interaction with five-membered heterocyclic compounds: Vibrational Feshbach resonances and hydrogen-atom stripping. *Physical Review A*.

### **Irina Filina** **Earth and Atmospheric Sciences**

Crustal architecture of the northwestern and central Gulf of Mexico from integrated geophysical analysis. *Interpretation*.

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**Lily M. Wang****Durham School of Architectural Engineering & Construction**

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**Liying Wang****Finance**

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**Yingying Wang****Special Education and Communication Disorders/ Center for Brain, Biology and Behavior**

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**Lorey A. Wheeler****Nebraska Center for Research on Children, Youth, Families and Schools**

With B.A. Gurney, M. German et al. Increasing behavioral health appointment attendance using warm handoffs in an integrated primary care setting. *The Behavior Therapist*.

With A.J. Yeo, M. German et al. Self-harm and self-regulation in urban ethnic minority youth: A pilot application of dialectical behavior therapy for adolescents. *Child and Adolescent Mental Health*.

With P.G. Arora and M.Y. Delgado. The distal role of adolescents' awareness of and perceived discrimination on young adults' socioeconomic attainment among Mexican-origin immigrant families. *Journal of Youth and Adolescence*.

**Cynthia Willis-Esqueda****Psychology/Institute for Ethnic Studies**

With Palmer Bacon, J., and Spaulding, W. Stress, trauma, racial/ethnic group membership, and HPA function: Utility of hair cortisol. *American Journal of Orthopsychiatry*.

With Shepherd, S.M., Newton, D., et al. The challenge of cultural competence in the workplace: Perspectives of healthcare providers. *BMC Health Services Research*.

With Cantone, J. A., and Martinez, L. N. Sounding guilty: How accent bias affects juror judgments of culpability. *Journal of Ethnicity in Criminal Justice*.

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

With Jessie Fernandez, Raquel O. Rocha et al. Genetic evidence for *Magnaporthe oryzae* vitamin B3 acquisition from rice cells. *Microbiology*.

With Gang Li, Xiaobo Qi et al. Terminating rice innate immunity induction requires a network of antagonistic and redox-responsive E3 ubiquitin ligases targeting a fungal sirtuin. *New Phytologist*.

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

With A. Assefa, Y. Dessalegn et al. Maize-lupine intercrop response to applied nitrogen and phosphorus in northwestern Ethiopia. *African Journal of Agricultural Research*.

With F.M. Liben, A. Tigist et al. Maize and sorghum nutrient response functions for Ethiopia. *Nutrient Cycling in Agroecosystems*.

With F.M. Liben, T. Midega and T. Tufa. Barley and wheat nutrient responses for Shewa Ethiopia. *Agronomy Journal*.

With I. Serme, B. Tarfa and K. Ouattara. Maize response to applied nutrients for the Sudan and Guinea savannas of West Africa. *Agronomy Journal*.

With H. Blanco-Canqui, J. Lindquist et al. Identifying the drivers and predicting the outcome of conservation agriculture globally. *Agricultural Systems*.

With F. Liben and A. Tirfessa. Geospatial modeling of conservation tillage and nitrogen timing effects on yield and soil properties. *Agricultural Systems*.

With N.L. Nabahungu, A.R. Cyamweshi et al. Lowland rice yield and economic response to fertilizer application in Rwanda. *Agronomy Journal*.

With J.P. Garcia-Montealegre, J. Schepers and R. Little. Applied organic nitrogen: Pre-plant and in-season estimation of corn nitrogen uptake. *Field Crops Research*.

With J.P. Garcia-Montealegre, R. Ferguson et al. Nitrogen sidedress guided by corn canopy reflectance for manured fields. *Agronomy Journal*.

With H. Blanco-Canqui, J.L. Lindquist et al. Short-term impacts of conservation agriculture on soil physical properties and productivity. *Agronomy Journal*.

**Brenda G. Wristen****Glenn Korff School of Music**

Let them eat cake! Teaching piano using stacked engagement layers. *The Piano Magazine*.

**Julie Wu****Finance**

With Ekkehart Boehmer and Kingsley Fong. Algorithmic trading and market quality: International evidence. *Journal of Financial and Quantitative Analysis*.

With Stanislava Nikolova and Liyang Wang. Institutional allocations in the primary market for corporate bonds. *Journal of Financial Economics*.

With E. Boehmer, C. Jones and X. Zhang. What do short sellers know? *Review of Finance*.

With Andrew Zhang. Short selling and market anomalies. *Journal of Financial Markets*.

**Judy Wu-Smart****Entomology**

With Olgun, T., Everhart, S., and Anderson, T.D. Comparative analysis of viruses in four bee species collected from agricultural, urban, and natural landscapes. *PLOS ONE*.

With Simone-Finstrom, M., Nino, E.L., et al. Proceedings of the 2019 American Bee Research Conference. *Insects*.

**Tadeusz A. Wysocki****Electrical and Computer Engineering**

With Denis Shitov, Elena Pirogova and Margaret Lech. Learning acoustic word embeddings with dynamic time warping triplet networks. *IEEE Access*.

With E.J. Clement, T.T. Schulze et al. Stochastic simulation of cellular metabolism. *IEEE Access*.

**Cindy Xu****Finance**

With David Landriault and B. Li, T. Shi. On the distribution of classic and some exotic ruin times. *Insurance Mathematics and Economics*.

**Liang Xu****Supply Chain Management and Analytics**

With Hui Zhao and Nicholas C Petruzzi. Inducing compliance with post-market studies for drugs under FDA's accelerated approval pathway. *Manufacturing & Service Operations Management*.

With Hui Zhao and Enno Siemsen. Inventory sharing and demand-side underweighting. *Manufacturing & Service Operations Management*.

**Yiqi Yang****Textiles, Merchandising and Fashion Design**

With Mi, X., Chang, Y., and Xu, H.L. Valorization of keratin from food wastes via crosslinking using non-toxic oligosaccharide derivatives. *Food Chemistry*.

With Liu, L.Y., Mu, B.N., and Li, W. Cost-effective reactive dyeing using spent cooking oil for minimal discharge of dyes and salts. *Journal of Cleaner Production*.

With Mu, B.N., Li, W., et al. Salt-free and environment-friendly reactive dyeing of cotton in cottonseed oil/water system. *Cellulose*.

With Mu, B.N., and Hassan, F. Controlled assembly of secondary keratin structures for continuous and scalable production of tough fibers from chicken feathers. *Green Chemistry*.



With Mu, B.N., Liu, L.Y., and Li, W. A water/cottonseed oil bath with controlled dye sorption for high dyeing quality and minimum discharges. *Journal of Cleaner Production*.

With Liu, L.Y., Mu, B.N., and Li, W. A semi-stable emulsion system based on spent cooking oil for pilot-scale reactive dyeing with minimal discharges. *ACS Sustainable Chemistry & Engineering*.

With Zhu, X.Y., Hou, X.L., et al. Chitosan/Gallnut tannins composite fiber with improved tensile, antibacterial and fluorescence properties. *Carbohydrate Polymers*.

With Mi, X., Mu, B.N., et al. From poultry wastes to quality protein products via restoration of secondary structure with extended disulfide linkages. *ACS Sustainable Chemistry & Engineering*.

With Chang, Y., Chen, Z.Z., and Pan, G.W. Enhancing the recrystallization ability of bio-based polylactide stereocomplex by in situ construction of multi-block branched conformation. *Journal of Materials Science*.

### Jiujie Yu Nutrition and Health Sciences

With J. Zempleni, S.D. Kachman, S.K. Natarajan et al. Protective role of shiitake mushroom-derived exosome-like nanoparticles in D-galactosamine and lipopolysaccharide-induced acute liver injury in mice. *Nutrients*.

### David P. Yuill Durham School of Architectural Engineering & Construction

With A. Ebrahimifakhar. Inverse estimation of thermophysical properties and initial moisture content of cereal grains during deep-bed grain drying. *Biosystems Engineering*.

With Mehdi Mehrabi. A laboratory test method to realistically simulate air side fouling of condensers (RP-1705). *Science and Technology for the Built Environment*.

With Alireza Behfar and Yuebin Yu. Automated fault detection and diagnosis for supermarkets' method selection, replication, and applicability. *Energy and Buildings*.

With Y. Hu and A. Ebrahimifakhar. The effects of outdoor air-side fouling on frost growth and heat transfer characteristics of a microchannel heat exchanger: An experimental study. *International Journal of Heat and Mass Transfer*.

### Janos Zempleni Nutrition and Health Sciences

With M. Sandri, J. Shu, S. Kachman and J. Cui. Milk exosomes and microRNAs cross the placenta and promote embryo survival in mice. *Reproduction*.

With F. Zhou, H.A. Paz, J. Shu, M. Sadri, J. Cui, S.D. Kachman and S.C. Fernando. Dietary bovine milk exosomes and their RNA cargos elicit changes in bacterial communities in C57BL/6 mice. *American Journal of Gastrointestinal and Liver Physiology*.

With D. Wu, H. Kittana, J. Shu, S.D. Kachman, J. Cui and A.E. Ramer-Tait. Dietary depletion of milk exosomes and their microRNA cargos elicits a depletion of miR-200a-3p and elevated intestinal inflammation and CXCL9 expression in Mdr1a<sup>-/-</sup> mice. *Current Developments in Nutrition*.

With E. Mutai and A.E. Ramer-Tait. MicroRNAs in bovine milk exosomes are bioavailable in humans but do not elicit a robust pro-inflammatory cytokine response. *BMC ExRNA*.

With S. Sukreet, F. Zhou, D. Wu and E. Mutai. Milk-derived exosomes and metabolic regulation. *Annual Review of Animal Biosciences*.

With B. Liu, Y. Lu, X. Chen, P. Muthuraj, X. Li, M. Pattabiraman, S. Kachman, S.K. Natarajan and J. Yu. Protective role of shiitake mushroom-derived exosome-like nanoparticles in D-galactosamine and lipopolysaccharide-induced liver injury in mice. *Nutrients*.

With A. Leiferman, J. Shu, B. Upadhyaya and J. Cui. Storage of extracellular vesicles in human milk, and microRNA profiles in human milk exosomes and infant formulas. *Journal of Pediatric Gastroenterology and Nutrition*.

With K.O. Casavale, J.K.C. Ahuja et al. NIH workshop on human milk composition: Summary and visions. *The American Journal of Clinical Nutrition*.

With S.D. Kachman, J. Cui, A.E. Ramer-Tait et al. Dietary depletion of milk exosomes and their microRNA cargos elicits a depletion of miR-200a-3p and elevated intestinal inflammation and chemokine (C-X-C Motif) ligand 9 expression in Mdr1a<sup>-/-</sup> mice. *Current Developments in Nutrition*.

With A. Leiferman, J. Cui et al. Storage of extracellular vesicles in human milk, and microRNA profiles in human milk exosomes and infant formulas. *Journal of Pediatric Gastroenterology and Nutrition*.

### Yuzhen Zhou Statistics

With Ronghao Wang, Yumou Qiu et al. A high-throughput phenotyping pipeline for image processing and functional growth curve analysis. *Plant Phenomics*.

## Shengchao Zhuang

## Finance

With K.S. Tan, P.Y. Wei and W. Wei. Optimal dynamic reinsurance policies under a generalized Denneberg's absolute deviation principle. *European Journal of Operational Research*.

## Ruizhi Zhang

## Statistics

With S. Li, L. Wang et al. Temporal logic point processes. *Proceedings of the International Conference on Machine Learning*.

With Zou, S. A game-theoretic approach to sequential detection in adversarial environments. *Proceedings of the IEEE International Symposium on Information Theory*.

With Suh, N., and Mei, Y. Adaptive online monitoring of the Ising model. *Proceedings of the 57th Annual Allerton Conference on Communication, Control, and Computing*.

## Sarah J. Zuckerman

## Educational Administration

The role of rural school leaders in a school-community partnership. *Theory and Practice in Rural Education*.

Why can't this work here? Social innovation and collective impact in a micropolitan community. *Community Development*.

With Amanda L. Garrett, Susan Sarver and Catherine Huddleston-Casas. Playing well with others: A case study of collective impact in the early care and education policy arena. *International Journal of Childcare and Education Policy*.

## CMS Collaboration: Ken Bloom, Dan Claes, Frank Golf, Ilya Kravchenko, Greg Snow et al. Physics and Astronomy

The CMS Collaboration comprises more than 4,000 particle physicists, engineers, computer scientists, technicians and students from around 200 institutes and universities from more than 40 countries.

The collaboration operates and collects data from the Compact Muon Solenoid, one of the general-purpose particle detectors at CERN's Large Hadron Collider in Geneva, Switzerland.

In keeping with CERN's commitment to open access for high-energy physics, the scientific results from CMS are shared openly with the world. A number of faculty members in UNL's Department of Physics and Astronomy are part of the CMS Collaboration and have contributed to an impressive body of literature over the past year.

Measurement of the top quark polarization and  $t\bar{t}$  spin correlations using dilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review D*. Oct. 8, 2019.

Search for dark photons in decays of Higgs bosons produced in association with Z bosons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Oct. 10, 2019.

Measurement of the top quark Yukawa coupling from  $t\bar{t}$  kinematic distributions in the lepton+jets final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review D*. Oct. 17, 2019.

Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum. *Journal of High Energy Physics*. Oct. 25, 2019.

Measurement of the average very forward energy as a function of the track multiplicity at central pseudorapidities in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. Nov. 5, 2019.

Search for MSSM Higgs bosons decaying to  $\mu+\mu^-$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. Nov. 10, 2019.

Measurements of triple-differential cross sections for inclusive isolated-photon+jet events in pp collisions at  $\sqrt{s} = 8$  TeV. *The European Physical Journal C*. Nov. 25, 2019.

Search for supersymmetry using Higgs boson to diphoton decays at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Dec. 4, 2019.

Search for anomalous triple gauge couplings in WW and WZ production in lepton + jet events in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Dec. 9, 2019.

Measurements of differential Z boson production cross sections in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Dec. 9, 2019.

Search for long-lived particles using delayed photons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review D*. Dec. 9, 2019.

Search for physics beyond the standard model in events with overlapping photons and jets. *Physical Review Letters*. Dec. 11, 2019.

Study of the  $B^+ \rightarrow J/\psi^- \Lambda p$  decay in proton-proton collisions at  $\sqrt{s} = 8$  TeV. *Journal of High Energy Physics*. Dec. 12, 2019.

Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review D*. Dec. 20, 2019.

Searches for physics beyond the standard model with the MT2 variable in hadronic final states with and without disappearing tracks in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. Jan. 3, 2020.

Search for electroweak production of a vector-like T quark using fully hadronic final states. *Journal of High Energy Physics*. Jan. 8, 2020.



Search for light pseudoscalar boson pairs produced from decays of the 125 GeV Higgs boson in final states with two muons and two nearby tracks in pp collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. Jan. 10, 2020.

Search for a charged Higgs boson decaying into top and bottom quarks in events with electrons or muons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Jan. 16, 2020.

Evidence for WW production from double-parton interactions in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. Jan. 17, 2020.

Search for supersymmetry with a compressed mass spectrum in events with a soft  $\tau$  lepton, a highly energetic jet, and large missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review Letters*. Jan. 29, 2020.

Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. Jan. 31, 2020.

Search for top squark pair production in a final state with two tau leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Feb. 3, 2020.

Combined search for supersymmetry with photons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. Feb. 10, 2020.

Measurement of the top quark pair production cross section in dilepton final states containing one  $\tau$  lepton in pp collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. Feb. 28, 2020.

Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of Instrumentation*. Feb. 28, 2020.

Search for direct pair production of supersymmetric partners to the  $\tau$  lepton in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. March 3, 2020.

Bose-Einstein correlations of charged hadrons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 3, 2020.

Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 4, 2020.

Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 6, 2020.

Measurement of top quark pair production in association with a Z boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 10, 2020.

Search for new neutral Higgs bosons through the  $H \rightarrow ZA \rightarrow l+l-b\bar{b}$  process in pp collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 10, 2020.

Observation of the  $\Lambda 0b \rightarrow J/\psi \Lambda \phi$  decay in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. March 10, 2020.

Search for physics beyond the standard model in multilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 10, 2020.

Search for a heavy pseudoscalar Higgs boson decaying into a 125 GeV Higgs boson and a Z boson in final states with two tau and two light leptons at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 11, 2020.

Search for lepton flavour violating decays of a neutral heavy Higgs boson to  $\mu\tau$  and  $e\tau$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. March 18, 2020.

A search for the standard model Higgs boson decaying to charm quarks. *Journal of High Energy Physics*. March 24, 2020.

Search for supersymmetry in pp collisions at  $\sqrt{s} = 13$  TeV with  $137 \text{ fb}^{-1}$  in final states with a single lepton using the sum of masses of large-radius jets. *Physical Review D*. March 25, 2020.

Search for a narrow resonance lighter than 200 GeV decaying to a pair of muons in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physical Review Letters*. April 3, 2020.

Measurement of the  $t\bar{t}b\bar{b}$  production cross section in the all-jet final state in pp collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. April 10, 2020.

Running of the top quark mass from proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. April 10, 2020.

Study of excited  $\Lambda 0b$  states decaying to  $\Lambda 0b\pi^+\pi^-$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. April 10, 2020.

Constraints on the  $\chi c1$  versus  $\chi c2$  polarizations in proton-proton collisions at  $\sqrt{s} = 8$  TeV. *Physical Review Letters*. April 24, 2020.

Experimental study of different silicon sensor options for the upgrade of the CMS Outer Tracker. *Journal of Instrumentation*. April 24, 2020.

Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. April 27, 2020.

Measurement of properties of  $B_0$ s  $\rightarrow \mu^+\mu^-$  decays and search for  $B_0 \rightarrow \mu^+\mu^-$  with the CMS experiment. *Journal of High Energy Physics*. April 28, 2020.

Calibration of the CMS hadron calorimeters using proton-proton collision data at  $\sqrt{s} = 13$  TeV. *Journal of Instrumentation*. May 5, 2020.

Measurement of differential cross sections and charge ratios for t-channel single top quark production in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *The European Physical Journal C*. May 6, 2020.

Search for high mass dijet resonances with a new background prediction method in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. May 8, 2020.

Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment. *Journal of High Energy Physics*. May 8, 2020.

Study of  $J/\psi$  meson production inside jets in pp collisions at  $\sqrt{s} = 8$  TeV. *Physics Letter B*. May 10, 2020.

Search for an excited lepton that decays via a contact interaction to a lepton and two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. May 12, 2020.

Measurement of the jet mass distribution and top quark mass in hadronic decays of boosted top quarks in pp collisions at  $\sqrt{s} = 13$  TeV. *Physical Review Letters*. May 21, 2020.

Determination of the strong coupling constant  $\alpha_S(m_Z)$  from measurements of inclusive  $W^\pm$  and Z boson production cross sections in proton-proton collisions at  $\sqrt{s} = 7$  and 8 TeV. *Journal of High Energy Physics*. June 1, 2020.

Identification of heavy, energetic, hadronically decaying particles using machine-learning techniques. *Journal of Instrumentation*. June 3, 2020.

Measurements with silicon photomultipliers of dose-rate effects in the radiation damage of plastic scintillator tiles in the CMS hadron endcap calorimeter. *Journal of Instrumentation*. June 8, 2020.

Search for dijet resonances using events with three jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV. *Physics Letter B*. June 10, 2020.

A measurement of the Higgs boson mass in the diphoton decay channel. *Physics Letter B*. June 10, 2020.

Measurement of the cross section for electroweak production of a Z boson, a photon and two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV and constraints on anomalous quartic couplings. *Journal of High Energy Physics*. June 10, 2020.

Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  and 5.02 TeV. *The European Physical Journal C*. June 13, 2020.

Strange hadron production in pp and pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV. *Physical Review C*. June 22, 2020.

Measurement of the top quark forward-backward production asymmetry and the anomalous chromoelectric and chromomagnetic moments in pp collisions at  $\sqrt{s} = 13$  TeV. *Journal of High Energy Physics*. June 24, 2020.

## Presentations at Professional Conferences

Faculty who have presented at professional conferences  
July 1, 2019–June 30, 2020

*UNL co-presenters (identified by those who submitted items for inclusion) designated in red*

*Submitted by faculty, chairs/heads or deans*

### Troy D. Anderson

### Entomology

Presenter/speaker. Impacts of in-hive pesticides on bee health. Entomological Society of America Annual Meeting. Nov. 17-20, 2019.

Presenter/speaker. Sub-lethal impacts of pesticides on bees. Fourth International Conference on Pollinator Biology, Health and Policy, UC Davis Honey and Pollination Center. July 19, 2019.

### Trey Andrews

### Psychology/Center for Ethnic Studies

Presenter/speaker, with Reyes, S., and Ramos, A.K. Stress predictors for avoidance of care in migrant farm workers. 41st Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine. April 1-4, 2020.

Presenter/speaker, with Acosta, L.M., Haws, J.K., and Acosta Canchila, M.N. Extending written exposure therapy to Spanish-speaking immigrants: Treatment perceptions and open pilot trial outcomes for overcoming PTSD. Annual Conference of the National Latinx Psychological Association. Oct. 2019.

Poster presenter, with Acosta, L.M., Acosta Canchila, M.N., and Haws, J.K. Barriers and facilitators of treatment completion among Spanish-speaking immigrants receiving a novel PTSD treatment. Annual Conference of the National Latinx Psychological Association. Oct. 2019.

Poster presenter, with Acosta Canchila, M.N., Acosta, L.M., and Haws, J.K. Perceived barriers to written exposure therapy and mental health treatments: Differences across treatment providers and users. Annual Conference of the National Latinx Psychology Association. Oct. 2019.

### Christos Argyropoulos

### Electrical and Computer Engineering

Presenter/speaker, with B. Jin. Robust self-induced nonreciprocal transmission in nonlinear pt-symmetric epsilon-near-zero metamaterials. Conference on Lasers and Electro-Optics Technical Conference. May 10-15, 2020.

Presenter/speaker, with D.S. Khatri, Y. Li, J. Chen, E.A. Kwizera, X. Huang and T.B. Hoang. Plasmon-assisted coherent random lasing. American Physical Society March Meeting. March 2-6, 2020.

Presenter/speaker, with Y. Li. Epsilon-near-zero plasmonic nanowaveguides to achieve efficient resonance energy transfer and quantum entanglement. American Physical Society March Meeting. March 2-6, 2020.

Presenter/speaker, with B. Jin. Strong nonreciprocal transmission self-induced by nonlinear PT-symmetric metamaterials. American Physical Society March Meeting. March 2-6, 2020.

Presenter/speaker, with T. Guo, B. Jin, L. Zhu and P. Y. Chen. Tunable THz generation and enhanced nonlinear effects with active and passive graphene hyperbolic metamaterials. International Society for Optics and Photonics (SPIE) West. Feb. 1-6, 2020.

Presenter/speaker, with B. Jin. Strong self-induced nonreciprocal transmission by using nonlinear PT-symmetric epsilon-near-zero metamaterials. SPIE Photonics West. Feb. 1-6, 2020.

Presenter/speaker, with Y. Li. Active epsilon-near-zero plasmonic waveguides to achieve exceptional points and light amplification at the nanoscale. SPIE Photonics West. Aug. 11-15, 2019.

Presenter/speaker, with E. O'Leary. Time and frequency domain modeling of thermo-plasmonic effects. National Nanotechnology Coordinated Infrastructure Research Experience for Undergraduates Convocation, hosted by Cornell Nanoscale Facility. Aug. 10-13, 2019.

Presenter/speaker, with T. Guo. Polarization-independent and broadband THz coherent perfect absorber based on black phosphorus bifacial metasurfaces. Institute of Electrical and Electronics Engineers International Symposium on Antennas and Propagation and North American Radio Science Meeting. July 7-12, 2019.

Presenter/speaker, with Y. Li. Slow light at the nanoscale based on active epsilon-near-zero plasmonic waveguides, Institute of Electrical and Electronics Engineers International Symposium on Antennas and Propagation and North American Radio Science Meeting. July 7-12, 2019.

### Jena Asgarpoor

### Master of Engineering Management Program

Presenter/speaker, with Majid Nabavi. Online versus residential exam and course average performance: A comparative assessment. Innovation in Pedagogy and Technology Symposium. May 12, 2020.

Presenter/speaker, with Yaoling Wang. Program management strategies and student success practices for a fully asynchronous online professional master's program. Innovation in Pedagogy and Technology Symposium. May 12, 2020.

**Rachel Azima****English**

Presenter/speaker, with Kelsey Hixson-Bowles and Neil Simpkins. Crafting our conferences: The racial climate survey for writing center professional gatherings. International Writing Center Association Conference. Oct. 16-19, 2019.

**Diane Barger****Glenn Korff School of Music**

Panel discussion participant, with Sarah Watts, Elizabeth Crawford et al. Auxiliary clarinets. The ICA Plays On, International Clarinet Association. June 27, 2020.

Panel discussion participant, with Denise Gainey. Interview with the Amicitia Duo: Commissioning, recording, and friendship. Clarinet Connections, Clarinet Mentors. May 11, 2020.

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

Presenter/speaker, with Jaehoon Lee, Rebecca Custead et al. Orofacial and digit force dynamics in chronic MCA ischemic stroke. International Motor Speech Conference. Feb. 2020.

**Nathan Bick****Interior Design**

Presenter/speaker, with **Steven Hardy**. Participatory processes in a collaborative design studio. EDRA 51 - Transform: Socially Embedded Collaboration, Environmental Design Research Conference. April 5, 2020.

**Christopher Bilder****Statistics**

Presenter/speaker, with Mokalled, S., McMahan, C., et al. Acknowledging the dilution effect in group testing regression: A new approach. Eastern North American Region of the International Biostatistics Society Meeting. March 24, 2020.

Presenter/speaker, with McMahan, C., Tebbs, J., and Joyner, C. From mixed-effects modeling to spike and slab variable selection: A Bayesian regression model for group testing data. International Conference of the European Research Consortium for Informatics and Mathematics Working Group on Computational and Methodological Statistics. Dec. 14, 2019.

Presenter/speaker. In or out? The new flagstick dilemma for putting in golf. Midwest Sports Analytics Meeting. Nov. 23, 2019.

Presenter/speaker, with McMahan, C., Liu, Y., and Tebbs, J. An additive regression model for group testing data. Institute for Operations Research and the Management Sciences Annual Meeting. Oct. 20, 2019.

Presenter/speaker. In or out? The new flagstick dilemma for putting in golf. New England Symposium on Statistics in Sports. Sept. 28, 2019.

Presenter/speaker, with Tebbs, J., and McMahan, C. Strategies for pooling in array testing configurations with multiplex assays. Joint Statistical Meetings. July 30, 2019.

**Erin Blankenship****Statistics**

Presenter/speaker. Lessons learned: Revising an online introductory course. Joint Statistics Meetings. Aug. 2019.

Presenter/speaker. Lessons learned: Revising an online introductory course. Invited webinar sponsored by the American Statistical Association Section on Teaching Statistics in the Health Sciences. Nov. 2019.

**Kenneth Bloom****Physics and Astronomy**

Presenter/speaker (for the CMS Collaboration). Search for associated production of a Higgs boson and a single top quark in proton-proton collisions at  $\sqrt{s} = 13$  TeV. Meeting of the Division of Particles and Fields of the American Physical Society. July 29-Aug. 2, 2019.

Presenter/speaker (for the D0 Collaboration). Measurement of the  $W$   $p_T$  distribution in proton-antiproton collisions at D0. Meeting of the Division of Particles and Fields of the American Physical Society. July 29-Aug. 2, 2019.

**David J. Boxler****Entomology**

Presenter/speaker, with **G. Brewer**. Nebraska research report. S-1076 Committee Annual Meeting. Jan. 15-17, 2020.

**Jeff D. Bradshaw****Entomology**

Presenter/speaker, with **Peterson J., Wright R., Hunt, T., and McMechan, A.J.** Improving IPM adoption through clientele collaboration in applied ecology. Entomological Society of America Annual Meeting. Nov. 20, 2019.

**Anita Breckbill****University Libraries**

Presenter/speaker. Dvořák and the birds of Spillville, Iowa. Mountain-Plains Music Library Association Annual Meeting. May 15, 2020.

**Tami Brown-Brandl****Biological Systems Engineering**

Presenter/speaker. Using data streams to create management information. American Society of Swine Veterinarians. March 2020.

Presenter/speaker. Precision animal management: The future of animal ag? American Dairy Science Association/American Society of Animal Science Midwest Meeting. March 2020.

Presenter/speaker. Bringing technology to animal production facilities. University of Nebraska at Omaha Seminar Series. Department of Biomechanics and the Center for Research in Human Movement Variability. Oct. 2019.

Presenter/speaker. Monitoring animal health and welfare with data streams. International Symposium on Precision Systems and Data Analysis in Animal Agriculture. Sept. 2019.

### **Stephen M. Buhler**

### **English**

Presenter/speaker. The politics of necromancy, opening remarks for seminar on the supernatural and transcendent in Shakespeare on screen. Shakespeare Association of America Annual Meeting. April 15-18, 2020.

Presenter/speaker. The dramaturg's progress: A question of audiences. Blackfriars Conference, American Shakespeare Center. Oct. 22-27, 2019.

### **Anthony J. Bushard**

### **Glenn Korff School of Music**

Presenter/speaker. "What to do over the week-end": Towards an understanding of distraction, advertising and newspaper coverage of the Kansas City jazz scene in the 1930s. Documenting Jazz 2020, Birmingham City University, UK. Jan. 16-18, 2020.

Presenter/speaker. Creating interactive content for the 21st Century music student: Reinvigorating text development in the foundational course and beyond. National Meeting of the American Musicological Society. Oct. 31-Nov. 3, 2019.

### **Les Carlson**

### **Marketing**

Presenter/speaker, with Robert L. Harrison and Ben Blackford. Consumer responses to sexual humor advertisements. Association for Consumer Research Science 50th Annual Conference, Become Wise: The Golden Anniversary of ACR. Oct. 17-20, 2019.

Presenter/speaker, with Jie G. Fowler. An examination of consumers' perceptions of cosmeceutical advertising claims. World Marketing Congress, Academy of Marketing Science. July 1, 2019.

### **Theresa Catalano**

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

Keynote speaker. Social action, social change and social justice: The link to critical discourse analysis/studies. XXV Symposium on Research in Applied Linguistics and VII International Symposium on Literacies and Discourse Studies. Nov. 6-7, 2019.

Presenter/speaker. Interdisciplinary approaches: Critical discourse analysis/studies and (language) education. XXV Symposium on Research in Applied Linguistics and VII International Symposium on Literacies and Discourse Studies. Nov. 6, 2019.

Presenter/speaker, with Castillo, M. Who are dual language programs for? De-mystifying ideas about who can benefit from bilingual education. Mid-America Teachers of English to Speakers of Other Languages Annual Conference. Sept. 27-28, 2019.

### **Jennifer Clarke**

### **Statistics/Food Science and Technology**

Presenter/speaker, with **Wilhelm, B.** Training for cross-disciplinary research and science as a team sport. Summer 2019 Conference of the Merrill Advanced Studies Center. July 11-12, 2019.

Panel discussion participant. Science on screen. Midwest Theatre, UNL Panhandle Research and Extension Center. Oct. 2019.

### **Matt Cohen**

### **English**

Keynote speaker, with **Nicole H. Gray.** Walt Whitman's Leaves. Textual Studies and the Nonhuman Turn: A Symposium. Nov. 21, 2020.

### **Rochelle L. Dalla**

### **Child, Youth and Family Studies**

Presenter/speaker, with **Kaitlin Roselius, Sarah Erwin, Jessie Peter and Alexis Thrasher.** A matter of money: Economics and family dynamics among the Bedia. National Council on Family Relations Conference. Nov. 20-23, 2019.

Presenter/speaker, with **Sarah Erwin and Lee Kreimer.** Children of Mumbai's brothels: Investigating developmental prospects, primary relationships, and service provision. Society for the Scientific Study of Sexuality Annual Meeting. Nov. 7-10, 2019.

Presenter/speaker, with **Kaitlin Roselius, Sarah Erwin, Jessie Peter and Alexis Thrasher.** Family-sanctioned sex trafficking: Studying risk and male partner relational dynamics among the Bedia of India. Society for the Scientific Study of Sexuality Annual Meeting. Nov. 7-10, 2019.

Presenter/speaker, with **Jessie Peter and Cody Hollist.** Intergenerational parenting values and its impact on child rearing practices among survivors of sex trafficking (SST) across four cities in India. International Human Trafficking and Social Justice Conference. Sept. 19-20, 2019.

Presenter/speaker, with **Sarah Erwin and Jessie Peter.** First responders' ability to identify victims and address survivors' needs. International Human Trafficking and Social Justice Conference. Sept. 19-20, 2019.

### **Lory J. Dance**

### **Sociology/Institute for Ethnic Studies**

Presenter/speaker. Newspaper discourses, theatrical estrangement, and at-risk students in Sweden and the U.S. Young People and Difference Symposium. Dec. 5-6, 2019.

Panel discussion participant, with Torun Elsrud. Difference in global perspectives. Young People and Difference Symposium. Dec. 5-6, 2019.

Presenter/speaker. "Move [snitch]. Get out da way!": Challenging IRB and mainstream researcher arrogance about under-represented populations. American Indigenous Research Association Meeting. Oct. 10-12, 2019.

Presenter/speaker. Forcibly removed: Homeland detachments of international and indigenous refugees. The Society for the Study of Social Problems 69th Annual Meeting. Aug. 9-11, 2019.

### **Jennifer Davidson**

### **Economics**

Presenter/speaker. Lasting effects from participation in an elementary grades savings program. 58th Annual Financial Literacy and Economic Education Conference. Oct. 4, 2019.

### **Stuart Dearden**

### **Accountancy**

Presenter/speaker, with Cory Cassell, David Rosser and Jonathan Shipman. The effect of confirmation bias on auditors' risk assessments: Archival evidence. American Accounting Association Auditing Midyear Meeting. Jan. 16-18, 2020.

Presenter/speaker, with Jodi Henley and Quinn Swanquist. Do audit characteristics affect provisional-tax-estimate accuracy when regulatory risk is low? Brigham Young University Accounting Research Symposium. Sept. 2019.

### **Kiyomi D. Deards**

### **University Libraries**

Presenter/speaker, with Mark Puente. Moving from talk to action: What does successful institutional change related to equity, diversity, and inclusion (EDI) look like? IDEAL '19: Advancing Inclusion, Diversity, Equity, and Accessibility in Libraries & Archives. Aug. 7, 2020.

Presenter/speaker, with Mark Puente. Moving from talk to action: What does successful institutional change related to equity, diversity, and inclusion (EDI) look like? IDEAL '19: Advancing Inclusion, Diversity, Equity, and Accessibility in Libraries & Archives. Aug. 7, 2019.

### **Dipti A. Dev**

### **Child, Youth, and Family Studies**

Presenter/speaker, with **Evan Choi**, **Donnia Behrends** et al. Differential effectiveness of Go NAP SACC in urban and rural childcare centers. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

Presenter/speaker, with **Jasmin Smith**, **Evan Choi**, **Lisa Franzen-Castle**, **Donnia Behrends**, **Vanessa Wielenga** et al. Implementation of and barriers to nutrition best practices in urban and rural Nebraska child care settings. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

Presenter/speaker, with Deepa Srivastava. Examining nutrition practices across early childhood education programs in two rural counties of California. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

Presenter/speaker, with **Saima Hasnin**, **Holly Hatton-Bowers**, **Lisa Franzen-Castle** et al. EAT family-style dining intervention improves child care providers' responsive feeding practices and children's dietary intake. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

Presenter/speaker, with **Saima Hasnin** and Alison Tovar. Participation in the food program ensures availability of nutritious foods but not intake in children attending childcare. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

Presenter/speaker, with Maha Elrakaiby and **Saima Hasnin**. Feasibility, acceptability and effectiveness of "read for nutrition" program in childcare settings. Society for Nutrition Education and Behavior Annual Conference. July 27, 2019.

### **Angela M. Dietsch** **Special Education and Communication Disorders**

Presenter/speaker, with Ross Westemeyer and **Douglas H. Schultz**. Brain activity and swallowing biomechanics associated with taste stimulation and genetics. Annual Meeting of the Dysphagia Research Society. March 17-20, 2020.

### **Shudipto K. Dishari** **Chemical and Biomolecular Engineering**

Presenter/speaker. Nature-inspired ion conducting polymers for energy conversion and storage devices, 2020 North American Membrane Society Conference. May 18-21, 2020.

Presenter/speaker, with **Seefat Farzin**. Exploring zone-specific proton transport of ionomers under confinement via confocal laser scanning microscopy. American Institute of Chemical Engineers Annual Meeting. Nov. 10-15, 2019.

Presenter/speaker, with **Seefat Farzin**. Lignin-based ion conducting polymers with controlled ion exchange capacities (IECs) for energy conversion and storage device. American Institute of Chemical Engineers Annual Meeting. Nov. 10-15, 2019.



Presenter/speaker, with **Ehsan Zaman**. Antimicrobial activity of cationic conjugated oligo/polyelectrolytes against wild-type and antibiotic-resistant bacteria. American Institute of Chemical Engineers Annual Meeting. Nov. 10-15, 2019.

### **Thomas Dotzel**

### **Marketing**

Presenter/speaker, with Venkatesh Shankar. The effects of new goods, new services, and new software on firm value and risk. Mays Innovation Research Center, Texas A&M University. June 1, 2020.

### **Katie Edwards**

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

Presenter/speaker, with Banyard, V. Strengths in understanding well-being of adolescent survivors of interpersonal violence: Buffering or direct effects? Society for Social Work and Research. Jan. 15-19, 2020.

Presenter/speaker, with Banyard, V. Youth actionists to prevent disparities caused by peer violence. Society for Social Work and Research. Jan. 15-19, 2020.

Presenter/speaker, with Dardis, C., DePrince, A., et al. Outcomes of a transitional living program for women with histories of substance use and victimization. Annual meeting of the American Psychological Association. April 25-29, 2020.

Presenter/speaker, with Siller, L., Murphy, S., et al. Reactions to participating in trauma and addiction research among women in a sober living home. Association for Women in Psychology. March 5-8, 2020.

Presenter/speaker, with Siller, L., **Wheeler, L.**, et al. Effectiveness of a sexual assault self-defense program for American Indian youth. Society for Prevention Research 28th Annual Meeting. May 26-29, 2020.

Presenter/speaker, with Waterman, E.A., Ullman, S.E., et al. Predictors of disclosure recipients' social reactions to disclosures of dating and sexual violence. Annual meeting of the American Psychological Association. Aug. 6-9, 2020.

Presenter/speaker, with Sall, K., Lim, S., et al. Assessing campus community readiness to address IPV among LGBTQ+ Students. Annual meeting of the American Psychological Association. Aug. 6-9, 2020.

Presenter/speaker, with Siller, L., Callery, M., et al. A promising approach to transitional housing: A study of a substance use and victimization recovery housing program. International Family Violence and Child Victimization Research Conference. July 12-14, 2020.

Presenter/speaker, with Waterman, E.A., Hutchison, C., et al. Implementation of a community-wide, youth-led sexual violence prevention initiative: A qualitative examination. Society for Prevention Research. May 26-29, 2020.

Invited presenter, with Herrington, R. Preventing sexual violence at all levels of the social ecological model: Creative strategies and COVID-19 considerations. Sexual Violence Prevention Planning Committee Meeting. May 19, 2020.

Invited presenter, with Banyard, V. The evolution of a logic model to evaluate a youth-led sexual violence prevention initiative. United States Department of Defense Sexual Assault Prevention and Response. March 17, 2020.

Poster presenter, with Banyard, V. Youth actionists to prevent disparities caused by peer violence. Annual Meeting of the Society for Social Work and Research. Jan. 15-19, 2020.

Camp, E.E., Banyard, V.L., et al. Lessons learned: Conducting sexual violence research with Native American youth populations. Annual Convention of the American Psychological Association. Aug. 6-9, 2020.

Banyard, V. L., Mitchell, K., and Jones, L. Youth actionists to prevent disparities caused by peer violence. Society for Social Work Research. Jan. 15-19, 2020.

Poster presenter, with Wormwood, J., Banyard, V., et al. Alcohol use and unwanted sexual experience among graduate students. Annual Meeting of the American Psychological Association. May 21-24, 2020.

### **Lynne Elkins**

### **Earth and Atmospheric Sciences**

Keynote speaker. A review of magma generation beneath North Atlantic mid-ocean ridges. American Geophysical Union 2019 Chapman Conference on Large-Scale Volcanism in the Arctic. Oct. 2019.

Presenter/speaker, with M. Spiegelman. Development of U-series disequilibrium melting and transport models using Jupyter and Python. Goldschmidt Conference, the Geochemical Society. Aug. 2019.

Presenter/speaker, with Meyzen, C.M., Callegaro, S., Marzoli, A. Melting of subduction modified mantle and continental crustal assimilation recorded by end-Triassic tholeiites from southern Eastern North America. American Geophysical Union Fall Meeting. Dec. 2019.

Presenter/speaker. Vertical streamline integration of U-series disequilibria in basalts. Goldschmidt Conference (virtual), the Geochemical Society. June 2020.

### **Ilya Fabrikant**

### **Physics and Astronomy**

Presenter/speaker. Recent advances in the theory of dissociative electron attachment. XXI International Symposium on Electron-Molecule Collisions and Swarms. July 18-21, 2019.

Presenter/speaker. Recent advances in the theory of electron attachment to molecules and clusters. The Ninth International Symposium: Atomic Cluster Collisions. July 31-Aug. 3, 2019.

Presenter/speaker. Electron attachment to molecules in condensed-matter and cluster environments. Second ELENA (Low energy ELEctron driven chemistry for the advantage of emerging NAno-fabrication methods) Conference, Marie Skłodowska-Curie Innovative Training Network. Sept. 4-6, 2019.

Presenter/speaker. Dissociative electron attachment at ultra-low energies. International Workshop on Dynamical Methods for Cold Molecular collisions – DYMCOM. Nov. 25-29, 2019.

### **Charles A. Francis**

### **Agronomy and Horticulture**

Presenter/speaker, with Geir Lieblein, Tor Arvid Breland and Anne Marie Nicolaysen. Becoming an effective catalyst for learning: How teachers transform themselves. European Network of Agroecology and Agroecology Teachers Annual Conference. Sept. 26-27, 2019.

Presenter/speaker, with **David Lambe**. Entrepreneurship learning for organic marketing. European Network of Organic Agriculture and Agroecology Teachers. Sept. 27-28, 2019.

### **Amanda Ganshert**

### **Bureau of Sociological Research**

Presenter/speaker, with **Jolene Smyth**, **Shanshan Deng** and **Lindsey Witt-Swanson**. Visual design experiments on income questions. American Association for Public Opinion Research. June 2020.

### **Marc Garcia**

### **Sociology/Center for Ethnic Studies**

Presenter/speaker, with Adriana M. Reyes, Catherine García et al. Demographic heterogeneity in life expectancies with functional limitations among older Hispanics in the United States. Population Association of America Annual Meeting. April 22-25, 2020.

Poster presenter, with Kasim Ortiz, Sandra Arevalo et al. Age of migration and cognitive functioning among older Latinos in the United States. Population Association of America Annual Meeting. April 22-25, 2020.

Presenter/speaker, with **Catherine Garcia** and David Warner. Socio-cultural variability in self-reported cognitive impairment among older Latino subgroups in the United States. Gerontological Society of America Annual Meeting. Nov. 3-17, 2019.

Presenter/speaker, with Kasim Ortiz, Sandra Arevalo et al. Age of migration and cognitive functioning among older Latinos in the United States. International Conference on Aging in the Americas. Sept. 30-Oct. 2, 2019.

Presenter/speaker, with Adriana M. Reyes. Racial/ethnic and nativity differentials in cognitive trajectories. American Sociological Association 114th Annual Meeting. Aug. 10-13, 2019.

Roundtable discussion participant, with **Catherine Garcia**, Adriana M. Reyes, and Chi-Tsun Chiu. Variations in functional life expectancies among older Hispanics in the United States by nativity and country of origin. American Sociological Association 114th Annual Meeting. Aug. 10-13, 2019.

### **Sue Ann Gardner**

### **University Libraries**

Presenter/speaker, with **Paul Royster**. Small but mighty: How a team of four administers a robust library publishing program. International Federation of Library Associations Special Interest Group on Library Publishing. March 5-6, 2020.

Presenter/speaker, with **Andrew Cano** and **Paul Royster**. Global reach: Use of the Nebraska Digital Commons in 3 LMI countries. CERN-UNIGE Workshop on Innovations in Scholarly Communication. June 19-21, 2019.

Presenter/speaker. Open access textbook project. CERN-UNIGE Workshop on Innovations in Scholarly Communication. June 19-21, 2019.

Panel discussion moderator, with Ruth Okediji, Stephen LaPorte and Dinusha Mendis. Copyright. CERN-UNIGE Workshop on Innovations in Scholarly Communication. June 19-21, 2019.

### **Marques L.A. Garrett**

### **Glenn Korff School of Music**

Presenter/speaker. The music and legacy of R. Nathaniel Dett. National Association of Negro Musicians 100th Anniversary Convention. July 14-17, 2019.

Presenter/speaker. Beyond Elijah Rock: The non-idiomatic choral music of Black composers. National Collegiate Choral Organization Biennial Conference. Nov. 7-9, 2019.

### **Souparno Ghosh**

### **Statistics**

Presenter/speaker. Coherent multivariate feature selection and inference across multiple databases. International Conference on Statistical Distribution and Application. Oct. 11-12, 2019.



**Danni Gilbert**

Presenter/speaker. An examination and comparison of the perceived levels of anxiety and depression of university music majors and non-music majors. 11th Annual International Conference on Visual and Performing Arts, Athens Institute for Education and Research. June 7-10, 2020.

Presenter/speaker. An examination and comparison of the perceived levels of anxiety and depression of university music majors and non-music majors. Florida Music Educators Association Conference. Jan. 10, 2020.

Presenter/speaker. So you want to be a music education major? Here's what you need to know. Nebraska Music Educators Association Conference. Nov. 21-23, 2019.

Presenter/speaker. An examination and comparison of the perceived levels of anxiety and depression of university music majors and non-music majors. Gordon Institute for Music Learning International Conference. July 31, 2019.

**Iker González-Allende****Modern Languages and Literatures**

Presenter/speaker. Basque exiled women in the United States: Gender and national identity in *Basque Girl* (1940), by Mirim Isasi. Keeping Spain's Exile in the Americas and Maryland Alive In Our Hearts (1939-1989-2019). Oct. 23-24, 2019.

Presenter/speaker. Literatura juvenil vasca en Estados Unidos: Género e identidad nacional en el exilio en *White Stars of Freedom* (1942), de Mirim Isasi y Melcena Burns Denny. XXIX Congreso Internacional de la Asociación de Estudios de Género y Sexualidades: CreadorAS en la Educación Literaria e Intercultural. July 18-20, 2019.

**Tricia Gray****Teaching, Learning and Teacher Education**

Panel discussion participant, with Phillips, A. Collaborative agency in constrained spaces. Annual meeting of the American Anthropological Association. Nov. 2019.

**Mark Griep****Chemistry**

Keynote speaker. Everything I know about chemistry, I learned at the movies. Southeastern Undergraduate Research Conference, University of Alabama. Jan. 24, 2020.

Keynote speaker. A periodic table of chemistry in the movies. Conference for Undergraduate Women in Physical Sciences, Nebraska Materials Research Science and Engineering Center. Nov. 6-10, 2019.

**Glenn Korff School of Music****Yawen Guan****Statistics**

Presenter/speaker, with H. Wang and B. Reich. Nearest-neighbor neural networks for geostatistics. International Conference on Data Mining Workshops. Nov. 8-11, 2019.

Presenter/speaker. Spatiotemporal air pollution analysis using mobile monitors on Google Street View vehicles. Joint Statistical Meeting. Aug. 2019.

Presenter/speaker. A comparison of statistical and machine learning methods for creating national daily maps of ambient PM2.5 concentration. U.S. Environmental Protection Agency. Feb. 2020.

Presenter/speaker. Multivariate spectral downscaling for multiple air pollutants. ENAR Spring Meeting. March 2020.

**Shivam Gupta****Supply Chain Management and Analytics**

Presenter/speaker. Analyzing the impact of one-Europe policy on agribusiness markets. Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting. Oct. 20-23, 2019.

Presenter/speaker. Procurement with cost and non-cost attributes: Cost-sharing mechanisms. INFORMS Annual Meeting. Oct. 20-23, 2019.

**Rumiko Handa****Architecture**

Presenter/speaker. Time and imperfection. Conserving Active Matter: Philosophy—Degradation as an Aesthetic Value, Bard Graduate Center in New York, supported by the Andrew W. Mellon Foundation. Nov. 2019.

Presenter/speaker. Urban aesthetics: Positive imperfection in contemporary architecture. Aesthetics and Ethics of Imperfection, Kansai University, Osaka, Japan. Feb. 2020.

**Michael Hoff****Art, Art History and Design**

Presenter/speaker. Antiochia ad Cragum in Rough Cilicia 2019. AKMED Arkeolojik Kazilar Webinari, Suna and Inan Kiraç Research Center for Mediterranean Civilizations, Koç University, Antalya, Turkey. June 10, 2020.

**Soo-Young Hong****Child, Youth and Family Studies**

Presenter/speaker. Early childhood science teaching and learning. University of Sao Paulo Early Childhood Workshop. Nov. 2020.

## Terry J. Housh

## Nutrition and Health Sciences

Presenter/speaker, with J.P.V. Anders, J.L. Keller, C.M. Smith, E.C. Hill, T.J. Neltner, R.J. Schmidt and G.O. Johnson. Performance fatigability and the bilateral deficit during maximal, isokinetic leg extensions in men and women. National Strength and Conditioning Association Annual Meeting. July 2020.

Presenter/speaker, with T.J. Neltner, J.P.V. Anders, J.L. Keller, K. Hergenrader, R.J. Schmidt and G.O. Johnson. The relative contributions of muscle cross-sectional area, muscle quality, and sex to the prediction of maximal isometric leg extension force. National Strength and Conditioning Association Annual Meeting. July 2020.

Presenter/speaker, with J.L. Keller, J.P.V. Anders, T.J. Neltner, R.J. Schmidt and G.O. Johnson. Sex-specific muscle activation during fatiguing tasks anchored to low and high perceptual based loads. National Strength and Conditioning Association Annual Meeting. July 2020.

Presenter/speaker, with J.L. Keller, J.P.V. Anders, T.J. Neltner, K.J. Hergenrader, R.J. Schmidt and G.O. Johnson. Relative contributions of muscular strength, muscle size, and tissue oxygenation to isometric performance fatigability. Medicine and Science in Sports and Exercise, American College of Sports Medicine Annual Meeting. May 2020.

Presenter/speaker, with T.J. Neltner, J.P.V. Anders, C.M. Smith, J.L. Keller, E.C. Hill, R.J. Schmidt and G.O. Johnson. Fatigue-induced changes in neuromuscular responses during maximal bilateral leg extensions. American College of Sports Medicine Annual Meeting. May 2020.

Presenter/speaker, with J.P.V. Anders, J.L. Keller, C.M. Smith, E.C. Hill, T.J. Neltner, R.J. Schmidt and G.O. Johnson. Performance fatigability and neuromuscular patterns of responses for bilateral versus unilateral leg extensions in men. American College of Sports Medicine Annual Meeting. May 2020.

## Reka Howard

## Statistics

Presenter/speaker. Response surface analysis of genomic prediction accuracy values using quality control covariates in soybean. INFORMS. Oct. 22, 2019.

Presenter/speaker. Response surface analysis of genomic prediction accuracy values using quality control covariates in soybean. 12th International Conference of the ERCIM WG on Computational and Methodological Statistics. Dec. 16, 2019.

## Qing Hui

## Electrical and Computer Engineering

Presenter/speaker, with Haopeng Zhang. A coupled spring forced bat searching algorithm: Design, analysis and evaluation. 2020 American Control Conference. June 2020.

## Thomas E. Hunt

## Entomology

Presenter/speaker, with Heng-Moss, T. Soybean tolerance to the soybean aphid, *Aphis glycines*. XIX International Association of Plant Protection Sciences Congress. Nov. 12, 2019.

## Jamie Hyodo

## Marketing

Presenter/speaker, with Matthew Hall. I should have tried that: The risks of serving growth-minded consumers in an increasingly DIY marketplace. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

Presenter/speaker, with Matthew Hall and Alix Barasch. When likes lead to liking: How post-consumption attention enhances experience satisfaction. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

Presenter/speaker, with Lisa E. Bolton. How does religion affect consumer response to failure and recovery by firms? American Marketing Association Consumer Behavior Special Interest Group. July 5-7, 2019.

Presenter/speaker, with Matthew Hall. The risks of serving growth-minded consumers in an increasingly DIY marketplace. American Marketing Association Consumer Behavior Special Interest Group. July 5-7, 2019.

## Aaron Johnson

## Teaching, Learning and Teacher Education

Presenter/speaker, with Scribner, G. Exploring one enslaved woman's power through scaffolded digital storytelling. National Council for History Education Annual Conference. March 19-21, 2020.

Presenter/speaker, with Yoder, P. "I'm bored?" Promoting agency among English learners through authentic inquiry. National Council for the Social Studies Annual Conference. Nov. 22-24, 2019.

## Jennifer Johnson Jorgensen

## Textiles, Merchandising and Fashion Design

Presenter/speaker. Owner and community involvement and business success in small family-owned businesses. United States Association of Small Business and Entrepreneurship Annual Conference. Jan. 3-7, 2020.

Presenter/speaker. The influence of social networking websites on the socialization of the baby boomer generation. International Textile and Apparel Association Annual Conference. Nov. 18-20, 2019.

**Steve Kachman**

Presenter/speaker. Design and interpretation. Nebraska Microbiome Research Interest Group Symposium, University of Nebraska Medical Center. May 28, 2020.

**Statistics****Alice Kang****Political Science/Institute for Ethnic Studies**

Presenter/speaker. Who represents the poor in Burkina Faso's national assembly? African Studies Association. Nov. 2019.

Presenter/speaker with Nam Kyu Kim. External security threats and attitudes toward male and female leaders. American Political Science Association. Sept. 2019.

Presenter/speaker with Maria Escobar-Lemmon, Valerie Hoekstra and Miki Kittilson. Breaking the judicial glass ceiling. European Conference on Politics and Gender. July 2019.

**Brian M. Kelly****Architecture**

Presenter/speaker. Photogrammetry and social media in the development of virtual space. Connections: Exploring Heritage, Architecture, Cities, Art Media. Architecture, Media, Politics, Society. June 29, 2020.

**Taeyeon Kim****Educational Administration**

Presenter/speaker. School leaders' perceptions of and responses to accountability: Multiple meanings and ethical dilemmas. University Council for Educational Administration Convention. Nov. 2019.

Presenter/speaker, with Charles Lowery. Who should get "ineffective"? Ethical dilemmas in leadership decisions. University Council for Educational Administration Convention. Nov. 2019.

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

Presenter/speaker, with Amy Bunnell and Sarah Carter. Family partnerships in early intervention: Two states' collaborations with higher education. Office of Special Education Programs Leadership Conference, U.S. Department of Education. July 2019.

**Natalie A. Koziol****Nebraska Center for Research on Children, Youth, Families and Schools**

Presenter/speaker. An investigation of sample weighted multilevel propensity score analysis. American Psychological Association Convention. Aug. 2019.

Presenter/speaker, with J. Marc Goodrich and HyeonJin Yoon. Differential functioning of English and Spanish-adapted kindergarten mathematics achievement items: A regression discontinuity design application. American Educational Research Association Annual Meeting. April 2020.

**Patty Kuo****Child, Youth and Family Studies**

Presenter/speaker, with Sonny Bechayda, Abet Bas and Lee Gettler. Parents' gender dynamics in childhood predict men's later marital quality: Evidence from Cebu, Philippines. National Council on Family Relations 81st Annual Conference. Nov. 2019.

**Yingchao Lan****Supply Chain Management and Analytics**

Presenter/speaker. Cost implication of freelancer physicians. 2019 INFORMS Healthcare Conference, INFORMS. July 2019.

Panel discussion participant. Designing Interactive Systems doctoral consortium. Decision Science Institute Annual Conference. Nov. 2019.

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

Presenter/speaker, with Lucas, L., Tankersley, A., Hasseler, E., et al. Predictors of inquiry-based science teaching. European Science Education Research Association. Aug. 2019.

Presenter/speaker, with Rivero, A. Reflection and inquiry-based teaching: Exploring reflective practices in beginning secondary science teachers. European Science Education Research Association. Aug. 2019.

**Joe Louis****Entomology**

Keynote speaker. Conventional and omic approaches to integrate host plant resistance in IPM. XIX International Association of Plant Protection Sciences Congress. Nov. 2019.

**Andre Maciel****Marketing**

Presenter/speaker, with Eileen Fischer. Collaborative market driving: Conceptualizing collective action in market orientation strategies. Association for Consumer Research North American Conference. Oct. 17-20, 2019.

Presenter/speaker, with Michelle Weinberger. The logic and practices of consumers who fund businesses: A study of crowdfunding. Consumer Culture Theory Conference. July 17-19, 2019.

**Lorraine Males****Teaching, Learning and Teacher Education**

Presenter/speaker, with Block, S. Examining equitable participation in a professional learning community using the EQUIP tool. Mathematics Teacher Education-Partnership. June 2020.

Presenter/speaker, with Smith, W.M. Transforming secondary mathematics teacher preparation across a state: Promises and challenges. Mathematics Teacher Education-Partnership. Aug. 2019.

Presenter/speaker, with Buchbinder, O. Learning to plan instructional units: Re-examining the grain-size in teacher preparation. Association of Mathematics Teacher Educators. Feb. 2020.

Presenter/speaker, with Raygoza, M.C., Lischka, A.E., et al. Humanizing approaches to grading with mathematics pre-service teachers: Navigating and pushing beyond systems. Association of Mathematics Teacher Educators. Feb. 2020.

Presenter/speaker, with Quigley, K., Block, S., and Setniker, A. Using curricular noticing to examine teachers' use of curriculum materials to plan and enact instruction. North American Chapter of the International Group for the Psychology of Mathematics Education. Nov. 2019.

### **Bernard R. McCoy** **Broadcast Journalism**

Presenter/speaker. Gen Z and digital distractions in the classroom: Student classroom use of digital devices for non-class related purposes. #BEAVirtualVegas, virtual convention, Broadcast Education Association. April 17-24, 2020.

### **Justin McMechan** **Entomology**

Presenter/speaker, with T. Hunt, R. Wright et al. Soybean gall midge: Observations on an emerging pest of soybean. Entomological Society of America Annual Meeting. Nov. 20, 2019.

### **Kim Meiergerd** **Bureau of Sociological Research**

Presenter/speaker, with Amanda Ganshert, Lindsey Witt-Swanson and Jolene Smyth. An experimental study on the effects of sponsor emphasis and incentive packaging on response. Midwest Association for Public Opinion Research. Nov. 22, 2019.

Presenter/speaker, with Amanda Ganshert, Lindsey Witt-Swanson and Jolene Smyth. An experimental study on the effects of sponsor emphasis and incentive packaging on response. American Association for Public Opinion Research. June 2020.

### **Deepika Menon** **Teaching, Learning and Teacher Education**

Presenter/speaker, with Shaw, K., Overduin, J., and Lowing, T. Steam power as a teaching tool in introductory physics. American Physical Society April Virtual Meeting. April 2020.

### **Jake Messersmith** **Management**

Presenter/speaker. Perceived HRM systems, well-being, and organizational performance: A two-wave longitudinal study. Academy of Management Annual Conference. Aug. 2019.

### **Claire Nicholas** **Textiles, Merchandising and Fashion Design**

Presenter/speaker, with Mary Alice Casto, Katie Francisco, and Alyssa Smith. No place like home? Shifting design ideals for eldercare facilities. Fashion and Active Aging Symposium, College of Design, University of Minnesota. Sept. 26-28, 2019.

### **Elizabeth Niehaus** **Educational Administration**

Panel discussion participant, with Cole, E., Friedman, J., et al. The professor in polarized times: Challenges of free speech and inclusion on campus and in the classroom. Annual Meeting of the American Historical Association. Jan. 2020.

### **Glenn E. Nierman** **Glenn Korff School of Music**

Presenter/speaker. Assessing beyond presenting a polished performance. National Association for Music Education National Inservice Conference. Nov. 9, 2019.

Keynote speaker. Music for a lifetime: Inquire. Inspire. Invest. Kansas Consortium of Music Teacher Education Professors and Students Annual Conference, Kansas Music Educators Association. Sept. 29, 2019.

Presenter/speaker. Assessment in a revised standards environment: An introduction to NAFME's 2016 workbooks for building and evaluating effective music education. Kansas Consortium of Music Teacher Education Professors and Students Annual Conference, Kansas Music Educators Association. Sept. 30, 2019.

### **Kendra L. Ordia** **Interior Design**

Presenter/speaker. Spatial narrative in biophilic interior design. 2020 Interior Design Educators Council Annual Conference. March 4-7, 2020.

### **Hasan H. Otu** **Electrical and Computer Engineering**

Presenter/speaker, with Vasunilashorn, S.M., Ngo, L.H., et al. An inflammatory signature of postoperative delirium. Gerontological Society of America Annual Scientific Meeting. Nov. 13-17, 2019.

Presenter/speaker, with Vasunilashorn, S.M., Ngo, L.H., et al. Inflammation as a potential shared mechanism for postoperative delirium and long-term cognitive decline in older adults undergoing major surgery. Alzheimer's Association International Conference. July 14-18, 2019.

Presenter/speaker, with Tripp, B.A., Dillon, S.T., et al. Metabonomics of delirium: A case-control study. Gerontological Society of America Annual Scientific Meeting. Nov. 13-17, 2019.

### **Morgan E. Palmer** **Classics and Religious Studies/ Women's and Gender Studies**

Presenter/speaker. The fictores on inscriptions from the Atrium Vestae. Third North American Congress of Greek and Latin Epigraphy. Jan. 6, 2020.

Presenter/speaker. Always advanced by her recommendations: The Vestal Virgins and women's mentoring. Society for Classical Studies Annual Meeting, Women's Classical Caucus Panel. Jan. 5, 2020.

Presenter/speaker. The Vestal Virgins and conflict resolution across genres: Livy and Valerius Maximus. Classics and Conflict Resolution in Ancient and Modern Contexts II: Theory and Genre, Arts and Humanities Research Council, King's College, London. July 1-3, 2019.

### **Daniel Piatkowski** **Community and Regional Planning**

Presenter/speaker, with **Justin McCully** and Melissa Piatkowski. Towards a rural vision zero: A qualitative exploration of vulnerable road user fatalities in rural areas. Bridging Transport Researchers, Texas A&M. Aug. 11-12, 2019.

Keynote speaker. Acceptable losses? Understanding vulnerable road user (VRU) fatalities in rural Nebraska. Nebraska Bike/Walk Summit, Bike/Walk Nebraska. Oct. 17, 2019.

Presenter/speaker. Smart cities for the rest of us? Nebraska Department of Transportation's Future of Transportation Forum. Virtual, NDOT. June 25, 2020.

Presenter/speaker, with **Justin McCully** and Melissa Piatkowski. Acceptable losses? Specifying fault in bicycle and pedestrian traffic deaths. Active Living Research Conference. Feb. 2-5, 2020.

Presenter/speaker, with **David Newton** and Wesley Marshall. Bird's eye view of health outcomes: Using deep learning to estimate health measures from satellite images. Active Living Research Conference. Feb. 2-5, 2020.

Presenter/speaker. The "Family CAB": Addressing family chauffeur-associated-burdens (CABs). Annual Meeting of the Transportation Research Board. Jan. 12-16, 2020.

Presenter/speaker with Wesley Marshall. When driving is no longer an option: Perceptions and plans for coping with age-related driving cessation. Association of Collegiate Schools of Planning. Oct. 13-15, 2019.

### **Zachary T. Porter** **Architecture**

Presenter/speaker. Groundforms: Architectural constructions of ground (after the digital). Schools of Thought: Rethinking Architectural Pedagogy, University of Oklahoma. March 5-7, 2020.

### **Robert Powers** **Chemistry**

Keynote speaker. Further developments in the application of metabolomics for drug discovery and disease diagnosis. Arizona State University-MAYO Metabolomics and Cardiac Regeneration Symposium. Feb. 28, 2020.

Presenter/speaker. A combined NMR and MS metabolomics approach to study neurodegenerative diseases. Great Plains Regional Annual Symposium on Protein and Biomolecular NMR. Nov. 22-23, 2019.

Presenter/speaker. A combined NMR and MS metabolomics approach to study neurodegenerative diseases. Chicago Area NMR Discussion Group. Nov. 2, 2019.

### **Laurence R. Rilett** **Civil and Environmental Engineering/ Nebraska Transportation Center**

Keynote speaker. Sustainability, reliability, and resiliency in transportation engineering. Conférence Internationale de Géotechniques, Ouvrages et Structures. Oct. 31-Nov. 1, 2019.

Keynote speaker. Simulation-based reliability and resiliency metrics. Fifth International Conference on Transportation Information and Safety. July 14-17, 2019.

### **Paul Royster** **University Libraries**

Presenter/speaker. IRs in America: Land of the free or free online access. International Association of Technological University Libraries Seminar. Dec. 10, 2019.

### **Blake Runnalls** **Marketing**

Presenter/speaker, with **Carissa Harris**, Nikos Dimotakis and **Pinar Kekec**. How leader-member exchange (LMX) agreement impacts salesperson turnover. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

Presenter/speaker, with **Ravi Agarwal**, Nikos Dimotakis and **Pinar Kekec**. The effect of team intelligence configuration on role overload and salesperson turnover. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

### **Sajeesh Sajeesh** **Marketing**

Presenter/speaker, with Ashutosh Singh and Pradeep Bhardwaj. Whitelisting versus sophisticated ad recovery: Effective strategies to overcome ad blocking. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

### **Loukia Sarroub** **Teaching, Learning and Teacher Education**

Presenter/speaker. The telling case of middle and high school readers as spatial. Ethnographic and Qualitative Research Conference. Feb. 25, 2020.

### **Lawrence Scharmann** **Teaching, Learning and Teacher Education**

Presenter/speaker. Evolution and nature of science: An account of changes in evolution instruction. National Science Teaching Association Annual Conference. April 5, 2020.

## James C. Schnable

### Agronomy and Horticulture/ Center for Plant Science Innovation

Presenter/speaker. Genes and gene-like sequences in maize, sorghum and arabidopsis. Plant and Animal Genome, Scherago. Jan. 11-15, 2020.

Presenter/speaker. Mapping recombination breakpoints in sorghum using highly multiplexed whole genome shotgun sequencing. Plant and Animal Genome, Scherago. Jan. 11-15, 2020.

Presenter/speaker. Climbing the phenotyper's pyramid. Guelph Plant Sciences Symposium, University of Guelph/Corteva. Nov. 20, 2020.

Panel discussion participant. The future of machine learning in agricultural systems. Machine Learning for Cyber-Agricultural Systems, USDA and Japanese Science and Technology Agency. Sept. 11-12, 2019.

Keynote speaker. Separating genes from gene-like sequences in maize and sorghum. Brewbaker Endowed Lecture, University of Hawaii. Oct. 11, 2019.

## Susan M. Sheridan

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

Presenter/speaker, with **Brown, K. E., Eastberg, S. A., Chen, D., Abrica, B., Wheeler, L. A., and Derr, K.I.** Assessing Latinx parent-teacher relationships: Considering language and school content. Annual Convention of the National Association of School Psychologists. Feb. 18-21, 2020.

Presenter/speaker, with **Gomes, R.T.M.,** and Smith, T.E. Promoting social-emotional functioning through conjoint behavioral consultation. Annual Convention of the National Association of School Psychologists, National Association of School Psychologists. Feb. 18-21, 2020.

Presenter/speaker, with **Kerby, H. M., Schumacher, R. E., Choi, D., Koziol, N. A., Witte, A. L., Prokasky, A.** et al. Student-teacher relationships and classroom quality: Implications for children of color. Annual Convention of the National Association of School Psychologists. Feb. 18-21, 2020.

Presenter/speaker, with **Derr, K.I.,** and McClure, D. Promoting student success through parent-teacher collaboration. Annual Conference of the Colorado Association of School Boards. Dec. 3-6, 2019.

Presenter/speaker, with **Harbourne, R.T., Koziol, N.A., Bovaird, J.A.** et al. Efficacy of the START-Play Program for Infants with Neuromotor Disorders: Cognitive outcomes. Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine and International Alliance of Academies of Childhood Disability. Sept. 18-21, 2019.

Presenter/speaker, with **Bass, H.P., Gomes, R., Racine, B., Bovaird, J.A.,** and **Gormley, M.J.** Conjoint behavioral consultation: Who benefits most? Annual Convention of American Psychological Association. Aug. 8-11, 2019.

Presenter/speaker, with **Brown, K.E., Eastberg, S.R.A.,** and Smith, T.E. Family-school interventions and ELL students: A meta-analysis of literacy outcomes. Annual Convention of American Psychological Association. Aug. 8-11, 2019.

Presenter/speaker, with **Kerby, H.M., Schumacher, R.E., Koziol, N., Racine, B.C., Overfield, R.A.,** and **Spradlin, C.A.** Neighborhood characteristics and geographic contexts: Impacts on children's social-emotional skills. Annual Convention of American Psychological Association. Aug. 8-11, 2019.

## Sunil Singh

### Marketing

Presenter/speaker, with **Blake Runnalls,** Mohsen Pourmasoudi and Bitty Balducci. Emerging trends in sales and service. Organizational Frontline Research Symposium. Feb. 13-14, 2020.

## Jolene D. Smyth

### Sociology

Presenter/speaker, with **Kristen Olson.** Do interviewers accurately field code answers? An experiment on the effect of number of response categories. Midwest Association for Public Opinion Research Conference. Nov. 22-23, 2019.

Presenter/speaker, with **Kristen Olson.** Do interviewers accurately code answers for field code items? An experiment on the effect of number of response categories. European Survey Research Association Conference. July 15-19, 2019.

## Ravipreet Sohi

### Marketing

Presenter/speaker, with **Ravi Agarwal.** Building customer relationships: Why does the most recent history matter in B2B exchange relations? American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.

Presenter/speaker, with **Shilpa Somraj.** Using salesforce intelligence to extract social media intelligence. American Marketing Association Winter Marketing Educators' Conference. Feb. 22-24, 2020.



### Hyun-Seob Song

### Biological Systems Engineering/ Food Science and Technology

Presenter/speaker. Multiomics-based metabolic network reconstruction and pathway analysis for predictive biogeochemical modeling. Metabolic Pathway Analysis 2019, European Union. Aug. 12-16, 2019.

Presenter/speaker. Substrate-explicit modeling. SFA Community Watershed Workshop, Pacific Northwest National Laboratory. Sept. 11-12, 2019.

Presenter/speaker. Modeling of environment-dependent microbial interactions and dynamics. American Institute of Chemical Engineers Annual Meeting. Nov. 10-15, 2019.

Presenter/speaker. Multiomics integration for substrate-explicit biogeochemical modeling and more. American Geophysical Union Fall Meeting. Dec. 9-13, 2019.

Presenter/speaker. The regulation of microbial nitrogen-transforming pathways: An enzyme-explicit modeling approach. American Geophysical Union Fall Meeting. Dec. 9-13, 2019.

### Erkut Sonmez

### Supply Chain Management and Analytics

Presenter/speaker. Dynamic irrigation management under temporal and spatial variability. INFORMS Annual Meeting. Oct. 20-23, 2019.

### Julie Thomas

### Teaching, Learning and Teacher Education

Presenter/speaker, with J. Thomas, T. Mittlestet and E. Ingram. Exploring BBC micro:bits as a tool for improving elementary pre-service teacher STEM preparation and science teaching self-efficacy. Annual Conference of the Association for Science Teacher Education. Jan. 9-11, 2020.

### Varkey K. Titus

### Management

Presenter/speaker, with Owen Parker and Cole Short. Your horses: Negative anticipatory impression management, and when and why managers engage in it. Strategic Management Society Conference. Oct. 19-22, 2019.

### Susan VanderPlas

### Statistics

Presenter/speaker. Big data, big experiments, and big problems. Plant and Animal Genome. Jan. 2020.

Presenter/speaker. One of these things is not like the others: Visual statistics and testing in statistical graphics. Data Science Symposium, South Dakota State University. Feb. 2020.

### Lily M. Wang

### Durham School of Architectural Engineering & Construction

Presenter/speaker, with Kieren H. Smith. Acoustic conditions in occupied classrooms. 26th International Congress on Sound and Vibration, International Institute of Acoustics and Vibration. July 7-11, 2019.

Presenter/speaker, with Kieren H. Smith. Exploring the effect of ventilation type on the acoustics of primary and secondary school classrooms. International Congress on Acoustics 2019, International Commission for Acoustics. Sept. 9-13, 2019.

Presenter/speaker, with Kieren H. Smith and Victoria R. Anderson. Design features and room characteristics contributing to noise levels in restaurants. International Symposium on Room Acoustics 2019, International Commission for Acoustics. Sept. 15-17, 2019.

Presenter/speaker, with Jared Paine and Joshua Palakapilly. Variations in restaurant soundscapes. 178th Meeting of the Acoustical Society of America. Dec. 2-7, 2019.

### Yujia Wang

### Landscape Architecture

Keynote speaker. Hybrid pedagogy: Transfer of knowledge to teach landscape vision planning and design in studio. Environmental Design Research Association Conference EDRA 51. April 4-7, 2020.

### Lorey A. Wheeler

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

Presenter/speaker, with Fabianne Gondim, Donna Chen, Cindy Miller and Martin Reisslein. Latina/o parents' role in youth's STEM identity, self-efficacy, and adjustment. Annual Meeting of the National Council on Family Relations. Nov. 20-23, 2019.

### Cynthia Willis-Esqueda

### Psychology/Institute for Ethnic Studies

Presenter/speaker, with Gilbert, K. The taint of criminality for exonerees and their children. American Psychology-Law Society Meeting. March 6, 2020.

### Amanda L. Witte

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

Presenter/speaker, with Kristen Derr and Susan M. Sheridan. Better behavior through family engagement: Tailoring behavior interventions for individual students and families. Nebraska MTSS Summit, Nebraska Department of Education. Sept. 2019.

Presenter/speaker, with Kristen Derr and Susan M. Sheridan. Teachers and parents as partners: Partnering for the future. Family-School-Community Alliance Annual Meeting. Sept. 2019.



**Biyu Wu**

Presenter/speaker, with Xiaotao Kelvin Liu. Do IPO firms misclassify expenses? Implications for IPO price formation and post-IPO stock performance. American Accounting Association Annual Meeting. Aug. 9-14, 2019.

**Accountancy****Shi-Hua Xiang****Veterinary Medicine and Biomedical Sciences/  
Nebraska Center for Virology**

Presenter/speaker, with Leslie Estrada, Joshua Wiggins and Leah Liu Wang. Structure based design of peptide inhibitors targeting Ebola endosomal receptor NPC1 binding site. ASV Filoviruses I & II, American Society for Virology. June 18, 2020.

**Liang Xu****Supply Chain Management and Analytics**

Presenter/speaker, with Hongmin Li and Hui Zhao. Outcome-based reimbursement: The solution to high drug spending? INFORMS Annual Conference. Oct. 20-23, 2019.

Presenter/speaker, with Hui Zhao. How does medication-assist treatment help in combating the opioid epidemic? INFORMS Annual Conference. Oct. 20-23, 2019.

**Yiqi Yang****Textiles, Merchandising and Fashion Design**

Keynote speaker, with B.N. Mu, F. Hassan and L. Xu. Pure keratin fibers from poultry feathers. Ninth International Conference on Advanced Fibers and Polymer Materials. Nov. 19-23, 2019.

Presenter/speaker, with B.N. Mu and F. Hassan. Continuous wet spun keratin fibers from chicken feathers. Fourth International Symposium on Materials from Renewables. Oct. 9-10, 2019.

Presenter/speaker, with B.N. Mu, L.Y. Liu and W. Li. An environmentally responsible dyeing technology. 2019 International Conference on Eco-Textiles. Aug. 4-6, 2019.

**HyeonJin Yoon****Nebraska Center for Research on  
Children, Youth, Families and Schools/  
Nebraska Academy for Methodology,  
Analytics and Psychometrics**

Presenter/speaker, with Keith Zvoch, Keith Smolkowski and Ben Clarke. Evaluation of the validity and precision of the multiple-cutoff regression discontinuity designs: A within-study comparison. Annual Meeting of American Educational Research Association. April 17-21, 2020.

Panel discussion participant, with Chris Ives and Gina Biancarosa. Identifying first grade reading profiles with latent profile analysis. Annual Convention of the National Association of School Psychologists. Feb. 18-21, 2020.

**David P. Yuill****Durham School of Architectural  
Engineering & Construction**

Presenter/speaker. The surprising effects of outdoor coil fouling on heat transfer and frost formation rate. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Winter Conference. Feb. 1-5, 2020.

Presenter/speaker. A method for simulating real air side fouling based on field sample analysis. ASHRAE Winter Conference. Feb. 1-5, 2020.

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

Presenter/speaker, with M. Sadri and F. Zhou. Knockout of maternal Tsg101 and Dicer impair gut health in suckling wild-type pups. American Society for Exosomes and Microvesicles (ASEMV) Annual Meeting. Oct. 6-10, 2019.

Poster presenter, with M. Sadri and F. Zhou. Knockout of maternal Tsg101 and Dicer impair gut health in suckling wild-type pups (poster). ASEMV Annual Meeting. Oct. 6-10, 2019.

Keynote speaker. Milk exosomes. Seventh International Conference on Food Factors. Dec. 1-5, 2019.

Keynote speaker. Concluding remarks for session on exosomes and microRNA. Seventh International Conference on Food Factors. Dec. 1-5, 2019.

Invited speaker. Biological activities of milk exosomes and their RNA cargos within and across species boundaries. Laureate Institute for Brain Research. Jan. 22, 2020.

**Ruizhi Zhang****Statistics**

Presenter/speaker. A game-theoretic approach to sequential detection in adversarial environments. IEEE International Symposium on Information Theory. June 2020.

Invited speaker. Adaptive online monitoring of the Ising model. 57th Annual Allerton Conference. Sept. 2019.

**Yuzhen Zhou****Statistics**

Invited speaker. Tail asymptotics for the extremes of bivariate Gaussian random fields. Analysis and Data Science Seminar, University of Albany. Oct. 7, 2019.

## Mentorship: UCARE and FYRE Programs

The Undergraduate Creative Activities and Research Experience program and the First Year Research Experience program enable Husker undergraduate students to work one-on-one with a faculty member on a research or creative project in the mentor's field of scholarship. The following faculty members mentored students – whose names, majors and project titles are also listed – during the summer of 2019 and/or the 2019-2020 academic year.

Compiled by the Office of Undergraduate Research and the Office of Graduate Studies

### **Peter Angeletti** **Biological Sciences**

Patience Gihozo, integrated science. Characterization of Ocular Surface Squamous Neoplasia (OSSN) Among HIV+ and HIV-Zambians

Salan Preet Kaur, biological sciences. Does HIV Promote HPV-Related Eye Tumors?

### **Effie Athanassopoulos** **Anthropology/ Classics and Religious Studies**

Alexander Kuehler, anthropology/classics and religious studies. The Origins and History of the Perry-Campbell Coin Collection

William Roe, anthropology. The Perry-Campbell Coin Collection at the Nebraska State Museum: Documenting the Coin Collection

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

Anna Barent, biological sciences. Use of pmirGLO to Detect Bovine miRNA Effects on Human Gene Expression

### **Jennifer Auchtung** **Food Science and Technology**

Keegan Schuchart, biochemistry. Effects of Microbiota Accessible Carbohydrates on *Clostridioides difficile* Infection

### **Raul Barletta** **Veterinary Medicine and Biomedical Sciences**

Tim Kaftan, biological sciences. Targeting the Biosynthesis of Mycobacterial Peptidoglycan Precursors in Search of Novel Targets for Drug Development and Vaccines

### **Greg Bashford** **Biological Systems Engineering**

Juliana Rodriguez, biological systems engineering. Artificial Emboli Verification and Discrimination in Cerebral Circulation: Increasing Sensitivity and Specificity of Embolic Detection Via Transcranial Doppler Ultrasound

### **Donald Becker** **Biochemistry**

Trinh Huong, biochemistry. Impact of Substrate Channeling in Proline Metabolism on Cell Growth

### **David Berkowitz** **Chemistry**

Jonathan Askey, French. Synthesis of Chiral Phosphonates (Phosphate Mimics) Through Enzymatic Dynamic Reductive Kinetic Resolution

### **Nate Bicak** **Architecture**

Annie Mimick, architecture. Material Assemblies Research and Prototyping for Interior Design + Build

### **Paul Blum** **Biological Sciences/Biological Systems Engineering**

Stephan Sutter, biological systems engineering/biochemistry. Developing Targeted ChIP Methods in *Sulfolobus solfataricus* to Identify Proteins Involved in Epigenetically Controlled Expression

### **Justin Bradley** **Computer Science and Engineering/ Mechanical & Materials Engineering**

David Besonen, computer science. The Harmonizer Project: A Commercially Available Evolution in Music Creation

Liam Kruse, mechanical engineering. Towards the Development of On-the-Fly Markov Decision Process Updating

### **Eve Brank** **Psychology**

Kaitlyn Wilson, psychology. The Effects of Social Support on Consent to Search Decisions

### **Chad Brassil** **Biological Sciences**

Miranda Martin, biological sciences. The Influence of Temperature and Density on the Induction of Winged Aphids

### **Anita Breckbill** **Glenn Korff School of Music**

James Heisner, anthropology/women's and gender studies. Lincoln's Culture: Preservation of Classical Music Printed Programs

### **Rebecca Brock** **Psychology**

Olivia Maras, psychology. Influence of Parental Eating Pathology on Child Obesity Risk at Two Years of Age/Role of Parental Eating Pathology on Child Outcomes and Parenting Practices

### **David Cahan** **History**

Hannah Oh, graphic design/computer engineering/mathematics. The Nobel Prizes in the Natural Sciences as Proxy for National Scientific Strength: A Databased Approach

**Matthew Carlson** **Center on Children, Families and the Law**

Chelsey Wisehart, psychology/communication studies. Case Closure Among the Lancaster County's Family Treatment Drug Court: The Role of Personal Relationships and Service Engagement

**Weiwien Chai** **Nutrition and Health Sciences**

Carly Selleck, nutritional science/dietetics. Diet Quality and Race-Ethnic Disparities in Prediabetes and Type 2 Diabetes

**Barry Cheung** **Chemistry**

EMA Shaker, chemistry. Analyzing the Uptake of Minerals by Microgreens of Brassicaceae

**Kathy Chiou** **Psychology**

Megan Jones, psychology. Comparing Positive and Negative Emotion Recognition in Individuals After Traumatic Brain Injury

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

Tomo Bessho, mathematics/computer science. Controlling Search Algorithms Via Visualizations

Denis Komissarov, software engineering. Studying Different Algorithms for Generating All Connected Subgraphs with k Vertices

Khang Phan, computer science. Studying Different Algorithms for Generating All Connected Subgraph with k Vertices

Zachary Scott, electrical and computer engineering. Cross-Fertilization of SAT and CP Solvers

Serigne Toure, computer engineering. Cross-Fertilization of SAT and CP Solvers

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

Nathan Andrews, microbiology. Where Does all the Junk DNA in Plant Mitochondria Come From?

David Campbell, biochemistry. A Search for Genes Required for DNA Repair in Plant Mitochondria

Jaqueline Korth, biological sciences. Inducing Mutations in Mitochondria and Chloroplast DNA

**Soonkyu Chung** **Nutrition and Health Sciences**

Darius Fox, nutritional sciences and dietetics. Urolithin A, a Gut Metabolite, and Its Effects on an *in vitro* Parkinson's Disease Model

Duncan Works, biochemistry. The Effects of Urolithin A, a Gut Metabolite, on the Brain NLRP3 Inflammasome

**Song Ci** **Electrical and Computer Engineering**

Andrew Butler, electrical engineering. Study of Battery Energy Consumption Behaviors of Cybersecurity Software of Embedded Computing Systems

**Justina Clark** **Undergraduate Education and Student Success**

Ryan Pawloski, sports media and communication/broadcasting. Impact of Campus Research

**Matt Cohen** **English**

Bianca Swift, English. Cross-Examining the Works and Letters of Charles Chesnutt

**Steven Comfort** **Natural Resources/Agronomy and Horticulture**

Amy Yanagida, sociology/environmental restoration science. Using Electrocoagulation and Electrochemically Activated Persulfate to Remove Per- and Polyfluoroalkyl Substances (PFAS) from Contaminated Water

**Jessica Corman** **Natural Resources**

Matthew Chen, environmental restoration sciences. Investigation of Nutrient Imbalances in the Niobrara River

Sydney Kinnach, fisheries and wildlife/pre-veterinary medicine. Effects and Implications of Nutrient Pollution on Algae Growth in the Niobrara River

Precious Nyabami, integrated science. Using Dissolved Oxygen to Predict Holmes Lake's Phytoplankton Community's Ability to Process Annual Nutrient Loads

Collin Podany, chemical engineering. Testing the Removal of Nutrients in Streams with Nebraska Buffers

Kayla Vondracek, environmental studies. Human Influence on the Biodiversity of Algae in the Niobrara River

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

Emily Bremers, microbiology. Validating an Assessment Instrument That Measures Students' Science Proficiencies

**Joel Cramer** **Nutrition and Health Sciences**

Nicholas Bohannon, nutritional sciences and dietetics. Effects of Eccentric Loading on Vertical Jump Performance in Youth Female Athletes

Sydney Gibson, nutritional sciences and dietetics. Blood Hemoglobin Concentrations and Tissue Oxygenation Relationships During Rest, Exercise and Recovery

**Clay Cressler****Biological Sciences**

Freddy Gonzalez, microbiology. Isolating Novel Species Within the Microbiota of *Daphnia magna* to Understand Host-Microbe Interactions

Joseph Levey, biological sciences. Evolutionary and Ecological Determinism of Host Specificity in Arthropod Parasites

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

Kevin Zhao, mechanical engineering. Understanding the Mechanisms of the Pulsed Electric Current Process for Joining High-temperature Alloys

Nathan Snyder, mechanical engineering. Development of Novel Welding Process for High-Temperature Alloys

**Juan Cui****Computer Science and Engineering/Biological Sciences**

Christian Dukunde, integrated science. Informatics-Guided Approach to Study miRNA Sorting Through Motif Finding

**Jeffrey Day****Architecture**

Andrew Goldsmith, architectural studies. FACT\_Book

**Erica DeFrain****University Libraries**

Tiffany Schweer, architectural studies. A Comparative Case Study of Four Informal Learning Spaces on Campus

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

Fiona Shogren, biological sciences. Predation Risk and Its Effect on Foraging Behavior in Slender Crab Spiders (*Tibellus oblongus*)

**Sarah Deyong****Architecture**

Logan Altrichter, architectural studies. Teaching Pedagogy on Integrated Design in Architecture

Paige Haskett, architectural studies. Teaching Pedagogy on Integrated Design in Architecture

**Angela Dietsch****Special Education and Communication Disorders**

Katrina German, communication sciences and disorders. The Co-occurrence of Dysphagia and Dysphonia Following Orotracheal Intubation

Madison Felix, Special Education and Communication Disorders. Retrospective Analysis of Respiratory Exercise and Swallowing Recovery

**Shudipto Dishari****Chemical and Biomolecular Engineering**

Jackson Goddard, chemical engineering/mathematics. Effect of Ionomer Chemical Structure and Nature of Substrate on Morphology of Ionomer Thin Films

Isabelle Koehler, chemical engineering. Nanoscale Interrogation of Supported Ionomer Catalyst Layers for Hydrogen Fuel Cells

**Michael Dodd****Psychology**

Payton Geschke, psychology/biological sciences. Eye Movements, Task-Switching, and Schizotypy

Logan Miller, psychology. An Examination of Pop-Out in Dynamic Visual Search

**Eddie Dominguez****Art, Art History and Design**

Tea Ilic, graphic design. When Endangered Animals Become Extinct

**Ellen Donnelly****Architecture**

Majdi Alkarute, architectural studies. Architectural Exhibitions: The Disciplinary Edge

Seyedeh Golsa Motevalli, architectural studies. Cultural Producers or Products of Culture: Subverting the Image Through Instagram

Paige Haskett, architectural studies. Cultural Producers or Products of Culture: Subverting the Image Through Instagram

**Matthew Douglass****Agricultural Sciences and Natural Resources**

Connor McFayden, environmental studies. Changes in Land Use Along Kenya's Lake Turkana

**Huijing Du****Mathematics**

Shannyn Bird, biochemistry and mathematics. Multi-population Compartment Models and Stochasticity Analysis for Cancer Stem Cells Proliferation and Differentiation

**Mary Ellen Ducey****University Libraries**

Jake Borgmann, history/ethnic studies. Archiving Nebraska Native American History

Sam Guido, history. LGBTQA+ History at the University of Nebraska-Lincoln

**Aaron Duncan** **Communication Studies/Speech and Debate Program**

Jordan Wong, economics/political science. An Empirical Analysis of Competitive Speech and Debate

**Bruce Dvorak****Civil and Environmental Engineering/  
Mechanical & Materials Engineering**

Kimberly Law, chemical engineering. Evaluating the Embedded Environmental Impacts of the Sanitary System Using Life Cycle Assessment

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

Abdelrahman Elsayed, mechanical engineering. Control of Electrospinning Jet Instabilities: In Pursuit of Perfect Continuous Nanofiber Alignment

Iakov Golman, mechanical engineering. Size Effects in Mechanical Properties of Advanced Continuous Nanofibers and Nanocomposites

**Ece Erdogmus Skourup****Durham School of Architectural  
Engineering & Construction**

Ethan Hall, civil engineering. Discrete Element Modeling of Compressed Stabilized Earth Blocks

**Sydney Everhart****Plant Pathology**

Cristian Wulkop Gil, biochemistry. Fungicide Sensitivity of *Sclerotinia sclerotiorum* Isolates Selected from Five Different States That Use Different Fungicide Treatments

**Lucia Fernandez Ballaster****Mechanical & Materials Engineering**

Tucker Loosbrock, mechanical engineering. Conductivity of Poly(3-hexylthiophene) Resulting from Formation Conditions

**Samodha Fernando****Animal Science/Biological Sciences**

Audra Hessenflow, microbiology. A New Method for Treating Liver Abscesses by Identifying and Isolating Naturally Occurring Bacteriophages Against *F. necrophorum* Species from the Rumen of Cattle

**Dennis Ferraro****Natural Resources**

Abigail Horner, veterinary science. Effect of Calcium Supplements on the Eyesight of Western Tiger Salamanders

Luke Micek, fisheries and wildlife. Determining How Nicotine from Cigarettes Affects Plains Leopard Frog Tadpole Development

Lexy Polivanov, biological sciences/fisheries and wildlife/environmental studies. The Effects of Monoammonium Phosphate Fertilizer on Western Barred Tiger Salamander Larvae (*Ambystoma mavortium*)

**Irina Filina****Earth and Atmospheric Sciences**

Erik Jacobson, geology. Mapping a Recently Reactivated Fault System in Central Nebraska with a Drone-Based Magnetic Surveying System

**Jenna Finch****Psychology**

Amyia Harris, psychology. Parental Support of Persistence and Challenge Preference During the Transition to Third Grade

Rachelle Johnson, psychology. Motivation in Third Grade Students with Learning Disabilities

**Mikil Foss****Mathematics**

Stephen Yaghmour, chemical engineering. Theoretical and Numerical Investigations for Solutions to Nonlocal Systems with Applications in Peridynamics

**Trenton Franz****Natural Resources**

Thierry Bienvenu, integrated science. Using Hydro-Geophysics and XRF to Produce a High Resolution 3-Dimensional Soil Cadmium Map for Evaluating Hybrid Wheat Trials

**Julie Frengs****Modern Languages and Literatures**

Peyton Reynolds, French. Translating Culture: An International Colloquium on the Earth in French and French-Speaking Communities

**Hernan Garcia-Ruiz****Plant Pathology**

Benjamin Downing, microbiology. Epitope Tagging Core Components of Gene Silencing by Gene Editing/Mutational Inactivation of *A. thaliana* RNA-Dependent RNA Polymerases by Gene Editing

Rebecca Leuschen, biochemistry. Epitope Tagging Core Components of Gene Silencing by Gene Editing/Mutational Inactivation of *A. thaliana* RNA-Dependent RNA Polymerases by Gene Editing

Rachel Stein, microbiology. Epitope Tagging Core Components of Gene Silencing by Gene Editing/Mutational Inactivation of *A. thaliana* RNA-Dependent RNA Polymerases by Gene Editing

**Amanda Garrett****Educational Psychology**

Rose Wehrman, English. Typology of Gaps in the Education System

**Sarah Gervais****Psychology/Public Policy Center**

Kyle Bizal, psychology. Predictors of Bystander Intervention to Reduce Sexual Assault

Taylor Brumbaugh, psychology. Predictors of Bystander Intervention to Reduce Sexual Assault

Haley Hansmeier, psychology. Predictors of Bystander Intervention to Reduce Sexual Assault

**George Gogos** **Mechanical & Materials Engineering**

Maureen Winter, mechanical engineering. Quantifying Wicking in Functionalized Surfaces

Ryan Regan, mechanical engineering. Micro-Droplet Production Using Femtosecond Laser Surface Processing

**Frank Golf** **Physics and Astronomy**

Mitchell Lange, computer engineering. Analyzing Muons and Other Particles from the Large Hadron Collider

Carter Walford, physics and mathematics. Development of Methods to Reject Cosmic Ray Muons as a Background to Searches for Fractionally Charged Particles at the Large Hadron Collider

**Marc Goodrich** **Special Education and Communication Disorders**

Joelly Anderson, communication sciences and disorders. Exploring the Relations Between Executive Function, Self-Efficacy and Reading Skills

Margarita Quintana, Spanish. Early Language and Literacy Skills of Spanish-Speaking Dual Language Learners

Alejandro Rodriguez, psychology. Early Language and Literacy Skills of Spanish-Speaking Dual Language Learners

Charlee Sindelar, elementary education. Influences of Executive Function on Self-Efficacy for Reading

**Richard Graham** **University Libraries**

Julien Hoffman, English/women's and gender studies. Illustrations of Femininity, Power and Magic: A Study of the Representations of Women and Girls as Witches in Comics Throughout History

**Jiantao Guo** **Chemistry**

Alexander Meyer, biochemistry. UNL International Genetically Engineered Machines (iGEM) Team

Roxanne Mpinganzima, integrated science. UNL International Genetically Engineered Machines (iGEM) Team

**Dave Hall** **Glenn Korff School of Music**

Christopher Goulet, music. An In-Depth Analysis of Peter Klatzow's Dances of Earth and Fire

**David Hansen** **Psychology/Public Policy Center**

Erika Boohar, psychology/Spanish. Mental Health Treatment for Sexually Abused Youth and Their Non-Offending Family Members: Evaluation of Project SAFE Services

Chelsey Wisehart, psychology/communication studies. Mental Health Treatment for Sexually Abused Youth and Their Non-Offending Family Members: Evaluation of Project SAFE Services

**Edward Harris** **Biochemistry**

Connor Clanton, biochemistry/agricultural education. Biophysical Characterization of Stabilin-2

Patrick Forbes, biochemistry. Biophysical Characterization of Stabilin-2

Amanda Lewis, biochemistry. Biophysical Characterization of Stabilin-2

**Mohammad Hasan** **Computer Science and Engineering**

Mohamed Aly, computer science. Software Application for Improving Performance in Large Undergraduate Classes

Vy Doan, computer science/philosophy. Algorithm for Social Good: A Solution for False and Misleading News on Social Media

**Lindsay Hastings** **Agricultural Leadership, Education and Communication**

Kaylee Robinson, psychology. Exploring Generativity Development Among Collegiate Student Leaders Who Mentor

Addison Sellon, psychology. Exploring Generativity Development Among Collegiate Student Leaders Who Mentor

**Kyle Haws** **Psychology**

Bailey Lytle, psychology. Moral Foundations Among UNL College Students and the Influence of Bystander Intervention Behaviors

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

Rachel Brush, elementary education. Examining Students' Writing Skills in the Context of Executive Function and Self-Efficacy

Wesley Deuel, speech-language pathology. Examining Students' Writing Skills in the Context of Executive Function and Self-Efficacy

Brittany Ringler, elementary education. Examining Students' Writing Skills in the Context of Executive Function and Self-Efficacy

**Eileen Hebets** **Biological Sciences**

Earl Agpawa, insect science. Exploring the Role of the Putative Antipredator Defenses in the Orb-Weaving Spider *Micrathena gracilis*

Nicholas Morgan, biological sciences. Investigating the Connection Between Sexual Cannibalism and Offspring Quality in the Dark Fishing Spider *Dolomedes tenebrosus*

**Gary Hein** **Entomology/Agronomy and Horticulture**  
Pierce Leef, secondary education, science (7-12). Determining How Wheat Streak Mosaic Virus Spreads in Resistant and Susceptible Corn Varieties

**Joshua Herr** **Plant Pathology**  
Seth Blakestad, microbiology. Degradation of Relic DNA in Soil

**Courtney Hillebrecht** **Political Science/  
Human Rights and Humanitarian Affairs**  
Cole Kovarik, global studies/Spanish/political science. A Comparative Case-Study Analysis: Backlash to the European Court of Human Rights

Emma Zoller, journalism/political science. Mapping Human Right Violation from Fast Data

**Mark Hinchman** **Architecture**  
Caroline Goertz, architectural studies. Dale and Patricia Keller: Overlooked Designers of the 20th Century

**Kathryn Holland** **Psychology/Women's and Gender Studies**  
Sage Volk, psychology. An Investigation and Development of a Comprehensive Self-Report Questionnaire of Gender Identity

**Miyoung Hong** **Architecture**  
Ashlynn Engelhard, interior design. A Comparative Case Study of Four Informal Learning Spaces on Campus

Annie Mimick, interior design. A Comparative Case Study of Four Informal Learning Spaces on Campus

**Terry Housh** **Nutrition and Health Sciences**  
Kipp Hergenrader, nutritional sciences and dietetics. Effects of Cross-Sectional Area on Performance Fatiguability in Both Men and Women

**Robert Hutkins** **Food Science and Technology/Biological Sciences**  
Chloe Christensen, food science and technology. Do Lactic Acid Bacteria in Fermented Foods Persist in the Gastrointestinal Tract? An *in vitro* Investigation

**Cheryl Immethun** **Chemical and Biomolecular Engineering**  
Cameron Gilley, chemical engineering. Inducing Increased Bioplastic Production in *R. palustris* CGA009

Dylan Hoppner, chemical engineering. Inducing Increased Bioplastic Production in *R. palustris* CGA009

**Katrina Jagodinsky** **History**  
Zoe Battaglia, history/anthropology. Habeas Corpus and Legal Histories of the North American West

Cole Dunning-Ward, political science. Habeas Corpus and Legal Histories of the North American West

Ashley Morrison, history/Great Plains Studies Program/women's and gender studies. Habeas Corpus and Legal Histories of the North American West

**Uchechukwu Jarrett** **Economics**  
Youngju Cho, management. Effect Analysis of Cryptocurrency Influences on International Trade

Tom Volkmer, economics/finance. The Effect of Mobile Payments in Developing Economies

**Andrew Jewell** **University Libraries/English**  
Simone Droge, English. The Complete Letters of Willa Cather  
Gayle Rocz, dance/English. The Complete Letters of Willa Cather

**Matthew Johnson** **Psychology**  
Mei Grace Behrendt, psychology. Decoding the Contents of Visual Working Memory During Rehearsal Using EEG and Multivariate Pattern Analysis

**Jeannette Jones** **History/Ethnic Studies**  
Chelsea Akyeampong, global studies/political science. To Enter Africa from America: U.S. Empire, Race, and the African Question, 1847-1919

Unyoh Mbilain, political science. To Enter Africa from America: U.S. Empire, Race, and the African Question, 1847-1919

C'jera Sherrod, child, youth and family studies. To Enter Africa from America: U.S. Empire, Race, and the African Question, 1847-1919

**Michael Kaiser** **Agronomy and Horticulture**  
Ryley Thomas, environmental studies/agronomy. Effects of Biochar and Coffee Grounds on Lead Uptake in Lettuce Plants from Contaminated Urban Soil

**David Karle** **Architecture**  
Morgan Davis, architectural studies. Design for Decline  
Olena Yarmolyuk, architectural studies. Design for Decline



**Sarah Karle**

Margaret Gies, architectural studies. Nebraska Shelterbelt Archive  
 Jessica Schafer, landscape architecture. Nebraska Shelterbelt Archive

Meagan Willoughby, architectural studies. Nebraska Shelterbelt Archive

**Oleh Khalimonchuk**

Drew Harrahill, biochemistry. Analysis of ALS-Associated Mutation in the Mitochondrial Metalloprotease Oma1 in Yeast Genetic Model

Joeeun Song, biochemistry. The Role of Mitochondrial Inner Membrane Morphology on Heme Biosynthesis and Transport

**Srivatsan Kidambi****Chemical and Biomolecular Engineering**

Noha Algahimi, chemical engineering. Biomimetic Brain Modeling for the Study of Neuron-Astrocyte Communication

Paurima Ghotikar, chemical engineering. Analysis of GBM Cell and Astrocyte Interactions Through the Glycolytic Pathway

Samantha Harvat, chemical engineering. Polymer-Based Patterned Co-Cultures of Breast Cancer and Stromal Cells Mimicking Tumor Microenvironment

Philamon Hemstreet, biochemistry/biological systems engineering. Engineering Lipid Nanoparticles for Targeted Delivery for Vitamin E to Treat Inflammation in Arterial Tissues

Roarick Schollmeyer, biochemistry/microbiology/biological sciences. Engineering Lipid Nanoparticles for Targeted Delivery for Vitamin E to Treat Inflammation in Arterial Tissues

Trenton Tulloss, chemical engineering. Effects of Hepatocyte Proliferation of Patterned Co-Culturing with Stellate Cells and Macrophages

**Forrest Kievit****Biological Systems Engineering**

Brandon McDonald, biological systems engineering. Kinetics of Reactive Oxygen Species Generation After Traumatic Brain Injury/Nanoparticle Treatment to Counter Reactive Oxygen Species After Traumatic Brain Injury

Megan Otte, biological systems engineering. Optimizing PLGA Nanoparticles and Drug Combinations to Induce Synthetic Lethality in Pediatric Brain Cancer

Megan Ruckman, biological systems engineering. Optimizing PLGA Nanoparticles and Drug Combinations to Induce Synthetic Lethality in Pediatric Brain Cells

**Architecture****Yong-Rak Kim**

Murtaza Nalwala, civil engineering. Testing and Modelling of Polymeric Materials for Resilient Infrastructures

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

Evelyn Estrada-Gonzalez, psychology. Parent Language Use and Parent/Educator Relationships in Early Childhood Development

Brenna Schulte, speech-language pathology. Parent Behaviors: Supporting Language Development for Infants/Toddlers

**Iason Konstantzos****Durham School of Architectural Engineering & Construction**

Aaron Adams, architectural engineering. An Investigation of the Operational and Design Characteristics of Circadian Lighting Systems

**Lisa Kort-Butler****Sociology**

Vanessa Woosley, sociology. Stress, Media Consumption and Depression in College Students

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

Jesse Osborn, physics/mathematics. Measurements of Radio Pulse Reception with Stations of the ARA Experiment Based on the SpiceCore Pulser Data Set/Discrimination Between Neutrino Signal and Noise in the ARA Experiment Using Multivariate Data Analysis

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

Alyssa Kobza, art. Investigating the Sociological Imagination Through Lithography

**Rebecca Lai****Chemistry**

Katharina Dvorak, biochemistry. Development of a Salivary Glucose Biosensor for Diabetes Management

**Adam Larios****Mathematics**

Luke Galvan, mathematics/physics. A Computational Investigation of a Continuum Model for Flocking Dynamics

**James Le Sueur****History**

John Grinvalds, journalism. A History of Anticolonial Struggle in Nebraska: Nebraskan History in Local and Regional Archives

**Glenn Ledder****Mathematics**

Marc Wade, mathematics. Predator Survival in a Two Patch System

**Kevin Lee**                      **Physics and Astronomy/Center for Science,  
Mathematics and Computer Education**

Brandon Harper, physics. Creation and Study of Astronomy Ranking Tasks

Devi Seshadri, graphic design. Introductory Astronomy Graphics Directory

**Jaekwon Lee**                      **Biochemistry**

Jacob Stewart, biochemistry. Copper-Dependent Activation of Cell Proliferation Signaling Pathways

**Ming Li**                                      **Psychology**

Barbara Bueno, psychology/biological sciences. Behavioral and Neurobiological Models of Nicotine Withdrawal Syndrome in Mother Rats

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

Shea Thompson, graphic design. Mechanobiology of Breast Cancer Cell Migration

**Michael Lippman**                      **Classics and Religious Studies**

Nichole Brady, classics and religious studies/classical languages. Didaskalia/An Interactive, Multimedia eBook on Ancient Drama

Ellie Churchill, history/classics and religious studies. Homerathon 2020

Ellen Kratzer, English/graphic design/classical languages. An Interactive, Multimedia eBook on Sophocles' *Antigone*/An Interactive, Multimedia eBook on Ancient Drama

Vanessa Larsen, classics and religious studies. An Interactive, Multimedia eBook on Sophocles' *Antigone*

Alexi Robertson, classics and religious studies/classical languages. An Interactive, Multimedia eBook on Sophocles' *Antigone*

Steven Winston, history/classics and religious studies. An Interactive, Multimedia eBook on Sophocles' *Antigone*

**Matthew Loar**                      **Classics and Religious Studies**

Ellie Churchill, history/classics and religious studies. An Interactive, Multimedia eBook on Ancient Drama

Vanessa Larsen, classics and religious studies. An Interactive, Multimedia eBook on Ancient Drama

Alexi Robertson, classics and religious studies/classical languages. An Interactive, Multimedia eBook on Ancient Drama

**Joe Louis**                                      **Entomology**

Earl Agpawa, insect science. Understanding Sorghum Tolerance Against Phloem-Feeding Aphid, *Melanaphis sacchari*

**John Dustin Loy**                      **Veterinary Medicine and Biomedical Sciences**

Claudia Antonika, microbiology. Application and Evaluation of Fourier Transform-Infrared (FT-IR) Spectroscopy Method to Differentiate *Mycobacterium avium ssp paratuberculosis* (MAP) Strains Isolated from Various Hosts

**Christopher Mann**                      **Economics**

Mohammed Al Badaai, accounting. The Cooperation Council for the Arab States of the Gulf and Economic Growth in the Arabian Peninsula

**Kaustav Majumder**                      **Food Science and Technology**

Alexander Brady, biochemistry. Modulation of Vascular Calcium-sensing Receptors (CaSRs) by Nebraskan Great-Northern Bean-derived Gamma-Peptides for the Prevention and Management of Hypertension Associated Vascular Inflammation

**Eric Markvicka**                      **Mechanical & Materials Engineering**

Will Brovold, mechanical engineering. Wearable Technology - Electronic Bandages

Marco Fabietti, mechanical engineering. Soft Matter Actuators

Aaron Haake, mechanical engineering. 3D Printing Complex Microstructures of Liquid Metal in a Support Bath

**Meredith Martin**                      **Educational Psychology**

Christina Berger, psychology. Predictors of Adolescent Disclosure of Peer Victimization

Brandon Ee, psychology. Predictors of Adolescent Disclosure of Peer Victimization

Cara Jack, psychology. Predictors of Adolescent Disclosure of Peer Victimization

**Chris Marvin**                      **Special Education and Communication Disorders**

Rachel Beeney, speech-language pathology. The Getting Ready Intervention for Young Children at Developmental Risk: Impact on Children's Mean Length of Utterances

Sydney Harrington, speech-language pathology. Getting Ready 0-3

Morgan Padera, speech-language pathology. Getting Ready 0-3

Ana Perez-Senic, sociology/Spanish. The Getting Ready Project: Developmental Risk in Young Spanish Children: Impacts on Children's Mean Length of Utterances

**Dennis McChargue** **Psychology**

Gabrielle Krause, psychology. The Impact of Sexual Violence History on Substance Use and Dissociative Tendencies in College Women

Irenea Soetjoadi, psychology. Examining the Cross-Cultural Influence of Childhood Trauma on College Alcohol Use and Mental Health

**Justin McMechan** **Entomology**

Geneuse Turabawe, integrated science. Larval Movement and Infestation Potential

**Tiffany Messer** **Biological Systems Engineering**

Helen Little, biological systems engineering. Treating Non-Point Source Cocktails: Pesticide Removal Utilizing In-Stream Best Management Practices

**Taro Mieno** **Agricultural Economics**

Olivier Tuyizere, agricultural economics. The Impact of Saturated Thickness of Groundwater Aquifer on Farmers' Ability to Avoid Significant Economic Damage Under Severe Drought

**Ali Moeller** **Teaching, Learning and Teacher Education**

Anna Helzer, Spanish. History and Impact of Centennial College at UNL

**Mohammad Rashedul Hasan** **Computer Science and Engineering**

Brian Chong, computer science. Automatically Identifying, Counting, and Describing Wild Animals in Camera-Trap Images with Deep Learning

**Kristi Montooth** **Biological Sciences**

Alexus Hansen, biological sciences. Overwintering Physiology in Monarch Butterflies (*Danaus plexippus*)

Lauren Reiman, biological sciences. Infection-induced Anorexia in the Face of Energetic and Immune Deficiency

Jia Yin Sum, biological sciences. Uncoupling the Mitochondria as a Cellular Defense Mechanism

**Alena Moon** **Chemistry**

Shikshya Bhusal, biochemistry. Investigation of Students' Understanding of Light-Matter Interactions

**Stephen Morin** **Chemistry/Nebraska Center for Materials and Nanoscience**

Matthew Gromowsky, chemistry/biochemistry. Hybrid Droplet Shells with Programmed Magnetic Domains

**Etsuko Moriyama** **Biological Sciences/Center for Biotechnology**

Kushagra Kapil, computer science/mathematics. Development and Assessment of an Improved Next-Generation Transcriptome Assembler

Quinn Lanik, computer science. Development, Assessment and Application of Protein-Domain Classification Methods

**Benny Mote** **Animal Science**

Lindsay Peters, animal science. Examining Phenotypic Structural Traits as Indicators for Reproductive Longevity Success in Sows

**Jessica Namkung** **Special Education and Communication Disorders**

Janelle Bernaky, elementary education. Exploring the Relations Between Executive Function, Self-Efficacy and Mathematics Skills

Morgan Peatrowsky, elementary education. Exploring the Relations Between Executive Function, Self-Efficacy and Mathematics Skills

**Sathish Natarajan** **Nutrition and Health Sciences**

Madison Kraus, biological sciences. ZIKA-VIRUS Induces Apoptosis in Retinal and Retinal Glial Epithelial Cells

Jillian Power, microbiology. Maternal Obesity Induces Activation of FoxO Transcription Factors and MicroRNA 34a and Lipoapoptosis in Placental Trophoblast Cells

**Siamak Nejati** **Chemical and Biomolecular Engineering**

Andy Mason, chemical engineering and geology. Fabrication of Composite Membranes for Water Desalination

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

Pin Hao Cheng, mechanical engineering and applied mechanics. Counterbalance System: Principles and Application for Transferring Bedridden Patient

Adonis Nesser, mechanical engineering. Soft Robotic Camera Manipulator for Use in Single-Port Laparoscopic Surgery

**Wei Niu** **Chemical and Biomolecular Engineering**

Noha Alghami, chemical engineering. UNL International Genetically Engineered Machines (iGEM) Team

Michael Banwo, chemical engineering. UNL International Genetically Engineered Machines (iGEM) Team

Logan Hauder, chemical engineering. UNL International Genetically Engineered Machines (iGEM) Team

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

Zach Martin, social science. Sustainability of Inquiry-Based Teaching Guided by Instructional Coaches

McKenna Ryan, elementary education. Coaching Strategies: How Do They Differ?

**Toshihiro Obata** **Biochemistry**

Cristian Wulkop Gil, biochemistry. Correlation Between Maize Metabolite Levels and Phenotypic Traits

**Lameck Odhiambo** **Biological Systems Engineering**

Elizabeth Uwase, integrated science. Evapotranspiration Values and Their Significant Agronomic Importance in Rwandan Agriculture

**Peter Olshavsky** **Architecture**

Amy Koenig, architectural studies. The Examination and Reconstruction of Libeskind's "Three Lessons on Architecture"

Erin McNeil, architectural studies. Material Agency in Architecture

**Kendra Ordia** **Architecture**

Ashlynn Engelhard, interior design. Spatial Narrative in Biophilic Interior Design

**Hasan Otu** **Electrical and Computer Engineering**

Beibei Xiong, electrical engineering. Biomarker Discovery Using High-Throughput Biological Data

**Angela Palmer-Wackerly** **Communication Studies**

Carter Bracht, biochemistry. An Analysis of the Behaviors Utilized by Physicians and Medical Students to Cope With Stress

**Jae Sung Park** **Mechanical & Materials Engineering**

Kin Hoe Ang, mechanical engineering. Drag Reduction in Turbulent Flows for Energy Saving Engineering

**Ryan Pedrigi** **Mechanical & Materials Engineering**

Kurt Ameku, mechanical engineering. Disturbed Stress-Mediated Remodeling of the Lens Capsule After Cataract Surgery Determines Implanted Accommodative Intraocular Lens Efficacy

Ian McCue, biochemistry/microbiology. Laminar Blood Flow as a Mechanotherapy for Endothelial Cell Dysfunction and Atherosclerosis

**Nora Peterson** **Modern Languages and Literatures**

Rhiannon Cobb, political science/global studies. Refugee Integration in Paris, France, and Lincoln, Nebraska

**Chase Pfeifer** **Biomedical Engineering/  
Nebraska Athletic Performance Laboratory**

Connor Albin, biological systems engineering. Engineering Rehabilitation Devices for Integration in "GoBabyGo!" Cars

**Kurt Piepenbrink** **Food Science and Technology/Chemistry**

Josephine Liess, biological sciences. *Clostridium perfringens* Adhesion Through Type IV Pili

Alexander Meyer, biochemistry. *Clostridium perfringens* Adhesion Through Type IV Pili

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

Brandon Lassalle, biochemistry/microbiology/biological sciences. UNL International Genetically Engineered Machines (iGEM) Team

Rahul Prajapati, computer science. UNL International Genetically Engineered Machines (iGEM) Team

Anton Skretta, philosophy. Ethical Assurance Cases: An Adaptation of Software Engineering Safety Assurance Cases to Provide a Framework for Ethical Considerations Throughout the Development Process

**Santosh Pitla** **Biological Systems Engineering**

Victoria Nelson, mechanical engineering. Unmanned Ground Vehicle Autonomous Behavior in Agricultural Environment

Hessan Sedaghat, mechanical engineering. Development and Integration of a Robotic System to Simulate Autonomous Management in Plant Nursery

**Zachary Tate Porter** **Architecture**

Tara Grebe, architectural studies. Catalog of Speculative Suburban Futures

Scott Lafferty, architectural studies. Slabs, Piles and Rocks: Architecture's Emerging Typologies of Ground

Nicholas Olsen, architectural studies. Figure and Frame in the Architectural Imaginary

Patrick Pineda, architectural studies. Manual of Speculative Suburban Futures

Austin Riggins, architectural studies. Manual of Speculative Suburban Futures, Vol. II

Geneva Sinkula, architectural studies. Manual of Speculative Suburban Futures, Vol. II

**Larkin Powell** **Natural Resources/Biological Sciences**

Lindsey LaBrie, fisheries and wildlife/German. How German Prisoners of War and Germans Fleeing the Holocaust Changed Nebraska's Landscape

Erika Swenson, fisheries and wildlife. Effects of Transect Survey Methods on the Accuracy of Animal Densities in the NamibRand Nature Reserve

**Robert Powers** **Chemistry**

Paula Evans, child, youth and family studies. Investigating the Phosphorous Metabolome Using NMR Spectroscopy in Order to Understand Cellular Biochemistry

Zhenyu Feng, computer engineering. Creating a Graphical User Interface for MVAPACK

**Petronela Radu** **Mathematics**

Andrew Haar, mathematics. Analysis of Nonlocal Operators

**Andrzej Rajca** **Chemistry**

Alexander Batelaan, chemistry/mathematics. Designing a Diradical with High Thermal Stability

**Pralhada Rao** **Mechanical & Materials Engineering**

Benjamin Bevans, mechanical engineering. Additive Manufacturing: Sensor Monitoring in Laser Powder Bed Fusion

Joseph Broadway, mechanical engineering. Validation of a Mathematical Model for Predicting Heat Flux in 3D Printed Titanium Alloy Parts

Bethany Krull, computer engineering. Analyzing Quality of Printed Stellite Coating Using Sensing Data

**Heather Richards-Rissetto** **Anthropology/Natural Resources**

Riley Evers, anthropology/art history and criticism/classics and religious studies. Reconstructing the Temple of Inscriptions: Astronomical Relationships, Sociopolitical Shifts and the Landscape at Copan, Honduras

**Wayne Riekhof** **Biological Sciences**

Nancy Nguyen, biochemistry. Defining the Mechanism of Action of Plant Derived Polyacetylene Antifungal Compounds

**Beverley Rilett** **English**

Michaela Brown, art. Collaborative Digital Literacy Archive Development: The George Eliot Archive

Mackenzie Burch, English. The George Eliot Digital Archive Project/ Building the George Eliot Digital Archive, Phase 2

Shane Clegg, computer science. Building the George Eliot Digital Archive, Phase 2

Grace Erixon, software engineering. Building the George Eliot Digital Archive, Phase 2

John Harkendorff, computer engineering. The George Eliot Digital Archive Project

**Seung-Hyun Ro** **Biochemistry**

Caroline Trupp, biochemistry. The Guardian Roles of Sestrin2 Against Inflammatory and Overnutrition Stress in 3T3-L1 White Mouse Adipocytes

Zachary Whipps, biochemistry. The Guardian Roles of Sestrin2 Against Inflammatory and Overnutrition Stress in 3T3-L1 White Mouse Adipocytes

**Sabrina Russo** **Biological Sciences**

Susana Mayer, biological sciences. Quantifying Biodiversity in Niobrara Forests

**Sangjin Ryu** **Mechanical & Materials Engineering**

Delimulati Diliziba, mechanical engineering. Development of Three-Dimensional Porous Network Models Using Polydimethylsiloxane and Sugar Block

**Rajib Saha** **Chemical and Biomolecular Engineering**

Shardhat Daggumati, chemical engineering. Utilizing Methane-Oxidizing Microbes to Mitigate Trichloroethylene in Soil and Groundwater

Tony Le, biochemistry. Utilizing Methane-Oxidizing Microbes to Mitigate Trichloroethylene in Soil and Groundwater

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

Utkarsh Hardia, computer science/mathematics. Analyzing and Mapping Human Right Violations from Fast Data

**Lisa Sample** **Criminology and Criminal Justice**

Mallorie Sckerl, psychology/English. An Investigation into Origins of Sexual Assault in the Catholic Priesthood

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

Ananth Venkatachalam, chemical engineering. Nanoparticle Necklace Arrays and Its Applications

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

Bridget Leutzinger, elementary education and special education K-6. Collaboration Between Teachers and Students with Visual Impairments and General Educators

Alaina Rast, elementary education/special education (K-6). IEP Analysis of Students with Visual Impairments

Madison Thompson, elementary education and special education K-6. Collaboration Between Teachers of Students with Visual Impairments and General Educators

**Myra Schmaderer** **University Health Center/College of Nursing**

Hanna Baum, pre-health/nursing. Self-Management in Heart Failure: mHealth Interventions

Wendi Haufle, pre-health/nursing. Self-Management in Heart Failure: mHealth Interventions

Nora Schuele, pre-health/nursing. Self-Management in Heart Failure: mHealth Interventions

**Mathias Schubert** **Electrical and Computer Engineering**

Nate Koeppel, electrical engineering. Spectroscopic Ellipsometry-Based Optical Analysis of Slanted Columnar Nanostructures Grown by Glancing Angle Deposition System

**Stephen Scott** **Computer Science and Engineering**

Brennan Rhoadarmer, computer science/mathematics. Medical Image Analysis with Interpretable Deep Learning

**Michael Sealy** **Mechanical & Materials Engineering**

Evan Hymanson, mechanical engineering. Ablative and Confining Layers in Laser Peening for Hybrid Additive Manufacturing

**Bonita Sharif** **Computer Science and Engineering**

Jada Loro, psychology and philosophy. Assessing Emotional Awareness During Bug Fixes

Sarah Oran, software engineering. Assessing Emotional Awareness During Bug Fixes

Abigail Schneff, psychology. Assessing Emotional Awareness During Bug Fixes

**Lloyd Shenefelt** **Architecture**

Ciara Allen, architectural studies. On-Site: Active Learning Through Direct Participation in Architecture

Ethan Weiche, architectural studies/philosophy. Design for Change: The Health Impacts of Climate Change on Remote and Rural Populations

Nash Kelly, architectural studies. Design for Change: The Health Impacts of Climate Change on Remote and Rural Populations

**Dai Shizuka** **Biological Sciences**

Kristofor Hans, biological sciences. Investigating the Impact of Sociality on Bird Traits

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

Dana Hoppe, computer science. Effectiveness of Creative Coding as a Platform for Interdisciplinary Education

**Marilyne Stains** **Chemistry**

Justin Shuman, pre-science (7-12). Evaluation of How STEM Faculty Use the First Day of Class and Their Choices of Non-Content Instructor Talk

**Joshua Steelman** **Civil and Environmental Engineering**

Lane Applegarth, civil engineering. Elevating Undergraduate Student Cognition with Artificial Intelligence

**Jeff Stevens** **Psychology/Biological Sciences**

McKenna Yohe, psychology/veterinary science. Social Inhibition in Dogs

**Pascha Stevenson** **English**

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**Cody Stolle** **Midwest Roadside Safety Facility**

Nathan Asselin, computer science. Improving Vehicle Crash Reporting

**Scott Stoltenberg** **Psychology**

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Rachel Sisley, psychology. Genetic Variation and Social Responsiveness

Emily Wiatr, psychology. Genetic Variation and Social Responsiveness

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Aaron Roberts, graphic design. Art and Art History Design Internship Liaison Program and National Internship Program

**Ali Tamayol** **Mechanical & Materials Engineering**

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**Steven Thomas** **Natural Resources**

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**William Thomas** **History**

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Ian Ghanavati, biological systems engineering. Optimizing Athletic Throwing Power for Increased Training Efficiency

Colton Lyons, biological systems engineering. Utilizing Catapult Data to Change How Sports Teams Practice

Abigail Smith, biological systems engineering. Optimization of Lateral Acceleration in Base Leads

**Joseph Turner** **Mechanical & Materials Engineering**

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**Jarrett Uchechukwu** **Economics**

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**Cornelis Uiterwaal** **Physics and Astronomy**

Tristen Hazlett, mechanical engineering. Spatial Profile and Quality of Laser Beams

**Matthew Van Den Broeke** **Earth and Atmospheric Sciences**

Lucy Melcher, meteorology/climatology/mathematics. Variation in Polarimetric Radar Variables in Tropical Cyclone Supercells as a Function of Tornado Intensity and Regional Environment

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Mathias Schulte, biochemistry. Identifying the Nitrogenase Gene in Corn Rhizosphere Isolates: Analysis of their DMBOA Sensitivity

Florian Wurtele, biochemistry. Identifying the Nitrogenase Gene in Corn Rhizosphere Isolates: Analysis of their DMBOA Sensitivity

**James Van Etten** **Plant Pathology/Biological Sciences/Chemistry**

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**Alex Vecchio** **Biochemistry**

Currey Zalman, biochemistry. Biochemical Investigation of Epithelial Tight Junction Proteins



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Jared Noetzel, psychology. Effects of Culture on Conflict Style in American and Korean Populations

Hannah Uhl, psychology. Definitions of Water Quality

**Hiep Vu**

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**Mehmet Can Vuran**

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Grace Carlson, architectural studies. Using Neuroimaging to Assist Cochlear Implant Programming

Makayla Gill, chemistry. Identifying Neural Correlates of Speech Perception in Cochlear Implant Users

Grace Oh, biochemistry. Identifying Neural Mechanism of Speech Perception in Adult with Cochlear Implants Using Functional Near-Infrared Spectroscopy

**Hana Waisserova**

Brian Bulin, advertising and public relations/journalism and broadcasting. Czech-American Culture in the Bohemian Alps Region of Nebraska

Mitchell Znamenacek, architectural studies. Czech-American Culture in the Bohemian Alps Region of Nebraska

**Psychology****Animal Science****Computer Science and Engineering****Biological Systems Engineering****Advertising/Agricultural Leadership, Education and Communication****Special Education and Communication Disorders****Modern Languages and Literatures****Eric Weaver**

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**Karrie Weber**

Alicia Li Han Chan, geology and biological sciences. Litho-autotrophy Growth of the Geobacter Strain FeAm09

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**Kristy Weissling**

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Mallory Tvrdy, speech-language pathology. Improving the Inter-Professional Relationship Between Special Education Teachers and Speech-Language Pathologists

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Naomi Tsukada, chemical engineering. The Effects of Carbon Catabolite Repression in *Actinobacillus succinogenes*

**Sandra Williams**

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Carter Nelson, graphic design. Art and the Portrayal of Mental Illness

**Mary Willis**

Alyssa Arndt, child, youth and family studies. The Impact of Food Insecurity on the Health and Well-being of Ethiopia and Zambia's Southern Peoples

Flora Bescansa Luers, mechanized systems management/anthropology. The Impact of Food Insecurity on the Health and Well-being of Ethiopia and Zambia's Southern Peoples

Gisselle Hernandez, biological sciences. The Impact of Food Insecurity on the Health and Well-being of Ethiopia and Zambia's Southern Peoples

**Biological Sciences****Earth and Atmospheric Sciences****Textiles, Merchandising and Fashion Design****Special Education and Communication Disorders****Nebraska Center for Research on Children, Youth, Families and Schools****Biological Systems Engineering****Art, Art History and Design****Nutrition and Health Sciences**

Brianna Juma, nutritional science and dietetics. The Impact of Food Insecurity on the Health and Well-being of Ethiopia and Zambia's Southern Peoples

Megan Wackel, biochemistry. The Impact of Food Insecurity on the Health and Well-being of Ethiopia and Zambia's Southern Peoples

**Cynthia Willis-Esqueda** **Psychology/Ethnic Studies**  
Kendra Quiroz, psychology and English. Mexican American Bias Scale

**Kim Wilson** **Engineering/Landscape Architecture/Extension**  
Madeline McGill, landscape architecture. National Significance of a National Heritage Area

**Mark Wilson** **Biochemistry/Chemistry**  
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**Richard Wilson** **Plant Pathology**  
Ngoc Pham, biochemistry. Genetic Manipulation of *Magnaporthe oryzae* to Determine Key Factors of Pathogenicity in Rice Plants

Reegan Salverson, agronomy. Genetic Manipulation of *Magnaporthe oryzae* to Determine Key Factors of Pathogenicity in Rice Plants

**Changmou Xu** **Food Processing Center**  
Gloria Dukuzeyesu, integrated science. Edible Films Made by Corn Zein and Cellulose Derivatives for a Sustainable Environment

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**Jifeng Yu** **Management**  
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**Limei Zhang** **Biochemistry**  
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**Craig Zuhlke** **Electrical and Computer Engineering**  
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Josh Gerdes, mechanical engineering. Investigation of the Self-Propelled Jumping Droplet Performance of Femtosecond Laser Surface Processed Metals

Jace Wieseler, mechanical engineering. Use of Femtosecond Laser Processing to Create High Emissivity Surfaces

## 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
SAMHSA	Substance Abuse and Mental Health Services Administration
DOC	Department of Commerce
EDA	Economic Development Administration
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
DoD	Department of Defense
AFOSR	Air Force Office of Scientific Research
ARO	Army Research Office
DTRA	Defense Threat Reduction Agency
DURIP	Defense University Research Instrumentation Program
MDA	Missile Defense Agency
MURI	Multidisciplinary University Research Initiatives
NAVSEA	Naval Sea Systems Command
ONR	Office of Naval Research
SERDP	Strategic Environmental Research and Development Program
STRATCOM	U.S. Strategic Command
DOE	Department of Energy
ARPA-E	Advanced Research Projects Agency-Energy
NETL	National Energy Technology Laboratory
DOI	Department of Interior
FWS	Fish and Wildlife Service
NPS	National Park Service
DOJ	Department of Justice
NIJ	National Institute of Justice
DOT	Department of Transportation
FHWA	Federal Highway Administration
PHMSA	Pipeline and Hazardous Materials Safety Administration
ED	Department of Education
IES	Institute of Education Sciences

EPA	Environmental Protection Agency
EPSCoR	Established Program to Stimulate Competitive Research
IMLS	Institute of Museum and Library Services
NASA	National Aeronautics and Space Administration
NCHRP	National Cooperative Highway Research Program
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
NHLBI	National Heart, Lung and Blood Institute
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIAID	National Institute on Allergy and 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 and Communication Disorders
NIDDK	National Institute of Diabetes, Digestive and Kidney Disease
NIGMS	National Institute on General Medical Sciences
NIMH	National Institute of Mental Health
NINDS	National Institute of Neurological Disorders and Stroke
NSF	National Science Foundation
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
AFRI	Agriculture and Food Research Initiative
AMS	Agricultural Marketing Service
ARS	Agricultural Research Service
FNS	Food and Nutrition Service
FS	Forestry Service
NASS	National Agricultural Statistics Service
NIFA	National Institute for Food and Agriculture
NRCS	Natural Resources Conservation Service
OCE	Office of the Chief Economist

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