OFFICE OF RESEARCH AND ECONOMIC DEVELOPMENT

RESEARCH AND CREATIVE ACTIVITY

JULY 01, 2021 - JUNE 30, 2022

Major Sponsored Programs and Faculty Accomplishments in Research and Creative Activity

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, 2021, to June 30, 2022.

It lists investigators, project titles and funding sources on major grants and sponsored awards that were active during the year; fellowships and other recognitions and honors bestowed on our faculty; books, chapters and creative literature published by faculty; performances, exhibitions and other examples of creative activity; patents and licensing agreements; and conference presentations. In recognition of the important role faculty play in the undergraduate experience at Nebraska, this booklet notes the students and mentors participating in the Undergraduate Creative Activities and Research Experience (UCARE) and the First-Year Research Experience (FYRE) programs.

Increasing impact through research and creative activity is one of the six core aims of the N2025 strategic plan. A few measurements of progress made this year:

- UNL achieved a record $321 million in total research expenditures in FY 2021, a 31% increase over the past decade.
- Our faculty earned 1,560 sponsored research awards in FY 2021.

N2025 aims also include contributing to economic growth throughout the state and broadening Nebraska's engagement in community, industry and global partnerships. These are some measures of our efforts to commercialize university-sponsored research and partner with industry:

- Nebraska Innovation Campus created 2,127 jobs statewide. The cumulative impact of NIC investments totals $328.9 million.
- Industry sponsorship supported $19.8 million in research expenditures.
- NUtech Ventures brought in $6.36 million in licensing income.

I want to thank the Nebraska Research community for its willingness to collaborate, mentor and redefine success in research and creative activity. Your leadership is paving the way for future growth and providing an unparalleled educational experience. At Nebraska, it is the people who make the place.

Because of your dedication and expertise, Nebraska is positioned to solve some of the world's most wicked problems. I am impressed by your commitment to the Grand Challenges initiative, a strategic investment of up to $40 million over four years for projects in the high-impact areas of anti-racism and racial equity; climate resilience; early childhood education and development; health equity; quantum science and engineering; science and technology literacy for society; and sustainable food and water security. More than 180 faculty, staff and students are contributing to projects funded in Year 1.

Another N2025 aim is to create a climate that emphasizes, prioritizes and expands inclusive excellence and diversity. In the Office of Research and Economic Development, we continue to seek ways to remove barriers to success and ensure all Nebraska researchers have the resources they need to thrive. Thank you for the feedback you've thoughtfully provided.

I am pleased to present this record of accomplishments.

Bob Wilhelm

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“The Nebraska Research community ... is paving the way for future growth and providing an unparalleled educational experience. At Nebraska, it is the people who make the place.”

Awards of $5 Million or More

Active awards, July 1, 2021–June 30, 2022

* Indicates new in 2021–2022

Bevins, Rick — Psychology/ Rural Drug Addiction Research Center

Rural Drug Addiction Research Center

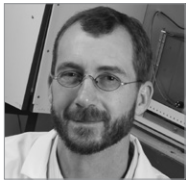
$11,854,178 . . . . . NIH-NIGMS

4/5/19 – 2/29/24

Habecker, Patrick . . . Sociology/Rural Drug Addiction Research Center

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

Nelson, Timothy . . . . . Psychology



The Rural Drug Addiction Research Center was created in 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

$51,250,000 . . . . . NSF

1/1/22 – 12/31/26

Ken Bloom, professor of physics and astronomy, oversees Nebraska's leadership of the National Science Foundation-funded portion of the U.S. CMS Operations Program. The university's role in this effort will advance cutting-edge work in subatomic physics at CERN, the European Organization for Nuclear Research in Switzerland, site of the Large Hadron Collider, the world's largest, most powerful particle accelerator.

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 – 12/31/22

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

Eve Brank, Aaron Douglas Professor of psychology and director of the Center on Children, Families and the Law (CCFL), and Kathryn Olson, associate director of CCFL and research assistant professor of psychology, 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

RII Track-1: Center for Root and Rhizobiome Innovation (CRRI)

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

6/15/16 – 4/30/22

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

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 an 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.

Chambers, Jeffrey — Center on Children, Families and the Law

COVID: NE Housing Assistance Common Fund - Balance of State
$6,486,296 . . . . . HUD through
Nebraska Department of Economic Development
6/1/21 – 5/31/23

The Center on Children, Families and the Law received a $6.5 million grant to respond to rural Nebraska homeowners who have been unable to make mortgage and utility payments due to the COVID-19 pandemic and are in jeopardy of losing their homes. Led by Jeff Chambers, senior project director in CCFL, the center is partnering with five community-based organizations to administer assistance to families through June 2023. The funding is sponsored by the U.S. Department of Housing and Urban Development Community Development Block Grant COVID-19 program and administered through the Nebraska Department of Economic Development. This work is part of the CCFL Community Services Division's larger efforts to build an infrastructure in Nebraska to respond to families in housing crisis after the pandemic. It is an extension of CCFL's mission of "Helping the Helpers."

Corman, Jessica — Natural Resources

RII Track-2 FEC: From Ecosystems to Evolution:
Harnessing Elemental Data to Detect Stoichiometric
Control-Points and their Consequences for Organismal Evolution
$5,987,352 . . . . . NSF-EPSCoR
1/1/21 – 12/31/24
Anania, Katie . . . . . Art, Art History and Design
Clarke, Jennifer. . . . . Food Science and Technology
Guan, Yawen. . . . . Statistics
Thomas, Steven. . . . . Natural Resources

With a $6 million grant from the National Science Foundation's Established Program to Stimulate Competitive Research, Jessica Corman is leading a team in developing a first-of-its-kind national environmental database. This tool will help researchers and policymakers study, predict and manage the ever-changing balance of elements in the environment and their impact on ecosystems regionally and nationally. The database, a collection of information from streams, lakes and the organisms that reside in them, will unlock major potential in ecological stoichiometry, a framework that explores the mismatch between available environmental elements and what organisms need. Corman, assistant professor of natural resources, is working with partners from the University of Wyoming, Central Arkansas University and Middlebury College.

Graef, Michelle — Center on Children, Families and the Law

Quality Improvement Center for Workforce Development
$15,520,500 . . . . . .DHHS-ACF
9/30/16 – 9/29/22
Ells, Mark. . . . . Center on Children, Families and the Law
Paul, Megan . . . . . Center on Children, Families and the Law

The University of Nebraska–Lincoln established the Quality Improvement Center for Workforce Development with a $15.5 million grant to the Center on Children, Families and the Law from the U.S. Department of Health and Human Services Administration for Children and Families-Children's Bureau. Under the leadership of Michelle Graef, research 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/Foundations
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.

Khattak, Aemal — Civil and Environmental Engineering/ Nebraska Transportation Center

University Transportation Centers Open Competition 2016
$15,584,200 . . . . . DOT
12/5/16 – 9/30/23

The Mid-America Transportation Center, a consortium of academic institutions led by the University of Nebraska–Lincoln, leads a $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. Aemal Khattak, MATC director and professor of civil and environmental 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 – 8/14/22
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), Phase 2

$10,667,732 ..... NIH-NIGMS
9/14/21 – 7/31/26

Checco, James ..... Chemistry/Nebraska Center for Integrated Biomolecular Communication
Clarke, Jennifer..... Statistics/Food Science and Technology/Nebraska Center for Integrated Biomolecular Communication
Eichhorn, Catherine..... Chemistry/Nebraska Center for Integrated Biomolecular Communication
Guo, Jiantao ..... Chemistry/Nebraska Center for Integrated Biomolecular Communication
Lai, Rebecca ..... Chemistry/Nebraska Center for Integrated Biomolecular Communication
Niu, Wei..... Chemical and Biomolecular Engineering/Nebraska Center for Integrated Biomolecular Communication
Powers, Robert ..... Chemistry/Nebraska Center for Integrated Biomolecular Communication
Wilson, Mark..... Biochemistry/Nebraska Center for Integrated Biomolecular Communication

A five-year, $11 million grant from the National Institutes of Health provides continuing support for 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

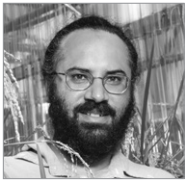
The Materials Research Science and Engineering Center (MRSEC) was established in 2002 with a grant from the National Science Foundation and involves scientists from the Departments of Physics and Astronomy, Chemistry, Mechanical & Materials Engineering, and the School of Biological Sciences. MRSEC projects 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. Evgeny Tsymbal, George Holmes Professor of physics and astronomy, leads the Nebraska team.

Walia, Harkamal — Agronomy and Horticulture

RII Track-2 FEC: Comparative Genomics and Phenomics Approach to Discover Genes Underlying Heat Stress Resilience in Cereals

$5,983,737 ..... NSF-EPSCoR
8/1/17 – 7/31/23

Morota, Gota ..... Animal Science
Obata, Toshihiro..... Biochemistry
Yu, Hongfeng ..... Computing
Zhang, Chi..... Biological Sciences
Zhang, Qi..... Statistics



Harkamal Walia, Heuermann Chair of agronomy, 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 $5.98 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
$7,500,000 . . . . . Nebraska Public Power District
4/1/21 – 3/31/26

The Nebraska Center for Energy Sciences Research is a collaboration between the university and the Nebraska Public Power District. The center was established in 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 and wind/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 – 9/30/22
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. RICA students learn the principles of conservation agriculture and One Health while emphasizing written communication, leadership and entrepreneurship. Students at RICA are 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

COBRE: Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules
$12,211,719. . . . . .NIH-NIGMS
8/5/14 – 5/31/24
Lim, Jung Yul . . . . . Mechanical & Materials Engineering
Sukumaran, Sunil . . . . . Nutrition and Health Sciences
Vechetti, Ivan . . . . . Nutrition and Health Sciences
Wang, Yongjun . . . . . Nebraska Center for the Prevention of Obesity Diseases
Yao, Qiuming. . . . . Computing

With the support of a $12.2 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, 2021–June 30, 2022

* Indicates new in 2021–2022

Allen, Craig — **Natural Resources**

RII Track-2 FEC: Resilience Informatics for the Convergence of Critical Capacities to Address Regional-Scale Environmental Change

$3,953,265 ..... NSF-EPSCoR

Banerjee, Simanti ..... Agricultural Economics

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

Uden, Daniel ..... Agronomy and Horticulture

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

Pytlik Zillig, Lisa ..... Public Policy Center

Soh, Leen-Kiat ..... Computing

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

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

Manufacturing Extension Partnership Center for Nebraska

$2,903,638 ..... DOC-NIST

Anderson, Troy — **Entomology**

*Development of an Efficacious Attractive Toxic Sugar Bait Station

$1,432,037 ..... Bill and Melinda Gates Foundation

Andrews, Trey — **Psychology/ Ethnic Studies/ Rural Drug Addiction Research Center/ Center for Brain, Biology and Behavior**

*Allostatic Load, Response to Discrimination Stress, Discrimination Exposure Frequency, and Social Network Structure and Function

$2,525,029 ..... NIH-NIMHD

Habecker, Patrick . . Sociology/Rural Drug Addiction Research Center/ Center for Brain, Biology and Behavior

Lorenz, Tierney . . . Psychology/Rural Drug Addiction Research Center/ Center for Brain, Biology and Behavior

Nelson, Timothy . . Psychology/Rural Drug Addiction Research Center/ Center for Brain, Biology and Behavior

Angeletti, Peter — **Biological Sciences**

Cancer Research International Training and Intervention Consortium (CRITIC)

$4,425,389 ..... NIH-NCI

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

Low-Power Signal-Processing Electronics for Unattended Radiation Monitoring Sensors

$1,060,772 ..... DoD-DTRA

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

Basche, Andrea — **Agronomy and Horticulture**

*Cover Crop Initiative: A Collaborative Project to Advance Knowledge and Utilization of Cover Crops for Conservation Measures in Nebraska

$1,049,500 ..... USDA-NRCS

Creech, Cody ..... Panhandle Research and Extension Center

Easterly, Amanda ..... Agronomy and Horticulture

Kaiser, Michael ..... Agronomy and Horticulture

Koehler-Cole, Katja ..... Agronomy and Horticulture

Maharjan, Bijesh ..... Panhandle Research and Extension Center

Redfearn, Daren ..... Agronomy and Horticulture

Yu, Hongfeng ..... Computing

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

Molecular Mechanisms of Disease

$1,214,052 ..... NIH-NIGMS

Harris, Edward ..... Biochemistry

Bellows, Laurie — **Graduate Studies**

TRIO – Ronald E. McNair Postbaccalaureate Achievement Program

$1,251,209 ..... 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

Berkowitz, David — **Chemistry**

Medical Countermeasure Drug Discovery and Development

$3,283,464 ..... DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute

Dussault, Patrick ..... Chemistry

Helikar, Tomas ..... Biochemistry

Powers, Robert ..... Chemistry

Bevins, Rick — **Psychology**

Interoceptive 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
$2,164,953 ..... NIH-NIAID

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

RII Track-1:
Emergent Quantum Materials and Technologies (EQUATE)
$4,617,536 ..... NSF-EPSCoR
Argyropoulos, Christos ..... Electrical and Computer Engineering/ Nebraska Center for Materials and Nanoscience
Bao, Wei ..... Electrical and Computer Engineering/ Nebraska Center for Materials and Nanoscience
Dowben, Peter ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Griep, Mark ..... Chemistry/ Nebraska Center for Materials and Nanoscience
Guo, Yinsheng ..... Chemistry/ Nebraska Center for Materials and Nanoscience
Hong, Xia ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Kovalev, Alexey ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Lai, Rebecca ..... Chemistry/ Nebraska Center for Materials and Nanoscience
Laraoui, Abdelghani ..... Mechanical & Materials Engineering/ Nebraska Center for Materials and Nanoscience
Liou, Sy-Hwang ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Schubert, Eva ..... Electrical and Computer Engineering/ Nebraska Center for Materials and Nanoscience
Schubert, Mathias ..... Electrical and Computer Engineering/ Nebraska Center for Materials and Nanoscience
Streubel, Robert ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Tsymbal, Evgeny ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Xu, Xiaoshan ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience

Nebraska Nanoscale Facility of NNCI
$3,500,000 ..... NSF
Ducharme, Stephen ..... Physics and Astronomy/ Nebraska Center forMaterials and Nanoscience
Hong, Xia ..... Physics and Astronomy/ Nebraska Center for Materials and Nanoscience
Lai, Rebecca ..... Chemistry/ Nebraska Center for Materials and Nanoscience
Lu, Yongfeng ..... Mechanical & Materials Engineering/ Nebraska Center for Materials and Nanoscience
Shield, Jeffrey ..... Mechanical & Materials Engineering/ Nebraska Center for Materials and Nanoscience

Brozovic, Nicholas — **Daugherty Water for Food Global Institute**

Promoting Sustainability and Resilience of
Smallholder Irrigation Impacts in Sub-Saharan Africa
$1,000,000 ..... International Fund for Agricultural Development

Bulling, Denise — **Public Policy Center**

Nebraska Youth Suicide Prevention 2019-2024
$3,610,121 ..... DHHS-SAMHSA
Hoffman, Stacey ..... Public Policy Center
Lewandowski, Quinn ..... Public Policy Center

Centurion, Martin — **Physics and Astronomy**

Nuclear and Electronic Dynamics in
Ultrafast Ring-Conversion Molecular Reactions
$2,940,000 ..... DOE

Ultrafast Electron Diffraction from Aligned Molecules
$1,566,385 ..... DOE

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

RII Track-2 FEC: Functional Analysis
of Nitrogen Responsive Networks in Sorghum
$1,337,633 ..... NSF-EPSCoR through HudsonAlpha Institute for Biotechnology
Ge, Yufeng ..... Biological Sciences/ Center for Plant Science Innovation
Schnable, James ..... Agronomy and Horticulture/ Center for Plant Science Innovation
Yang, Jinliang ..... Agronomy and Horticulture/ Center for Plant Science Innovation

Center for Advanced Bioenergy and Bioproducts Innovation
$3,886,388 ..... DOE through University of Illinois-Urbana-Champaign
Cahoon, Edgar ..... Biochemistry/ Center for Plant Science Innovation

Dodd, Michael — **Psychology/ Center for Brain, Biology and Behavior**

RII Track-2 FEC: Neural Networks Underlying the Integration of Knowledge and Perception

$1,172,504 . . . . . NSF through University of Delaware

Dodds, Eric — **Chemistry**

A Research Program on Advancing Biomedical Glycoproteomics

$1,999,597 . . . . . NIH-NIGMS

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

E2CDA: Type I: Antiferromagnetic Magneto-electric Memory and Logic

$3,573,423 . . . . . NSF/Semiconductor Research Corp

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

Sinitskii, Alexander . . . . . Chemistry/Nebraska Center for Materials and Nanoscience

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

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

Randomized Clinical Trial of the Boys Town In-Home Program

$1,112,775 . . . . . Father Flanagan's Boys' Home

Lambert, Matthew . . . . . Special Education and Communication Disorders/ Academy for Child and Family Wellbeing

Edwards, Katie — **Educational Psychology**

*Indigenous-led Research on Sex Trafficking Among Native Americans in the Northern Great Plains

$1,000,000 . . . . . DOJ-NIJ

Yellow Robe, Colette . . . . . Teaching, Learning and Teacher Education

Eichhorn, Catherine — **Chemistry**

*Structural Dynamics of Regulatory RNAs and Ribonucleoproteins

$1,845,838 . . . . . NIH-NIGMS

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

Indigenous Roots Teacher Education Program

$1,174,067 . . . . . ED

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

Cooperative Forestry Program

$3,221,930 . . . . . USDA-FS

Faller, Ronald — **Midwest Roadside Safety Facility/ Nebraska Transportation Center**

Crash Testing of Various Bridge Guardrails and Transitions, Phase III

$2,369,485 . . . . . Hawaii Dept of Transportation

Bielenberg, Robert . . . . . Midwest Roadside Safety Facility

Holloway, Jim . . . . . Midwest Roadside Safety Facility

Kim, Seunghee . . . . . Civil and Environmental Engineering

Lechtenberg, Karla. . . . . Midwest Roadside Safety Facility

Pajouh, Mojdeh A. . . . . Midwest Roadside Safety Facility

Rosenbaugh, Scott . . . . . Midwest Roadside Safety Facility

Sim, Chungwook. . . . . Civil and Environmental Engineering

Song, Chung . . . . . Civil and Environmental Engineering

Steelman, Joshua . . . . . Civil and Environmental Engineering

Stolle, Cody . . . . . Midwest Roadside Safety Facility

Low-Cost, Sacrificial, Energy-Absorbing, Crash Cushion

$1,218,785 . . . . . TrafFix Devices Inc.

Bielenberg, Robert . . . . . Midwest Roadside Safety Facility

Holloway, Jim . . . . . Midwest Roadside Safety Facility

Lechtenberg, Karla. . . . . Midwest Roadside Safety Facility

Rosenbaugh, Scott . . . . . Midwest Roadside Safety Facility

Stolle, Cody . . . . . Midwest Roadside Safety Facility

Pooled Fund Year 2021

$1,364,999 . . . . . DOT-FHWA through Nebraska Department of Transportation

Bielenberg, Robert . . . . . Midwest Roadside Safety Facility/ Nebraska Transportation Center

Holloway, Jim . . . . . Midwest Roadside Safety Facility/ Nebraska Transportation Center

Lechtenberg, Karla. . . . . Midwest Roadside Safety Facility/ Nebraska Transportation Center

Pajouh, Mojdeh A. . . . . Midwest Roadside Safety Facility

Rosenbaugh, Scott . . . . . Midwest Roadside Safety Facility/ Nebraska Transportation Center

Steelman, Joshua . . . . . 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)

$3,614,686 . . . . . 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

Fuchs, Brian — **Natural Resources**

*USDA Support for Enhancements to the U.S. Drought Monitor 2021-2022

$1,275,000 . . . . . USDA-OCE
Bathke, Deborah. . . . . Natural Resources
Haigh, Tonya. . . . . Natural Resources
Knutson, Cody . . . . . Natural Resources
Mieno, Taro . . . . . Agricultural Economics
Rimsaite, Renata . . . . . Natural Resources
Smith, Kelly . . . . . Natural Resources
Svoboda, Mark . . . . . Natural Resources
Tadesse, Tsegaye . . . . . Natural Resources
Wardlow, Brian. . . . . Natural Resources

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

Recognition and Recruitment of RNA Viruses into RNA Silencing Pathways

$1,312,105. . . . . .NIH-NIGMS

Ge, Yufeng — **Biological Systems Engineering**

High Intensity Phenotyping Sites: Transitioning to a Nationwide Plant Phenotyping Network

$3,000,000 . . . . . USDA-NIFA
Baenziger, P. Stephen. . . . . Agronomy and Horticulture
Sandall, Leah . . . . . Agronomy and Horticulture
Schnable, James. . . . . Agronomy and Horticulture
Shi, Yeyin . . . . . Biological Systems Engineering

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

$2,135,860 . . . . . United Soybean Board/Smith/Bucklin
Alvarez Y Albala, Sophie . . . . . Biotechnology
Clemente, Thomas . . . . . Agronomy and Horticulture
Holding, David . . . . . Agronomy and Horticulture
Hyten, David Jr. . . . . Agronomy and Horticulture

Grassini, Patricio — **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

Harris, Edward — **Biochemistry**

Liver-Mediated Clearance of Low Molecular Weight Heparins

$1,486,339 . . . . . NIH-NHLBI
Dodds, Eric . . . . . Chemistry

Helikar, Tomas — **Biochemistry**

*Multi-Cellular and Multi-Scale Systems Modeling to Understand the Dynamics of the Human Immune System in Interdisciplinary Applications

$1,856,250 . . . . . .NIH-NIGMS

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

Iverson, Nicole — **Biological Systems Engineering**

New and Improved Sensor Platforms and Quantification of Nitric Oxide for In Vitro and In Vivo Systems

$1,777,195. . . . . .NIH-NIGMS

Jacobson, Beth — **Student Affairs**

UNL Educational Talent Search

$2,635,070 . . . . . .ED

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

Mitochondrial Fidelity and Homeostasis
$1,846,766 ..... 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**

Coaching in Early Intervention (CEI): Promoting Outcomes for Infants/ Toddlers with Disabilities Through Evidence-Based Practices
$1,599,991 ..... ED
Nugent, Gwen. ..... Nebraska Center for Research on Children, Youth, Families and Schools
Schachter, Rachel. ..... Child, Youth and Family Studies
Sheridan, Susan ..... 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

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
Pajouh, Mojdeh A. ..... 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
$2,952,820 ..... ED

Lewis, Elizabeth — **Teaching, Learning and Teacher Education/ Center for Science, Mathematics and Computer Education**

Meeting the Needs of Diverse Students Through a Next Generation of Science Teacher Leadership in Nebraska
$2,916,074 ..... NSF
Claes, Daniel. ..... Physics and Astronomy
Harwood, David ..... Earth and Atmospheric Sciences
Helding, Brandon ..... Social and Behavioral Sciences Research Consortium
Heng-Moss, Tiffany ..... College of Agricultural Sciences and Natural Resources
Matkin, Gina ..... Agricultural Leadership, Education and Communication
McElravy, L.J. ..... Agricultural Leadership, Education and Communication
Menon, Deepika ..... Teaching, Learning and Teacher Education/ Center for Science, Mathematics and Computer Education
Moon, Alena ..... Chemistry
Searls, Mindi ..... Earth and Atmospheric Sciences/ Center for Science, Mathematics and Computer Education
Smith Wendy. ..... Center for Science, Mathematics and Computer Education

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 ..... Computing
Goodburn, Amy ..... Executive Vice Chancellor and Chief Academic Officer
Radu, Petronela ..... Mathematics
Sharif, Bonita ..... Computing
Smith, Wendy ..... Center for Science, Mathematics and Computer Education
Soh, Leen-Kiat ..... Computing

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

Libault, Marc — **Agronomy and Horticulture/ Center for Plant Science Innovation**

*Single-Cell Analysis of the Dynamics and Evolution of Gene Expression in Legumes

$1,500,000 ..... NSF

*Development of Advanced Multi-Modal Capabilities for Plant Single-Cell

$1,159,856 ..... Syngenta

Linzell, Daniel — **Civil and Environmental Engineering**

*Multilevel Analytics and Data Sharing for OPerations Planning (MADS-OPP)

$1,392,384 ..... DoD-Army-ERDC through University of Nebraska Omaha
Detweiler, Carrick ..... Computing
Sim, Chungwook ..... Civil and Environmental Engineering
Zhu, Jinying ..... Civil and Environmental Engineering

Louis, Joe — **Entomology/Biochemistry**

*Elucidating the Role of Brown Midrib12 (Bmr12) Gene in Modulating Sorghum Defense Against Sugarcane Aphid

$1,193,000 ..... USDA-NIFA
Helikar, Tomas ..... Biochemistry

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

Fabrication and Verification of Fuel Targets for Laser Fusion Research

$1,465,377 ..... DOE through University of Rochester

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

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

Lubben, Bradley — **Agricultural Economics**

North Central Risk Management Education Center

$2,212,900 ..... 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

$3,247,500 ..... DOC-NOAA

McQuillan, Julia — **Sociology**

Worlds of Connections: Engaging Youth with Health Research Through Network Science and Stories in Augmented Reality

$1,289,706 ..... NIH-NIGMS
Diamond, Judy ..... University of Nebraska State Museum
Spiegel, Amy ..... Social and Behavioral Science Research Consortium
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

$1,562,400 . . . . . ED

Upward Bound Math/Science Program

$1,532,919 . . . . . 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

Neale, Christopher — **Daugherty Water for Food Global Institute**

Novel Commercial Farm-Field Network to Quantify Emissions from Agricultural Bioenergy Feedstock Production

$3,052,157 . . . . . DOE-ARPA

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

Modifiable Predictors of Neural Vulnerabilities for Obesity

$3,049,571 . . . . . NIH-NIDDK
Brock, Becca . . . . . Psychology/Center for Brain, Biology and Behavior
Nelson, Jennifer . . . . Research/Center for Brain, Biology and Behavior
Savage, Cary. . . . . Psychology/Center for Brain, Biology and Behavior
Schultz, Douglas. . . . . Center for Brain, Biology and Behavior

Executive Control and Adolescent Weight Trajectories

$2,564,739 . . . . . NIH-NIDDK
Brock, Becca . . . . . Psychology/Center for Brain, Biology and Behavior
Lopez, Marla. . . . . Psychology
Nelson, Jennifer . . . . . Research and Economic Development/ 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

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)

$1,409,428 . . . . . 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)

$2,777,572 . . . . . NIH-NIBIB

Pegg, Mark — **Natural Resources**

*Pallid Sturgeon Biology in the Platte River and Its Tributaries
$1,201,000 . . . . . DOI-BR through Headwaters Corporation
Spurgeon, Jonathan . . . . . 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/ Daugherty Water for Food Global 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/ Daugherty Water for Food Global Institute
Burkhart-Kriesel, Cheryl . . Panhandle Research and Extension Center
Fulginiti, Lilyan . . . . . Agricultural Economics/ Daugherty Water for Food Global Institute
Groskopf, Jessica . . . . . Panhandle Research and Extension Center/ Daugherty Water for Food Global Institute
Perrin, Richard . . . . . Agricultural Economics/ Daugherty Water for Food Global Institute
Rudnick, Daran . . . . . West Central Research and Extension Center/ Daugherty Water for Food Global Institute
Weigle, Jason . . . . . Southeast Extension Center

Redfearn, Daren — **Agronomy and Horticulture**

*EXCHANGE: Expanding the Conversion of Habitat in the Northern Great Plains Ecosystem
$3,200,000 . . . . . DOE-EERE
Little, Andrew . . . . . Natural Resources
Parsons, Jay . . . . . Agricultural Economics
Peterson, Julie . . . . . West Central Research and Extension Center

Saha, Rajib — **Chemical and Biomolecular Engineering**

*A Predictive Modeling Framework to Dissect the Dynamic Immunometabolic Responses to Pathogenic Infection and the Kinetic Reprogramming of Metabolism in Cancer Cell System
$1,828,734 . . . . . NIH-NIGMS

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

*Interdisciplinary Training for Early Intervention and Visual Impairment (IT-EIVI)
$1,243,542 . . . . . ED
Loveall-Hague, Susan . . . . . Special Education and Communication Disorders
Yoon, HyeonJin . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

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

Scalora, Mario — **Public Policy Center**

*Supporting School Threat Assessment Teams Via the Implementation of a Statewide Anonymous Reporting System
$1,281,919. . . . . DOJ-BJA
Bulling, Denise . . . . . Public Policy Center

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

Schoengold, Karina — **Agricultural Economics**

*RII Track-2 FEC BioWRAP (Bioplastics with Regenerative Agricultural Properties): Spray-on Bioplastics with Growth Synchronous Decomposition and Water, Nutrient, and Agrochemical Management for Enhanced Field Crop Production

$1,800,000 . . . . . NSF through Kansas State University
Haacker, Erin. . . . . Earth and Atmospheric Sciences
Isom, Loren . . . . . .Industrial Agricultural Products Center
Proctor, Christopher. . . . . Agronomy and Horticulture
Ray, Chittaranjan . . . . . Civil and Environmental Engineering/ Nebraska Water Center
Rudnick, Daran . . . . . Biological Systems Engineering
Wilkins, Mark . . . . . Biological Systems Engineering/ Food Science and Technology/ Industrial Agricultural Products Center

Scott, Stephen — **Computing**

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 . . . . . Computing

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

Efficacy of Virtual Professional Development in Rural Schools to Enhance Teacher-Parent Partnerships for Students with Behavioral Challenges

$3,800,000 . . . . . ED-IES
Wheeler, Lorey . . . . . Nebraska Center for Research on Children, Youth, Families and Schools
Witte, Amanda . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

Early Learning Contexts in Rural and Urban Nebraska

$4,773,268 . . . . . ED-IES
Knoche, Lisa . . . . . Nebraska Center for Research on Children, Youth, Families and Schools/ Buffett Early Childhood Institute
Koziol, Natalie . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

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

Smith, Adam — **Nebraska State Forest Service**

*Nebraska Forest Restoration Partnership

$4,500,000. . . . . USDA-NRCS

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

*Achieving Critical Transformations in Undergraduate Programs in Mathematics (ACTUP Math)

$1,500,000 . . . . . .NSF
Bennett, Amy . . . . . .Mathematics/Center for Science, Mathematics and Computer Education
Funk, Rachel . . . . . .Center for Science, Mathematics and Computer Education
Wonch Hill, Trish. . . . . Social and Behavioral Science Research Consortium

*Practices and Research on Student Pathways in Education from Community College and Transfer Students in STEM (PROSPECT S-STEM)

$1,421,247. . . . . .NSF
Duncan, Brittany . . . . . Computing
Funk, Rachel . . . . . .Center for Science, Mathematics and Computer Education
Searls, Mindi. . . . . Earth and Atmospheric Sciences/ Center for Science, Mathematics and Computer Education
Soh, Leen-Kiat. . . . . Computing

Soh, Leen-Kiat — **Center for Science, Mathematics and Computer Education/Computing**

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

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**

USDA Support of the U.S. Drought Monitor and Hub Activities with the National Drought Mitigation Center for the Period of 2020 to 2023

$2,375,000 ..... USDA-OCE
Bathke, Deborah ..... Natural Resources
Fuchs, Brian ..... Natural Resources
Haigh, Tonya ..... Natural Resources
Knutson, Cody ..... Natural Resources
Smith, Kelly ..... Natural Resources
Tadesse, Tsegaye ..... Natural Resources

Providing Drought Information Services for the Nation: The National Drought Mitigation Center

$1,600,000 ..... DOC-NOAA
Bathke, Deborah ..... Earth and Atmospheric Sciences
Fuchs, Brian ..... Natural Resources
Haigh, Tonya ..... Natural Resources
Knutson, Cody ..... Natural Resources
Smith, Kelly ..... Natural Resources
Tadesse, Tsegaye ..... Natural Resources

Takacs, James — **Chemistry**

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

$1,232,002 ..... NIH-NIGMS

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
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 ..... Computing/ 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, Taro ..... 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**

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

Trainin, Guy — **Teaching, Learning and Teacher Education/ Nebraska Center for Research on Children, Youth, Families and Schools**

*Art TEAMS: Nurturing Educators Who Integrate Art, Core Subjects, and Culturally Responsive Teaching to Support Students in Becoming Makers of Change

$1,942,920 ..... ED

D'Adamo, Kimberley ..... Teaching, Learning and Teacher Education/ Nebraska Center for Research on Children, Youth, Families and Schools

Yoon, HyeonJin ..... Nebraska Center for Research on Children, Youth, Families and Schools

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

Juniper Invasions and Landscape Intervention Potential: A Statewide Assessment

$1,361,472 ..... DOI-FWS through Nebraska Game and Parks Commission

Allen, Craig ..... Natural Resources

Umstadter, Donald — **Physics and Astronomy**

LaserNetUS

$2,100,000 ..... 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

Vecchio, Alex — **Biochemistry**

Elucidating Structures and Functions of Membrane Protein Interactions at Tight Junctions

$1,973,388 ..... NIH-NIGMS

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

Kiramba, Lydiah ..... Teaching, Learning and Teacher Education

Wachs, Rebecca — **Biological Systems Engineering**

*Decoupling Mechanical and Inflammatory Stimuli in Discogenic Low Back Pain

$1,589,840 ..... NIH-NIAMS
Ramer-Tait, Amanda ..... Food Science and Technology

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

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)

$1,749,944 ..... DOE
Dvorak, Bruce ..... Civil and Environmental Engineering
Stelling, Karen ..... Mechanical & Materials Engineering

Wilson, Mark — **Biochemistry/Nebraska Center for Redox Biology**

Time-Resolved X-ray Crystallography of Dynamics in Cysteine-Dependent Enzymes

$1,183,976 ..... NIH-NIGMS

Xu, Xiaoshan — **Physics and Astronomy/Nebraska Center for Materials and Nanoscience**

Studies of Artificially Structured Composite Magnets

$1,868,002 ..... DOE

Yin, Yanbin — **Food Science and Technology/Nebraska Food for Health Center**

Carbohydrate Enzyme Gene Clusters in Human Gut Microbiome

$1,490,979 ..... NIH-NIGMS
Cui, Juan ..... Computing
Zhou, Yuzhen ..... Statistics

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

Yu, Jiujiu — **Nutrition and Health Sciences/Nebraska Center for the Prevention of Obesity Diseases**

*Role of Chive-derived Exosome-like Nanoparticles in Suppressing Inflammation in Obesity

$1,734,810 ..... NIH-NIDDK
Roston, Rebecca ..... Biochemistry/Nebraska Center for the Prevention of Obesity Diseases

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

Molecular Signatures of New Bioactive Compounds in Humans: Cows Milk MicroRNAs

$1,785,715 ..... USDA-NIFA
Adamec, Jiri ..... Biochemistry/Nebraska Center for the Prevention of Obesity Diseases
Cui, Juan ..... Computing/Nebraska Center for the Prevention of Obesity Diseases

Zhang, Limei — **Biochemistry/Nebraska Center for Redox Biology**

Structures and Mechanisms of Iron-Sulfur Proteins in Redox Control and Stress Response

$2,046,616 ..... NIH-NIGMS

Zuhlke, Craig — **Electrical and Computer Engineering**

Fundamental Studies on Functionalizing Metallic Surfaces Using Femtosecond Lasers with Applications to Enhanced Heat Transfer; Novel Power

$1,230,441 ..... DoD-ONR
Gogos, George ..... Mechanical & Materials Engineering
Ianno, Natale ..... Electrical and Computer Engineering
Shield, Jeffrey ..... Mechanical & Materials Engineering

Awards of $250,000 to $999,999

Active awards, July 1, 2021–June 30, 2022

* Indicates new in 2021–2022

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

Adenwalla, Shireen — **Physics and Astronomy**

*Funsize Physics Version 3: Past Achievements, Lessons Learnt and the Way Forward

$365,777 . . . . . NSF

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**

*DISES-RCN: Resilience in Agricultural Socio-Environmental Systems

$403,020 . . . . . NSF

Awada, Tala . . . . . Natural Resources

Alsaleem, Fadi — **Durham School of Architectural Engineering and Construction**

*Microsystems Based AI for SWaP-C @ Edge

$492,704 . . . Intelligence Advanced Research Projects Activity through General Electric

Micro-Electro-Mechanical Neural Integrated Sensing and Computing Units for Wearable Device Applications

$391,532 . . . . . NSF

Andrews, Trey — **Psychology/Ethnic Studies**

*REU Site: Community-Engaged Training for Advancing Health Equity

$402,120 . . . . . NSF

Edwards, Katie . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

Habecker, Patrick . . . . . Sociology

Nelson, Timothy . . . . . Psychology

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

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

Agricultural Intensification in the Western Corn Belt

$775,000 . . . . . USDA-ARS

Giannakas, Konstantinos. . . . . Agricultural Economics

Suyker, Andy . . . . . Natural Resources

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

Bao, Wei — **Electrical and Computer Engineering**

Robust, Compact, On-Chip Microlaser Enabled by Merging Bound States in the Continuum

$350,000. . . . . DoD-ONR

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

Development and Testing of *Mycobacterium avium* subsp. *paratuberculosis* DIVA Vaccines in Ruminants

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

Barrett, Scott — **Psychology**

*Non-opioid Anesthetic Countermeasures

$272,017 . . . . . DoD-DTRA through National Strategic Research Institute

Bevins, Rick . . . . . Psychology

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

*CAMRADES Connecting AntiMicrobial Resistance, Agricultural Decisions, and Environmental Systems: A Tool for Mitigating AMR and Assessing Risk to Human Health in Agro-Ecosystems
$309,037 . . . . . USDA-NIFA through Iowa State University
Schmidt, Amy . . . . . Animal Science/Biological Systems Engineering
Wang, Bing . . . . . Food Science and Technology

Influence of Agrochemical Mixtures on Treatment Wetland Ecosystems Services
$499,999 . . . . . USDA-NIFA
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
Sim, Chungwook . . . . . Civil and Environmental Engineering
Steelman, Joshua . . . . . Nebraska Transportation Center
Wittich, Christine . . . . . Civil and Environmental Engineering
Wood, Richard . . . . . Civil and Environmental Engineering

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
$414,979 . . . . . NSF
Markovicka, Eric . . . . . 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**

*Direct Removal of Groundwater Nitrate Coupling Water Treatment and Algae Growth
$456,962 . . . . . Nebraska Environmental Trust
Allen, James . . . . . Biochemistry
Demirel, Yasar . . . . . Chemical and Biomolecular Engineering

Investigating the Proline Cycle as a Potential Cancer Therapy Target
$291,983 . . . . . NIH-NIGMS through University of Missouri-Columbia

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

Benson, John — **Natural Resources**

*Elk Resource Selection, Movement, Survival, and Population Dynamics in Western Nebraska
$831,942 . . . . . DOI-FWS through Nebraska Game and Parks Commission

Reproductive Success, Survival, and Cause-specific Mortality of Bighorn Sheep in Nebraska
$280,740 . . . . . Nebraska Game and Parks Commission

Bevins, Rick — **Psychology**

Extracellular Vesicles, Meth Relapse and Sex Differences
$425,309 . . . . . NIH-NIDA through University of Nebraska Medical Center

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**

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**

Magnetoelectrics and Spinorbitronics in Topological Heterostructures and Superlattices
$838,679 . . . . . DoD-ONR through University of California, Los Angeles

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, Rhae . . . . . 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
Francis, Charles . . . . . Agronomy and Horticulture
Koehler-Cole, Katja . . . . . Agronomy and Horticulture
Parsons, Jay . . . . . Agricultural Economics
Ruis, Sabrina . . . . . Agronomy and Horticulture
Yang, Haishun . . . . . Agronomy and Horticulture

Blum, Paul — **Biological Sciences**

Epigenetic Inheritance in the Crenarchaeota
$618,472 . . . . . NSF
Van Cott, Kevin . . . . . Chemical and Biomolecular Engineering
Wilson, Mark . . . . . Biochemistry

REU Site: Integrated Development of Bioenergy Systems
$323,325 . . . . . 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
$591,349 . . . . . 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-Brandl, Tami — **Biological Systems Engineering**

FACT-CIN: A Coordinated Innovation Network for Advancing Computer Vision in Precision Livestock Farming
$286,058 . . . . . USDA-NIFA through Michigan State University

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**

*Prevention and Promotion Program
$785,956 . . . . . DHHS-SAMHSA through Nebraska Department of Health and Human Services
Walther, Janell . . . . . 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

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

*Expanding Opportunities in Agricultural Sciences: Crop-to-Food Innovation
$742,668 . . . . . USDA-NIFA
Auchtung, Jennifer . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Benson, Andrew . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Ciftci, Ozan . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Clemente, Thomas . . . . . Agronomy and Horticulture/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Danao, Mary-Grace . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Frels, Katherine . . . . . Agronomy and Horticulture/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Holding, David . . . . . Agronomy and Horticulture/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Ramer-Tait, Amanda . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Rose, Devin . . . . . Agronomy and Horticulture/ Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Schnable, James . . . . . Agronomy and Horticulture/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Velander, Paul . . . . . Biochemistry/Center for Plant Science Innovation/ Nebraska Food for Health Center
Wilkins, Mark . . . . . Biological Systems Engineering/ Industrial Agricultural Products Center/ Center for Plant Science Innovation/ Nebraska Food for Health Center
Xu, Changmou . . . . . Food Science and Technology/ Center for Plant Science Innovation/ Nebraska Food for Health Center

High-Value Oilseed Design and Optimization: Camelina- and Soybean-Based Astaxanthin Production
$450,000 ..... USDA-NIFA
Obata, Toshihiro. . . .Biochemistry/Center for Plant Science Innovation

High-throughput Mutagenesis in *Arabidopsis*
$300,000 ..... Google Inc.
Yu, Bin .....Biological Sciences/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

Centurion, Martin — Physics and Astronomy

Capturing Ultrafast Electron-Driven Chemical Reactions in Molecules
$700,847. . . . . DOE

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

*Mechanisms of Small RNA-Mediated Silencing in *Chlamydomonas*
$794,803. . . . . .NSF

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

Checco, James — Chemistry

*Chemical Approaches to Interrogate Neuropeptide and Peptide Hormone Signaling in Disease
$702,573. . . . . .NIH-NIGMS

Chizinski, Christopher — Natural Resources

Motivations, Preferences, Attitudes, and Expenditures of Kansas Anglers
$375,504. . . . . Kansas Department of Wildlife and Parks

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
Pope, Kevin . . . . . Natural Resources

Christensen, Alan — Biological Sciences

Double-Strand Break Repair in Plant Mitochondria: Products and Proteins
$820,000. . . . . .NSF

Ciftci, Ozan — Food Science and Technology

An Innovative Green Platform Technology to Manufacture Novel Multifunctional Hollow Solid Lipid Micro- and Nanoparticles
$481,960. . . . . USDA-NIFA
Ciftci, Deniz . . . . . .Food Science and Technology
Hutkins, Robert. . . . . .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

Clark, Carrie — Educational Psychology/ Nebraska Center for Research on Children, Youth, Families and Schools/ Center for Brain, Biology and Behavior

Evaluating Psychophysiological Mechanisms of Early Childhood Teachers' Stress Resilience and Their Relevance for Preschoolers' Self-Regulation

$412,863 ..... NIH-NICHD
Calvi, Jessica ..... Center for Brain, Biology and Behavior/ Nebraska Center for Research on Children, Youth, Families and Schools
Hatton-Bowers, Holly ..... Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools/ Center for Brain, Biology and Behavior
Parra, Gilbert ..... Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools/ Center for Brain, Biology and Behavior
Tyler, Kimberly ..... Sociology/Nebraska Center for Research on Children, Youth, Families and Schools/ Center for Brain, Biology and Behavior
Wheeler, Lorey ..... Nebraska Center for Research on Children, Youth, Families and Schools/ Center for Brain, Biology and Behavior

Clarke, Jennifer — Agricultural Research Division

*National Ag Producer Data Cooperative: A Strategic Framework for Innovation

$500,000 ..... USDA-NIFA
Franz, Trenton ..... Natural Resources
Lorang, Liz ..... University Libraries
Luck, Joe ..... Biological Systems Engineering
Spangler, Matthew ..... Animal Science
Thompson, Laura ..... Eastern Nebraska Research and Extension Center
Yu, Hongfeng ..... Computing

Corman, Jessica — Natural Resources

StreamNet: Building Capacity to Improve Water Quality

$480,524 ..... Nebraska Environmental Trust
Chizinski, Christopher ..... Natural Resources
Thomas, Steven ..... Natural Resources

Couch, Brian — Biological Sciences/ Nebraska Center for Virology

*From Community to Practice: Evaluating How Open Educational Resources Facilitate Implementation of Vision and Change Principles Across Diverse Institutions

$778,131 ..... NSF

Student Engagement with Online Formative Assessments: Identifying Access and Barriers to Resource Use at Two-Year and Four-Year Institutions

$250,724 ..... NSF
Brazeal, Kati ..... Biological Sciences
Wheeler, Lorey ..... Nebraska Center for Research on Children, Youth, Families and Schools

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

Creech, Cody — Agronomy and Horticulture

*The Effects of Solid-and Semi-Solid Stemmed Wheat Varieties and Wheat Stem Sawfly Infestation on Wheat Residue Longevity and Soil Water Content

$250,000 ..... USDA-NIFA through University of Minnesota-SARE
Bradshaw, Jeffrey ..... Entomology
Easterly, Amanda ..... Agronomy and Horticulture
Frels, Katherine ..... Agronomy and Horticulture
Maharjan, Bijesh ..... Agronomy and Horticulture
Stephenson, Mitchell ..... Agronomy and Horticulture

Cressler, Clay — **Biological Sciences**

Habitat and Coinfection as Drivers of Heterogeneity in Cross-Scale Wildlife Infectious Disease Processes
$348,171 . . . . . NSF through University of Arkansas

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

*Additively Manufactured Graded Composite Transition Joints for Dissimilar Metal Weldments in Advanced Ultra-Supercritical Power Plant
$300,000 . . . . . DOE through West Virginia University

*High-throughput Computational Guided Development of Refractory Complex Concentrated Alloys-based Composite
$510,626 . . . . . DOE-ARPA-E through West Virginia University

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

Cupp, Andrea — **Animal Science**

Metabolic Regulators of Corpus Luteum Function
$388,210. . . . . NIH-NICHD through University of Nebraska Medical Center
Wood, Jennifer . . . . . Animal Science

Dauer, Jenny — **Natural Resources**

*Supporting Students' Critical Evaluation of Evidence in Socioscientific Issues Contexts
$299,983 . . . . . NSF
Moon, Alena . . . . . Chemistry

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

Dauer, Joseph — **Natural Resources**

Quantitative Modeling in Undergraduate Biology Courses: Teaching Approaches and Student Outcomes
$402,926. . . . . NSF
Couch, Brian . . . . . Biological Sciences

ECR DBER DCL: Describing the Neurobehavioral Effects of Modeling-Based Instruction in Undergraduate Life Sciences Education
$313,898 . . . . . NSF
Clark, Carrie . . . . . Educational Psychology

De Guzman, Maria — **Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools**

Youth Civic Engagement: Using Simulations and Design Thinking
$648,242. . . . . USDA-NIFA
Do, Kieu-Anh. . . . . Child, Youth and Family Studies
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
Rice, Nathan. . . . . Extension
Thorson, Stephanie. . . . . Extension

DeLong, John — **Biological Sciences**

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

Detweiler, Carrick — **Computing**

Real-time Weather Awareness for Enhanced Safety Assurance in UTM
$805,406. . . . . NASA through Oklahoma State University
Houston, Adam. . . . . Earth and Atmospheric Sciences

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
$750,141 . . . . . DoD-Offutt Air Force Base-STRATCOM through National Strategic Research Institute
Bradley, Justin. . . . . Computing
Duncan, Brittany . . . . . Computing

Diefes-Dux, Heidi — **Biological Systems Engineering**

*Research: Evidencing Epidemic Change in Engineering Education: Shedding Light on Instructor Adaptability and Course Complexity for Sustained Change
$419,039 . . . . . NSF
Panther, Grace . . . . . Civil and Environmental Engineering

DiLillo, David — **Psychology**

Promoting Prosocial Bystander Behavior in Intoxicated Men: Evaluation of RealConsent2.0
$871,088 . . . . . NIH-NIAAA through Georgia State University
Gervais, Sarah . . . . . Psychology

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

Nebraska Local Technical Assistance Program
$818,039 . . . . . 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
Qi, 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

Duncan, Brittany — **Computing**

NRI: INT: Leveraging Environmental Monitoring UAS in Rainforests
$722,804. . . . . NSF
Detweiler, Carrick . . . . . Computing

REU Site: Undergraduate Research Opportunities in Unmanned Systems Foundations and Applications
$400,649. . . . . NSF
Bradley, Justin. . . . . Computing
Detweiler, Carrick . . . . . Computing

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

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

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

The Impact of an Adapted Version of the Strengthening Families Program on Reducing IPV among Caregivers and ACEs among Their Children
$699,996 . . . . . DHHS-CDC
Crawford, Devan . . . . . Sociology/Nebraska Center for Research on Children, Youth, Families and Schools/ Rural Drug Addiction Research Center
Wheeler, Lorey . . . . . Nebraska Center for Research on Children, Youth, Families and Schools/ Rural Drug Addiction Research Center

Development and Pilot Evaluation of an Online Intervention to Prevent Dating Violence and Problem Drinking in Sexual Minority Youth
$646,406. . . . . NIH-NIAAA
Wheeler, Lorey . . . . . Nebraska Center for Research on Children, Youth, Families and Schools/ Rural Drug Addiction Research Center

Development and Pilot Trial of an Intervention to Reduce Disclosure Recipients' Negative Social Reactions and Victims' Psychological Distress and Problem Drinking
$264,221 . . . . . NIH-NIAAA
Waterman, Emily . . . . . 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
$413,347 . . . . . NSF
Burberry, Cara . . . . . Earth and Atmospheric Sciences

Assessing Segment-scale Compositional Control over Slow-spreading Ridge Morphology
$278,905 . . . . . NSF

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

*Indigenous Roots School Leaders
$585,526 . . . . . ED
Holman, Shavonna. . . . . Educational Administration
Pace, Nick . . . . . Educational Administration

Erickson, Galen — **Animal Science**

Integrated Crop Livestock Systems for the Western Corn Belt
$470,000. . . . . USDA-ARS
MacDonald, James . . . . . Animal Science
Watson, Andrea . . . . . Animal Science

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 Assistance Funds Adjacent
$300,000 . . . . . USDA-FS

Eun, Jongwan — **Civil and Environmental Engineering**

Multiscale and Multiphysical Testing-Modeling of Inorganic Microfiber-Reinforced Engineered Barrier Materials (IMEBM) for Enhancing Repository Performance
$640,000 . . . . . DOE-NEUP
Kim, Seunghee . . . . . Civil and Environmental Engineering

Fabrikant, Ilya — **Physics and Astronomy**

Electron and Positronium Collisions with Molecules
$270,000. . . . . NSF

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

*Crash-Tested Bridge Railings and Transitions for Wood Bridges – Phase IIB
$500,000 . . . . . USDA-FS through U.S. Endowment for Forestry and Communities
Bielenberg, Robert . . . . . Midwest Roadside Safety Facility
Rosenbaugh, Scott . . . . . Midwest Roadside Safety Facility
Steelman, Joshua . . . . . Civil and Environmental Engineering/ Midwest Roadside Safety Facility
Stolle, Cody . . . . . Midwest Roadside Safety Facility

Crash Testing of a Precast Concrete Barrier
$414,128 ..... Iowa Department of Transportation
Bielenberg, Robert ..... Midwest Roadside Safety Facility
Rosenbaugh, Scott ..... Midwest Roadside Safety Facility
Steelman, Joshua ..... Civil and Environmental Engineering/ Midwest Roadside Safety Facility

Fernandez-Ballester, Lucia — Mechanical & Materials Engineering

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

Fernando, Samodha — Animal Science

Investigating the Emergence and Ecology of Antimicrobial Resistance in High-Risk Beef Cattle
$332,437 ..... USDA-AFRI through Texas Tech University
Schmidt, Amy ..... Animal Science/Biological Systems Engineering

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
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

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

Frels, Katherine — Agronomy and Horticulture

Breeding Scab-Resistant and Low DON Winter Barley Varieties for the Great Plains
$284,038 ..... USDA-ARS

Plant Breeding Partnerships: Continuing to Develop and Validate the Tools for Hybrid Wheat
$650,000. ..... USDA-NIFA

Fuchs, Matthias — Physics and Astronomy

High-Efficiency, High-Current Laser-driven Electron Injector
$749,622 ..... DOE
Shadwick, Bradley ..... 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

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

Gay, Timothy — Physics and Astronomy

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

Polarized Electron Physics
$689,917 ..... NSF

Ge, Yufeng — Biological Systems Engineering

A Rapid In-Field System to Measure Deep Soil C Stock and Flux
$624,997 ..... DOE-ARPA-E through Soil Health Institute

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

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

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

Golf, Frank — **Physics and Astronomy**

*Pursuing a Non-standard Higgs Boson Off the Beaten Path

$525,000 . . . . . NSF

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

Smart, Autumn . . . . . Entomology

Velez Arango, Ana Maria . . . . . Entomology

Weissling, Tom . . . . . Entomology

Wu-Smart, Judy . . . . . Entomology

Graef, George — **Agronomy and Horticulture**

Winter Nursery Support for Soybean Breeding and Genetics Studies

$257,069 . . . . . Nebraska Soybean Board

Increasing Soybean Genetic Gain for Yield by Developing Tools, Know-How and Community Among Public Breeders in the North Central U.S.

$253,260 . . . . . North Central Soybean Research Program through Ohio State University

Hyten, David Jr. . . . . Agronomy and Horticulture

Soybean Breeding and Genetic Studies for Nebraska

$304,247 . . . . . Nebraska Soybean Board

Grassini, Patricio — **Agronomy and Horticulture**

*Niche

$685,000 . . . . . Bill and Melinda Gates Foundation through Regrow Agriculture Inc.

*Extrapolation Domains for Aggregating Environmental Outcomes from Local to Regional Levels

$375,000 . . . . . DOE-ARPA-E

Developing a Platform to Monitor N Footprint in Agro-Ecosystems

$431,000 . . . . . USDA-NIFA

Brozovic, Nicholas . . . . . Agricultural Economics/ Daugherty Water for Food Global Institute

Gibson, Kate . . . . . Daugherty Water for Food Global Institute

Rattalino Edreira, Juan Ignacio . . . . . Agronomy and Horticulture

Griep, Mark — **Chemistry**

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

$387,249 . . . . . NSF

Groskopf, Jessica — **Panhandle Research and Extension Center**

North Central Farm and Ranch Stress Assistance Center: Engaging Programs to Support Well-being

$437,193 . . . . . USDA-NIFA through University of Illinois

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

Modular Construction: A Field Study of Energy Efficiency and Code Compliance Through Offsite Prefabrication

$400,000 . . . . . DOE

Grover, Piyush — **Mechanical & Materials Engineering**

*Inducing and Exploiting Criticality in Collective Behavior by Phase Space Analysis of Mean Field Type Control Problems

$311,533 . . . . . NSF

*Dynamics and Control of Active Nematics Using Nonlinear Reduced-order Models

$450,000 . . . . . DOE

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

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

Domain Wall Engineering for Novel Nanoelectronics

$338,422 . . . . . NSF

Guo, Jiantao — **Chemistry**

Development of Proximity-Induced Fluorogenic Reactions for Imaging Biomolecular Interaction

$613,476 . . . . . NIH-NIGMS

Niu, Wei. . . . . Chemical and Biomolecular Engineering

Guretzky, John — **Agronomy and Horticulture**

*Fostering Resilience and Ecosystem Services in Landscapes by Integrating Diverse Perennial Circular Systems

$371,410 . . . . . USDA-NIFA through University of Wisconsin-Madison

Habecker, Patrick — **Sociology**

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

$333,006 . . . . . NIH-NIMH through University of Michigan

Hage, David — **Chemistry**

Ultrafast Affinity Extraction Fundamental Studies and Use in Environmental Applications

$400,000 . . . . . NSF

Snow, Daniel . . . . . Nebraska Water Center

New Approaches to Catalyst Screening and Development

$575,000 . . . . . NSF

Berkowitz, David . . . . . Chemistry

Haghshenas Fatmehsari, Hamzeh — **Civil and Environmental Engineering**

Effect of Antioxidant Additives and Recycling Agents on Performance of Asphalt Binders and Mixtures Phase I

$397,788 . . . . . DOT-FHWA through Nebraska Department of Transportation

Haigh, Tonya — **Natural Resources**

*Climate-smart Indigenous Agriculture: Drought Planning and Adaptation with New Mexico Pueblos

$297,800 . . . . . USDA-NRCS

Bathke, Deborah . . . . . Natural Resources

Knutson, Cody . . . . . Natural Resources

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

*Sensitivity of the West Antarctic Ice Sheet to 2o Celsius (SWAIS 2C)

$757,689 . . . . . NSF

Subglacial Antarctic Lakes Scientific Access (SALSA): Integrated Study of Carbon Cycling in Hydrologically Active Subglacial Environments

$349,956 . . . . . NSF through Montana State University

Hasan, Mohammad Rashedul — **Computing**

*Towards an AI to Deliver Individualized Just-in-Time Interventions that Enhance Student Performance in STEM Disciplines

$599,891 . . . . . NSF

Kantamneni, Neeta . . . . . Educational Psychology

McQuillan, Julia . . . . . Sociology

Soh, Leen-Kiat . . . . . Computing

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

Hatton-Bowers, Holly — **Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools**

*Cultivating Healthy Intentional Mindful Educators (CHIME): Evaluating the Use of Mindfulness and Compassion to Promote Early Head Start/Head Start Education Staff's Well-Being

$499,704 . . . . . DHHS-ACF

Clark, Carrie . . . . . Educational Psychology/ Nebraska Center for Research on Children, Youth, Families and Schools

Foged, Jaci . . . . . Extension/Nebraska Center for Research on Children, Youth, Families and Schools

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

Sheridan, Susan . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

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

Hebets, Eileen — **Biological Sciences**

A Comparative Systems Approach to Complex Animal Signaling

$800,486 . . . . . NSF

Navigation and the Neural Integration of Multimodal Sensory Information in the Brain of an Arthropod

$331,353 . . . . . NSF

Heitman, Carrie — **Global Integrative Studies**

*(Re)Connections Through Time: Developing a Model for Multi-Modal Storytelling About Indigenous Communities and Their Collections

$310,000 . . . . . Andrew W. Mellon Foundation

Hibbeler, Theodore — **Extension**

Umonhon Nation Agricultural Economic Development Program

$400,000 . . . . . USDA

Grummert, Jordan . . . . . Extension

Holding, David — **Agronomy and Horticulture/ Center for Plant Science Innovation**

Advancing CRISPR Generated High-Digestibility High-Lysine Sorghum from Proof of Concept to Large-Scale Production
$500,000 ..... USDA-NIFA
Rose, Devin ..... Food Science and Technology/ Center for Plant Science Innovation

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

*DMREF: Accelerated Discovery of Artificial Multiferroics with Enhanced Magnetoelectric Coupling
$450,000 ..... NSF

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**

*NRI: Dispersed Autonomy for Marsupial Aerial Robot Teams
$454,570 ..... NSF

Targeted Observation by Radars and UAS of Supercells (TORUS)
$866,107 ..... NSF

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

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
$315,749 ..... Mead Johnson Nutrition
Izard, Jacques ..... Food Science and Technology

Iqbal, Javed — **Agronomy and Horticulture**

*Demonstrating an Integrated Nutrient Management Approach for Improving Drinking Groundwater Quality in Nebraska
$298,631 ..... USDA-NIFA
Johnson, Leslie ..... Extension
Malakar, Arindam ..... Nebraska Water Center
Milander, Jeremy ..... Extension
Proctor, Christopher ..... Agronomy and Horticulture
Schmidt, Amy ..... Animal Science/Biological Systems Engineering
Snow, Daniel ..... Nebraska Water Center

Jaffe, Anna — **Psychology/Rural Drug Addiction Research Center**

Leveraging Social Networks to Promote Sexual Assault Recovery and Reduce Drinking to Cope through Web-Based Intervention
$897,913 ..... NIH-NIAAA

Jagodinsky, Katrina — **History/Center for Digital Research in the Humanities**

*REU Site: Freedom Stories Digital Legal Research Lab
$331,568 ..... NSF
Thomas, William ..... History/Center for Digital Research in the Humanities

Jin, Congrui — **Civil and Environmental Engineering**

*From Agricultural Waste to Lithium-Ion Battery Anodes: Deciphering the Feedstock Processing-Property-Performance Relationship
$320,000 ..... USDA-NIFA
Clarke, Bertrand ..... Statistics
Wilkins, Mark ..... Biological Systems Engineering/ Food Science and Technology/ Industrial Agricultural Products Center

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

Jones, David — **Biological Systems Engineering**

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

$391,756 . . . . . Nebraska Environmental Trust

Kaskie, Shawn — **Extension**

Nebraska Entrepreneurial Communities Pandemic Response

$415,261 . . . . . DOC-EDA
Barrera Fuentes. Sandra . . . . . Extension
Schlake, Marilyn . . . . . Agricultural Economics
Tuller, Jason. . . . . Extension
Weigle, Jason . . . . . Extension

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
Keshwani, Jenny . . . . . Biological Systems Engineering
Rosenbaum, David. . . . . Bureau of Business Research
Thompson, Eric . . . . . Bureau of Business Research

Kidambi, Srivatsan — **Chemical and Biomolecular Engineering**

Extracellular Vesicles as the Vehicles for Promoting Liver Injury Induced by HIV and Alcohol

$344,448. . . . . NIH-NIAAA through University of Nebraska Medical Center

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

Kingery, 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

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

Getting Ready Preschool Development Grant PDG

$292,723 . . . . . 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

Kovalev, Alexey — **Physics and Astronomy**

Spin Currents in Magnetic Systems and Heterostructures

$344,671. . . . . DOE

Krull, Dean — **Agronomy and Horticulture**

Managing Irrigation Systems Today

$552,982 . . . . . Central Platte NRD

Lackey, Susan — **Natural Resources**

Developing Hydrogeologic Databases to Assist in Water Resources Management

$654,700. . . . . Lower Elkhorn NRD

Lai, Rebecca — **Chemistry**

A Wireless, Closed-Loop Neural Probe for Optogenetics, Pharmacology and Neurochemical Monitoring

$339,325 . . . . . NIH-NINDS through University of Connecticut

Lau, Josephine — **Durham School of Architectural Engineering and Construction**

*The Efficacy of Air Filters in Classrooms on Student Academic and Learning Outcomes

$556,003. . . . . Nebraska Department of Education
Bovaird, Jim. . . . . Educational Psychology

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

Lee, Kevin — **Center for Science, Mathematics and Computer Education/Physics and Astronomy**

*Development and Research on Smartphone Simulations in Introductory College Astronomy

$299,344 . . . . . NSF
Menon, Deepika . . . . . Center for Science, Mathematics and Computer Education/Teaching, Learning and Teacher Education

Lewis, Ronald — **Animal Science**

*Improving Robustness and Climatic Resilience in U.S. Sheep Populations Through Genomics

$650,000 . . . . . USDA-NIFA

Li, Haorong — **Durham School of Architectural Engineering and Construction**

*Smart Operations of Common HVAC Systems

$591,055 . . . . . Turntide Technologies

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

*Effects of CSF1R Blockade on Repopulation of SIV Reservoirs from the CNS to the Periphery After Antiretroviral Therapy Interruption

$356,068 . . . . . NIH-NINDS through Boston College

Targeted In Vivo Delivery of Gene Therapeutics for HIV Cure

$460,106 . . . . . NIH-NIAID through Temple University

Impact of the Gut Microbiome on HIV-1 Rectal Transmission and Immunopathogenesis During ART

$416,659 . . . . . NIH-NIAID

Impact of Fc N-glycan Structure on HIV-specific Antibody Functions

$586,217 . . . . . NIH-NIAID through University of Wyoming

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

Libault, Marc — **Agronomy and Horticulture/Center for Plant Science Innovation**

*Single Cell Characterization of the Transcriptional Programs Controlling Plant Root Organ Initiation

$626,827 . . . . . USDA-NIFA

Limpert, George — **Natural Resources**

Ensemble Sensitivity Analysis to Investigate Mesoscale Heterogeneity in Southeast U.S. Tornado Events

$260,822 . . . . . DOC-NOAA
Houston, Adam. . . . . Earth and Atmospheric Sciences

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

Little, Andrew — **Natural Resources**

Identifying and Prioritizing Habitat for Pheasant Conservation and Management in Agriculturally Dominated Landscapes

$699,940 . . . . . Nebraska Game and Parks Commission
Carroll, John . . . . . Natural Resources
Powell, Larkin . . . . . Natural Resources
Qi, Yi . . . . . Natural Resources
Twidwell, Dirac Jr. . . . . Agronomy and Horticulture
Tyre, Drew . . . . . Natural Resources
Uden, Daniel . . . . . Natural Resources

Louis, Joe — **Entomology/Biochemistry**

Characterizing the Interplay Between Sorghum and Fall Armyworm

$429,248 . . . . . USDA-NIFA

Loveall-Hague, Susan — **Special Education and Communication Disorders**

Designing and Providing Academic Interventions
$955,034 . . . . . ED
Lambert, Matthew . . . . . Special Education and Communication Disorders
Savaiano, Mackenzie . . . . . Special Education and Communication Disorders

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

Multifunctional Laser Processing for Repair and Mitigation of Pitting and Cracks in Welded Stainless Steel Dry Storage Canisters
$800,000 . . . . . DOE
Cui, Bai . . . . . Mechanical & Materials Engineering

Luck, Joe — **Biological Systems Engineering**

*Nitrogen Research for Agriculture Transformation and Enhancement
$442,800 . . . . . USDA-ARS
Awada, Tala . . . . . Natural Resources
Basche, Andrea . . . . . Agronomy and Horticulture
Blanco, Humberto . . . . . Agronomy and Horticulture
Drijber, Rhae . . . . . Agronomy and Horticulture
Ge, Yufeng . . . . . Biological Systems Engineering
Iqbal, Javed . . . . . Agronomy and Horticulture
Kaiser, Michael . . . . . Agronomy and Horticulture
Little, Andrew . . . . . Natural Resources
Mahmood, Rezaul . . . . . Natural Resources
Mieno, Taro . . . . . Agricultural Economics
Neale, Christopher . . . . . Daugherty Water for Food Global Institute
Pitla, Santosh . . . . . Biological Systems Engineering
Puntel, Laila . . . . . Agronomy and Horticulture
Shi, Yeyin . . . . . Biological Systems Engineering
Snow, Daniel . . . . . Nebraska Water Center
Suyker, Andy . . . . . Natural Resources
Thompson, Laura . . . . . Eastern Nebraska Research and Extension Center
Weber, Karrie . . . . . Biological Sciences

Initiation of Nitrogen and Cover Crop Application Technology Demonstration
$452,540 . . . . . EPA through Nebraska Department of Environment and Energy
Koehler-Cole, Katja . . . . . Agronomy and Horticulture
Pekarek, Katie . . . . . Natural Resources
Proctor, Christopher . . . . . Agronomy and Horticulture
Puntel, Laila . . . . . Agronomy and Horticulture
Thompson, Laura . . Eastern Nebraska Research and Extension Center

Reducing Field Worker Exposure to Pesticides Via Agricultural Data Connectivity and Mobile Apps
$299,529 . . . . . USDA-NIFA
Thompson, Laura . . Eastern Nebraska Research and Extension Center
Thorson, Nathan . . Eastern Nebraska Research and Extension Center

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

Lyons, Kate — **Biological Sciences**

RCN: Ecological and Evolutionary Effects of Extinction and Ecosystem Engineers (E6)
$500,131 . . . . . NSF
Wagner, Peter . . . . . Earth and Atmospheric Sciences/ Biological Sciences

MacDonald, James — **Animal Science**

Characterizing Digestion Aspects of Bran
$365,864 . . . . . Cargill
Erickson, Galen . . . . . Animal Science

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

Malakar, Arindam — **Nebraska Water Center**

*Identifying Reactive Nitrogen Dynamics in the Deep Vadose Zone to Protect Groundwater Quality
$749,861 . . . . . USDA-NIFA
Haacker, Erin . . . . . Earth and Atmospheric Sciences
Ray, Chittaranjan . . . . . Nebraska Water Center
Snow, Daniel . . . . . Nebraska Water Center

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

Markvicka, Eric — **Mechanical & Materials Engineering**

*Additive Manufacturing of Functional Emulsions: Materials and Printing for Designer Microstructrues

$354,293 . . . . . NSF

McChargue, Dennis — **Psychology/ Rural Drug Addiction Research Center**

*Mapping the Co-evolution of Craving, Affect, Stressors, and Access to Alcohol (CASA) Using Responsive EMA

$408,187 . . . . . NIH-NIAAA
Andrews, Trey . . . . . Psychology/Rural Drug Addiction Research Center
Tyler, Kimberly . . . . . Sociology/Rural Drug Addiction Research Center

Mapping the Co-Evolution of Craving, Affect, Stressors, and Access to Alcohol (CASA) Using Responsive EMA

$408,187 . . . . . NIH-NIAAA
Andrews, Trey . . . . . Psychology/ Rural Drug Addiction Research Center
Tyler, Kimberly . . . . . Sociology/ Rural Drug Addiction Research Center

McMechan, Justin — **Entomology**

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

$507,953 . . . . . North Central Soybean Research Program
Graef, George . . . . . Agronomy and Horticulture
Hunt, Thomas . . . . . Entomology
Wright, Robert . . . . . Entomology

Menon, Deepika — **Center for Science, Mathematics and Computer Education/ Teaching, Learning and Teacher Education**

*Research on Integrated STEM Efficacy (RISE): A Study of Elementary Preservice Teachers and Noyce Scholars

$481,065 . . . . . NSF

Montooth, Kristi — **Biological Sciences**

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

$354,998 . . . . . NSF
DeLong, John . . . . . Biological Sciences

Moon, Alena — **Chemistry**

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

$300,112 . . . . . NSF

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

Improving Livestock Production through the Development of Precision Rangeland Management Technologies

$450,000 . . . . . USDA-ARS
Shi, Yeyin . . . . . Biological Systems Engineering
Stephenson, Mitchell . . . . . Panhandle Research and Extension Center
Xiong, Yijie . . . . . Animal Science

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/ Daugherty Water for Food Global Institute**

Improving Agricultural Water Use and Nutrient Management to Sustain Food and Energy Crops Production in the Corn Belt

$847,117 . . . . . USDA-NIFA through University of Maryland
Luck, Joe . . . . . Biological Systems Engineering
Masih, Ashish . . . . . Daugherty Water for Food Global Institute
Puntel, Laila . . . . . Agronomy and Horticulture
Thompson, Laura . . Eastern Nebraska Research and Extension Center

Irrigation Innovation Consortium-Base Funding

$343,000 . . . . . Foundation for Food and Agriculture Research through Colorado State University
Garcia Nascimento, Jessica . . . . . Daugherty Water for Food Global Institute
Masih, Ashish . . . . . Daugherty Water for Food Global Institute
Rudnick, Daran . . . . . Daugherty Water for Food Global 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

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, Carl — **Mechanical & Materials Engineering**

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

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

Role of Executive Control in Adolescent Substance Use
and Co-occurring Problems
$508,159 . . . . . NIH-NIDA through University of Tennessee
Nelson, Jennifer . . . . . Psychology/ Center for Brain, Biology and Behavior

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

Strong Field & Ultrafast Atomic and Molecular Processes
$548,398 . . . . . 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

Obata, Toshihiro — **Biochemistry/ Center for Plant Science Innovation**

Elucidating the Health-Beneficial Traits of Kernels of
Maize Relatives Digested in the Human Gastrointestinal Tract
$500,000 . . . . . USDA-NIFA
Majumder, Kaustav . . . . . Food Science and Technology/ Center for Plant Science Innovation
Yang, Jinliang . . . . . Agronomy and Horticulture/ Center for Plant Science Innovation

Pajouh, Mojdeh A. — **Midwest Roadside Safety Facility**

AASHTO Guidelines for Implementation of MASH Sign Supports,
Breakaway Poles, and Work Zone Traffic Control Devices
$500,000 . . . . . DOT-FHWA through National Academy of Sciences-NCHRP
Faller, Ronald . . . . . Midwest Roadside Safety Facility
Reid, John . . . . . Mechanical & Materials Engineering

Pannier, Angela — **Biological Systems Engineering**

Influence of Maternal and Embryonic-Derived Extracellular Vesicles
on the Initiation of Porcine Conceptus Elongation
$500,000 . . . . . USDA-NIFA

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

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

*Exploring Flow Enhancements of Hydrophobic Particles in
Confined Fluid Flow
$418,120 . . . . . NSF
Li, Yusong . . . . . Civil and Environmental Engineering

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

Pedrigi, Ryan — **Mechanical & Materials Engineering**

Ultrasound as a Mechanotherapy for Endothelial Cell Dysfunction
$602,769 . . . . . NIH-NIBIB
Kievit, Forrest . . . . . Biological Systems Engineering
Sun, Xinghui . . . . . Biochemistry
Turner, Joseph . . . . . Mechanical & Materials Engineering

Pegg, Mark — **Natural Resources**

Spatial Distribution and Population Demographics of Asian Carp in the Missouri River Basin, Nebraska

$333,994 . . . . . DOI-FWS through Nebraska Game and Parks Commission

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

Spatial Visualization Skills and Engineering Problem Solving

$645,943 . . . . . NSF

Panther, Grace . . . . . Civil and Environmental Engineering

Petersen, Jessica — **Animal Science**

Annotation of Functional Regulatory Regions in the Horse

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

Peterson, Julie — **West Central Research and Extension Center**

*Insect Resistance Management: Evaluating the Impact of Blended Refuges and the VIP3A *Bacillus thuringiensis* Toxin on Western Bean Cutworm

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

Corteva Innovation Farms

$315,991 . . . . . Pioneer Hi-Bred

Pierobon, Massimiliano — **Computing**

CIF: Small: WetComm: Foundations of Wet Communication Theory

$515,528 . . . . . NSF

Niu, Wei. . . . . Chemical and Biomolecular Engineering

Pitla, Santosh — **Biological Systems Engineering**

UGV and UAV Collaboration for Automated Seed Refilling in Row Crops (U2AGV Refill)

$452,783 . . . . . USDA-NIFA

Luck, Joe . . . . . Biological Systems Engineering

Rohrer, Rodney . . . . . Biological Systems Engineering

Shi, Yeyin . . . . . 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

Powers, Robert — **Chemistry**

The Molecular Mechanism Linking Respiratory NADH Oxidation and Virulence in *Staphylococcus aureus*

$837,706 . . . . . NIH-NIAID through University of Illinois-Urbana/Champaign

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

ABI Innovation: A Metabolomics Toolkit for NMR and Mass Spectrometry

$695,000 . . . . . NSF

Proctor, Christopher — **Agronomy and Horticulture**

Development of Research and Demonstration Sites in the BGMA for Nitrate Reduction

$272,574 . . . . . Nebraska Environmental Trust through Lower Elkhorn NRD

Heeren, Derek. . . . . Biological Systems Engineering

Mamo, Martha . . . . . Extension

Milander, Jeremy . . . . . Extension

Powers, Crystal. . . . . Nebraska Water Center

Ray, Chittaranjan . . . . . Civil and Environmental Engineering/ Nebraska Water Center

Rudnick, Daran. . . . . Biological Systems Engineering

Timmerman, Amy . . . . . Extension

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

CNS Core: Small: Secure and Efficient Mobile Edge Computing in Wireless Heterogeneous Networks

$250,000. . . . . NSF

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

*Learning to Adapt and Control for Complex Power Systems

$300,000 . . . . DOE through Battelle-Pacific NW National Laboratory

Qu, Liyan . . . . . Electrical and Computer Engineering

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

Qu, Liyan — **Electrical and Computer Engineering**

*A Hot-Swappable, Fault-Tolerant, Modular Power Converter System for Solar Photovoltaic Plants

$300,000 . . . . . DOE
Qiao, Wei . . . . . Electrical and Computer Engineering

Radu, Petronela — **Mathematics**

*Nonlocality in Continuum Mechanics, Population Dynamics, and Neural Networks

$343,085 . . . . . NSF
Foss, Mikil . . . . . Mathematics

Higher Order Nonlocal Models in Continuum Mechanics

$418,805 . . . . . NSF
Foss, Mikil . . . . . Mathematics

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 — **Computing**

NeTS: Small: Intelligent Optical Networks Using Virtualization and Software-Defined Control

$515,999 . . . . . NSF

Rasby, Rick — **Extension**

Nebraska Extension Implementation Program

$836,596 . . . . . USDA-NIFA
Bradshaw, Jeffrey . . . . . Panhandle Research and Extension Center
Green, Jody . . . . . Southeast Research and Extension Center
Jackson-Ziems, Tamra . . . . . Plant Pathology
Jhala, Amitkumar . . . . . Agronomy and Horticulture
McMechan, Justin . . . . . Entomology
Nygren, Aaron . . . . . Extension
Proctor, Christopher . . . . . Agronomy and Horticulture
Stine, Emily . . . . . Panhandle Research and Extension Center
Weisbrod, Jennifer . . . . . Agronomy and Horticulture
Wright, Robert . . . . . Entomology
Wu-Smart, Judy . . . . . Entomology

Ray, Chittaranjan — **Nebraska Water Center/ Civil and Environmental Engineering/ Daugherty Water for Food Global Institute**

Development of Data Bases for Model Development and Field Testing of Crop Models in Midwest Farms

$750,000 . . . . . USDA-ARS

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

*Trained Immunity in the Prevention of Viral Myocarditis and Pancreatitis

$398,306 . . . . . NIH-NIAID
Barletta, Raul . . . . . Veterinary Medicine and Biomedical Sciences
Seravalli, Javier . . . . . Biochemistry
Steffen, David . . . . . 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

Redfearn, Daren — **Agronomy and Horticulture**

Developing Adaptive Grazing Management Strategies for Optimizing Corn Residue Use

$300,000 . . . . . USDA-NIFA
Drewnoski, Mary . . . . . Animal Science
Parsons, Jay . . . . . Agricultural Economics
VanderPlas, Susan . . . . . Statistics

Reiling, Bryan — **Animal Science**

Enhancement of Agricultural Literacy Through Inquiry-Based Professional Development

$291,000 . . . . . USDA-NIFA
Ciobanu, Daniel . . . . . Animal Science
Conner, Nathan . . . . . Agricultural Leadership, Education and Communication
Cupp, Andrea . . . . . Animal Science
Ruth, Taylor . . . . . Agricultural Leadership, Education and Communication
Stowell, Rick . . . . . Biological Systems Engineering
Sullivan, Gary . . . . . Animal Science

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**

Rural Rail Safety Center

$535,500 . . . . . DOT-FRA through Kansas State University
Sharif-Kashani, Hamid . . . . . Electrical and Computer Engineering/ Nebraska Transportation Center
Turner, Joseph . . . . . Mechanical & Materials Engineering/ 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
Song, Chung . . . . . Civil and Environmental Engineering
Steelman, Joshua . . . . . Civil and Environmental Engineering
Stolle, Cody . . . . . Midwest Roadside Safety Facility

Roston, Rebecca — **Biochemistry/ Center for Plant Science Innovation**

Membrane Contact Site Components Enabling Biogenesis of the Photosynthetic Membrane

$400,000 . . . . . DOE

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

Ryherd, Erica — **Durham School of Architectural Engineering and Construction**

*Improving Engineering Student Engagement, Self-efficacy, Diversity Awareness and Retention Using Visualization and Virtual/Augmented Reality Technologies

$493,001 . . . . . NSF through Georgia Institute of Technology
Diefes-Dux, Heidi . . . . . Biological Systems Engineering
Kim, Kyungki . . . . . Durham School of Architectural Engineering and Construction
Konstantzos, Iason . . . . . Durham School of Architectural Engineering and Construction
Lather, Jennifer . . . . . Durham School of Architectural Engineering and Construction
Lau, Josephine . . . . . Durham School of Architectural Engineering and Construction

Saha, Rajib — **Chemical and Biomolecular Engineering**

*PlantSynBio: Deciphering the Roles of Genetics and Biochemical Redundancy and Pathway Regulation Via Refactoring the Protective Plant Cuticle

$313,425 . . . . . NSF

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

*Incidence of Ideologically Influenced Threatening and Violent Activity in Rural Communities

$772,955 . . . . . DOJ-NIJ
Bulling, Denise . . . . . Public Policy Center
Hoffman, Stacey . . . . . Public Policy Center

The Role of Leadership Identity in Developing Noncommissioned Officers for the Future Force (B4)
$719,589 . . . . . DoD-ARI
Bulling, Denise . . . . . Public Policy Center
McElravy, L.J. . . . . Public Policy Center

Schachter, Rachel — **Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools**

Language Gains During Early Childhood: Prediction of Later Outcomes and Multiple Methods Exploration of Relevant Classroom Factors
$417,183 . . . . . ED-IES through Ohio State University
Gabas, Ma Clariebelle. . . . . Child, Youth and Family Studies/ Nebraska Center for Research on Children, Youth, Families and Schools

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

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

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

*CPS: Medium: Field-scale, Single Plant Resolution Agricultural Management Using Coupled Molecular and Macro Sensing and Multi-scale Data Fusion and Modeling
$264,581 . . . . . USDA-NIFA
Shi, Yeyin . . . . . Biological Systems Engineering/ Center for Plant Science Innovation

High Intensity Phenotyping Sites: A Multi-Scale, Multi-Modal Sensing and Sense Making Cyber-Ecosystem for Genomes to Fields
$389,320 . . . . . USDA-NIFA through Iowa State University

Crops in Silico: Increasing Crop Production by Connecting Models from the Microscale to the Macroscale
$387,960 . . . . Foundation for Food and Agricultural Research through University of Illinois Urbana-Champaign

RoL: FELS: EAGER: Genetic Constraints on the Increase of Organismal Complexity Over Time
$299,801 . . . . . NSF

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

*NSF-DFG: Advances in Ion-Surface Interaction-Driven Manufacturing of One-Dimensional Metal Oxide Heterostructures
$343,615 . . . . . NSF

Schubert, Mathias — **Electrical and Computer Engineering**

Terahertz Electron Paramagnetic Resonance Ellipsometry Defect Characterization in Ultrawideband Gap Monoclinic Gallium Oxide and Related Alloys
$499,987 . . . . . DoD-AFOSR
Korlacki, Rafal. . . . . 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
$485,052 . . . . . 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

Secord, Ross — **Earth and Atmospheric Sciences/ University of Nebraska State Museum**

*Paleoenvironmental and Paleoecological Responses to Climate Change in the Early Eocene Climatic Optimum
$337,950 . . . . . NSF
Diamond, Judy . . . . . University Libraries/ University of Nebraska State Museum

Shadwick, Bradley — **Physics and Astronomy**

*High Fidelity Fluid-Kinetic Hybrid Modeling of Intense, Short Pulse Laser Plasma Interactions
$480,000 . . . . . NSF

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

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 and Construction
Hempel, Michael . . . . . Electrical and Computer Engineering
Peng, Dongming . . . . . Electrical and Computer Engineering

Shen, Zhigang — **Durham School of Architectural Engineering and 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

Shi, Yeyin — **Biological Systems Engineering**

CPS: Medium: CPS-Enabled Variable Rate Technology
$935,756 . . . . . USDA-NIFA
Ge, Yufeng . . . . . Biological Systems Engineering
Heeren, Derek . . . . . Biological Systems Engineering
Puntel, Laila . . . . . Agronomy and Horticulture
Rudnick, Daran . . . . . Biological Systems Engineering
Zhang, Kuan . . . . . Electrical and Computer Engineering
Zhou, Yuzhen . . . . . Statistics

FACT-AI: Cyberinformatic Tools for Exploring and Validating Sow Posture and Piglet Activity
$500,000 . . . . . USDA-NIFA
Brown-Brandl, Tami . . . . . Biological Systems Engineering

An Intelligent Unmanned Aerial Application System for Site-Specific Weed Management
$453,775 . . . . . USDA-NIFA
Jhala, Amit . . . . . Agronomy and Horticulture
Knezevic, Stevan . . . . . Agronomy and Horticulture
Luck, Joe . . . . . Biological Systems Engineering
Riggan, Benjamin . . . . . Electrical and Computer Engineering
Zhang, Kuan . . . . . Electrical and Computer Engineering

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

Understanding the Thermal Physics and Metallurgy of Metal Big Area Additive Manufacturing
$670,000 . . . . . DOE
Cole, Kevin . . . . . Mechanical & Materials Engineering

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
Detweiler, Carrick . . . . . Computing
Faller, Ronald . . . . . Midwest Roadside Safety Facility
Linzell, Daniel . . . . . Civil and Environmental Engineering
Sharif-Kashani, Hamid . . . . . Electrical and Computer Engineering
Song, Chung . . . . . Civil and Environmental Engineering
Wittich, Christine . . . . . Civil and Environmental Engineering
Wood, Richard . . . . . Civil and Environmental Engineering
Zhu, Jinying . . . . . Civil and Environmental Engineering

Sinitskii, Alexander — **Chemistry**

*Topological Spin Qubits Based on Graphene Nanoribbons
$627,324 . . . . . DoD-ONR through University of Pittsburgh

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

Snow, Daniel — **Nebraska Water Center**

Vadose Zone Nitrate Accumulation Upper Big Blue Natural Resources District, Relation to Fertilizer Management and Groundwater Nitrate Concentrations
$297,104 . . . . . Upper Big Blue NRD
Malakar, Arindam . . . . . Nebraska Water Center

Soh, Leen-Kiat — **Computing**

Anticipating Social Unrest Using Integrated Model- and Data-Driven Approaches: The Impact of Socio-Demographic and Environmental Factors in Post-Colonial Nations
$804,412 . . . . . DoD-National Geospatial Intelligence Agency through Citadel University
Hayes, Michael . . . . . Natural Resources
Samal, Ashok . . . . . Computing
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

Song, Hyun-Seob — **Biological Systems Engineering/ Food Science and Technology**

*MIM: Microbial Division of Labor in Polysaccharide-degrading Communities
$648,819 . . . . . NSF through Purdue University

Spangler, Matthew — **Animal Science**

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

Spurgeon, Jonathan — **Natural Resources**

*Assessment of Silver Carp and Bighead Carp in the Platte River, Nebraska: Emphasis on Population Distribution, Population Demographics and Reproduction
$301,498 . . . . . DOI-FWS through Nebraska Game and Parks Commission
Pegg, Mark . . . . . Natural Resources

Steelman, Joshua — **Midwest Roadside Safety Facility/ Civil and Environmental Engineering**

MASH Railing Load Requirements for Bridge Deck Overhang
$440,000 . . . . . DOT-FHWA through National Academy of Sciences-NCHRP-TRB
Faller, Ronald . . . . . Midwest Roadside Safety Facility

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
Fang, Chen . . . . . Midwest Roadside Safety Facility
Lechtenberg, Karla. . . . . Midwest Roadside Safety Facility
Pajouh, Mojdeh A. . . . . 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 . . . . . Computing/ Center for Brain, Biology and Behavior

Stevens-Liska, Maegan — **Global Strategies**

U.S.-Rwanda Training Program and Mentorship Exchange on University Advancement and International Partnerships

$250,000 . . . . . U.S. Department of State
Sharpe, Blayne . . . . . Global Strategies
Van Hoosen, Courtney . . . . . Global Strategies

Stolle, Cody — **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
Pajouh, Mojdeh A. . . . . Midwest Roadside Safety Facility

Storz, Jay — **Biological Sciences**

*Physiology of Hypoxia Adaptation in the World's Highest-Dwelling Mammal

$827,312 . . . . . NSF

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

Streubel, Robert — **Physics and Astronomy/ Nebraska Center for Materials and Nanoscience**

*Magnetic Order in Disordered Dipolar Nanostructures

$517,069 . . . . . NSF

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

Suyker, Andy — **Natural Resources**

Long-Term Maize-Based Agro-Ecosystem Core Sites as Part of the AmeriFlux Management Project Network

$565,000 . . . . . DOE through University of California-Berkeley National Laboratory
Blanco, Humberto . . . . . Agronomy and Horticulture
Franz, Trenton . . . . . Natural Resources
Gamon, John . . . . . Natural Resources
Liska, Adam . . . . . Agronomy and Horticulture/ Biological Systems Engineering
Yang, Haishun . . . . . Agronomy and Horticulture

Svoboda, Mark — **Natural Resources**

*Building a Global Composite Drought Indicator (GCDI) Hot Spot Early Warning and Information System

$998,218 . . . . . DoD-Air Force
Bathke, Deborah . . . . . Natural Resources
Fuchs, Brian . . . . . Natural Resources
Haigh, Tonya . . . . . Natural Resources
Knutson, Cody . . . . . Natural Resources
Roy, Tirthankar . . . . . Civil and Environmental Engineering
Smith, Kelly . . . . . Natural Resources
Tadesse, Tsegaye . . . . . Natural Resources
Wardlow, Brian . . . . . Natural Resources

Thomas, Steven — **Natural Resources**

*MTM 2: Discovering in Reverse Using Isotopic Translation of Omics to Reveal Ecological Interactions in Microbiomes

$267,094 . . . . . NSF through Northern Arizona University

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
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

$307,395 . . . . . NSF

STTR: Ultrasonic Method to Quantify Ablative Material Liners

$450,000 . . . . . DoD-NAVSEA through Intelligent Automation, Inc.

PCC-3: Non-Destructive Testing (NDT) Microstructural Response Characterization and Impact

$528,399 . . . . . 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

Uiterwaal, Kees — **Physics and Astronomy**

REU Site: Lasers and Optics

$310,555 . . . . . NSF

Umstadter, Donald — **Physics and Astronomy**

Novel Approach to Imaging through Dense Shielding with Penetrating Radiation

$621,875 . . . . . DoD-DTRA

Controlled Injection of Electrons for Improved Performance of Laser-Wakefield Acceleration

$528,681 . . . . . DOE

Disabling Batteries with Laser-Driven Beams of High-Brightness Ionizing Radiation

$466,999 . . . . . DoD-DTRA

Controlled Release of Energy from Nuclear Isomers by Laser-Driven X-Rays

$699,999 . . . . . DoD-ARO
Fareed, M. Ashiq . . . . . Physics and Astronomy

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

Aeroecology as a Test-Bed for Interdisciplinary STEM Training

$332,708 . . . . . 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

VanderPlas, Susan — **Statistics**

Center for Statistics and Forensic Evidence

$456,930 . . . . . DOC-NIST through Iowa State University

Automatic Acquisition and Identification of Footwear Class Characteristics

$380,405 . . . . . DOJ-NIJ

Variyam, Vinod — **Computing**

*AF: Small: Weak Derandomizations in Time and Space Complexity

$279,995 . . . . . NSF

Velez Arango, Ana Maria — **Entomology**

*Exosomes as Intercellular Delivery Vehicles in Insects

$340,270 . . . . . USDA-NIFA through Kansas State University

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

*Partnership: Systemic Screening of ASFV Proteome for Identification of Immunogenic Antigens
$770,000 . . . . . USDA-NIFA
McVey, Scott . . . . . Veterinary Medicine and Biomedical Sciences/ 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

Vuran, Can — **Computing**

SWIFT: LARGE: DYNAmmWIC: Dynamic mmWave Spectrum Sharing Techniques for Public Safety Communications
$500,000 . . . . . NSF
Batur, Demet. . . . . Supply Chain Management and Analytics
Ryan, Jennifer . . . . . Supply Chain Management and Analytics

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

Wagner, Peter — **Earth and Atmospheric Sciences/ Biological Sciences**

*Associations Between Climate Shifts and Ammonoid Turnover Across Second-Tier Extinctions During the Early Late Cretaceous Greenhouse
$296,242 . . . . . NSF

Walia, Harkamal — **Agronomy and Horticulture**

UNL-VBC Collaboration: Using Plant Phenomics to Capture Dynamic Growth Responses in Maize
$599,009 . . . . . Valent USA

Walker, Mark — **Mathematics**

*Multiplicities of Modules and Complexes and the NC Hodge Conjecture
$282,638 . . . . . NSF

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

Walters, Cory — **Agricultural Economics**

Northern Plains Regional Farm Business Management and Benchmarking Partnership
$498,262 . . . . . USDA-NIFA
Banerjee, Simanti . . . . . Agricultural Economics
Yiannaka, Emie . . . . . Agricultural Economics

Wang, Jian — **Mechanical & Materials Engineering**

*A Metamodeling Framework for Multiscale Mechanical Modeling of Nano Architectural Crystalline-amorphous Composites
$333,267 . . . . . NSF

Bridging Microscale to Macroscale Mechanical Property Measurements and Predication of Performance Limitation for FeCrAl Alloys under Extreme Reactor Applications
$799,270 . . . . . DOE

Plasticity of High-strength Multiphase Metallic Composites
$525,019 . . . . . DOE through University of Michigan

Wang, Yingying — **Special Education and Communication Disorders/ Center for Brain, Biology and Behavior/ Nebraska Center for Research on Children, Youth, Families and Schools**

Neural Predictors of Speech Perception Outcomes in Adults with Cochlear Implants
$460,356 . . . . . NIH-NIDCD
Hughes, Michelle . . . . . Special Education and Communication Disorders/ Center for Brain, Biology and Behavior/ Nebraska Center for Research on Children, Youth, Families and Schools

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

One Health Universal Swine Influenza Vaccines
$452,442 . . . . . USDA-NIFA

Comparative Virology Research Training Program
$843,579 . . . . . NIH-NIAID
Van Etten, James . . . . . Plant Pathology

Weitzel, Derek — **Computing**

CC* Team: Great Plains Regional CyberTeam
$269,874 . . . . . NSF through University of Missouri-Columbia

Wiebe, Matthew — **Veterinary Medicine and Biomedical Sciences/ Nebraska Center for Virology**

*Engagement of Cellular Mitotic and Antiviral Signaling by Poxviral Kinases
$425,778 . . . . . NIH-NIAID

Wilson, Mark — **Biochemistry**

Engineering Enzymes for New Stereoselective and Stereodynamic Processes: An Integrated Chemistry -Bioengineering- X-Ray Crystallography Molecular Dynamics Approach
$603,881 . . . . . NSF
Berkowitz, David . . . . . Chemistry
Niu, Wei. . . . . Chemical and Biomolecular Engineering

Wilson, Richard — **Plant Pathology**

*On the Nature and Regulation of the Plant-Fungal Biotrophic Interface
$700,000. . . . . NSF

Molecular Mechanisms Integrating Fungal Growth with Plant Innate Immunity Suppression
$599,999 . . . . . NSF

Witte, Amanda — **Nebraska Center for Research on Children, Youth, Families and Schools**

Nebraska Multi-Tiered System of Support Implementation Support Team
$801,224 . . . . . ED through Nebraska Department of Education
Yoon, HyeonJin . . . . . Nebraska Center for Research on Children, Youth, Families and Schools

Wolf, Marilyn — **Computing**

SHF: Small: System-Level Design of Attack-Resistant Safety-Critical Systems
$343,061 . . . . . NSF

Wortman, Samuel — **Agronomy and Horticulture**

A Bio-based Mulch Innovation for Organic Spinach and Carrots
$475,000. . . . . USDA-NIFA

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 Master Beekeeping Farmer Open Apiaries and Educational Training Kits
$453,486. . . . . USDA-NIFA

Great Plains Regional Training for Beginning Beekeeping Farmers
$393,332 . . . . . USDA-NIFA

Xiang, Shi-Hua — **Veterinary Medicine and Biomedical Sciences/ Nebraska Center for Virology**

Structure-Based Design of Peptide Entry Inhibitors Against Ebola Virus Infection
$468,183 . . . . . NIH-NIAID

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, Lisong — **Computing**

*FMitF: Track 1: Flow Modeling Meets Software Verification: Redesign Internet Congestion Control for Performance and Verifiability
$766,000. . . . . NSF
Bagheri, Hamid . . . . . Computing

*CNS Core: Small: Efficient Interoperability Testing of Heterogeneous Network Protocol Implementations
$515,998 . . . . . NSF
Srisa-An, Witawas . . . . . Computing

NeTS: Small: Exploring the Design Space of Bandwidth Estimation Methods Using Packet Sequence Information
$498,878 . . . . . 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 HfO2-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

Yang, Jinliang — **Agronomy and Horticulture**

*Leveraging the Naturally Occurring Maize-Microbe Symbiotic Partnership to Improve Maize NUE
$849,000 . . . . . USDA-NIFA
Schachtman, Daniel . . . . . Agronomy and Horticulture

Rescuing the Fixed Deleterious Alleles for Genome-Enabled Micronutrients Improvement in Maize
$500,000 . . . . . USDA-NIFA

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

Yin, Yanbin — **Food Science and Technology/ Nebraska Food for Health Center**

*Bioinformatics Discovery of Anti-CRISPR Operons in Human Gut Microbiome
$400,833 . . . . . NIH-NIAID
Zhou, Yuzhen . . . . . Statistics

*Developing Genomics Resources for Tropical Perennial Crops Economically Important to the United States
$271,112 . . . . . USDA-ARS

Yoder, Aaron — **Biological Systems Engineering**

Nebraska AgrAbility
$723,840 . . . . . USDA-NIFA
Frecks, Nancy . . . . . 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, Jiujiu — **Nutrition and Health Sciences/ Nebraska Center for the Prevention of Obesity Diseases**

Dietary Exosome-Like Nanoparticles and Their Impact on the Gut Microbiome in Obesity
$500,000 . . . . . USDA-NIFA
Auchtung, Jennifer . . . . . Food Science and Technology/ Nebraska Center for the Prevention of Obesity Diseases

Yuill, David — **Durham School of Architectural Engineering and Construction**

A Field Study to Characterize Fault Prevalence in Residential Comfort Systems
$824,792 . . . . . DOE

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

*Biopharming: Engineering Nanoparticles in Milk for Use in Drug Delivery
$630,000 . . . . . USDA-NIFA
Guo, Jiantao . . . . . Chemistry/Nebraska Center for the Prevention of Obesity Diseases
Kievit, Forrest . . . . . Biological Systems Engineering/ Nebraska Center for the Prevention of Obesity Diseases

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

Development of an Exosome and Cargo Tracking Mouse
$408,375 . . . . . DHHS-NIH

Zeng, Lirong — **Plant Pathology**

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

Zhu, Jinying — **Civil and Environmental Engineering**

*Dual External Leak Sensing and Monitoring for Dry Storage Canister
$800,000 . . . . . DOE
ALSaleem, Fadi . . . . . Durham School of Architectural Engineering and Construction

Nondestructive Diagnosis and Probabilistic Prognosis of Aging Plastic Pipe
$250,000 . . . . . DOT-PHMSA
Jin, Congrui . . . . . Civil and Environmental Engineering

Online Monitoring System for Concrete Structures Affected by Alkali-Silica Reaction (ASR)
$800,000 . . . . .
Hu, Jiong . . . . . Civil and Environmental Engineering

Zuhlke, Craig — **Electrical and Computer Engineering**

Laser Forensics Attribution and Geolocation Studies Using 16 Elements of the Mueller Matrix as the Fingerprint
$368,496 . . . . . U.S. Department of State

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

Zupan, Alexander — **Mathematics**

Interactions of 3- and 4-Dimensional Topology
$273,741 . . . . . NSF

Early Career Awards

Active awards, July 1, 2021–June 30, 2022
* Indicates new in 2021–2022

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

Bao, Wei
Electrical and Computer Engineering
*CAREER: Towards Room-temperature Quantum Simulators Enabled by Halide Perovskites
$756,713. . . . . NSF

Bradley, Justin
Computing
CAREER: Foundations for a Resource-Aware, Cyber-Physical Vehicle Autonomy
$499,968 . . . . . NSF

Dishari, Shudipto
Chemical and Biomolecular Engineering
CAREER: Confined Ionomeric Systems and Imaging of Ionic Distribution
$609,949 . . . . . NSF

Duncan, Brittany
Computing
CAREER: Drones in Public: Foundational Interaction Research
$599,647 . . . . . NSF

Eichhorn, Catherine
Chemistry
CAREER: Molecular Mechanisms of Ribonucleoprotein Assembly
$1,048,975 . . . . . NSF

Elkins, Lynne
Earth and Atmospheric Sciences
CAREER: Modeling Two-Phase Flow, Multi-Lithologic Melting, and Chemical Disequilibrium with Uranium-Series Isotopes
$696,573 . . . . . NSF

Glowacka, Katarzyna
Biochemistry/Center for Plant Science Innovation
*CAREER: Understanding Non-photochemical Quenching Under Chilling in the Warm Season C4 Grasses
$1,375,334 . . . . . NSF

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

Holland, Kathryn
Psychology
*CAREER: The Efficacy of Sexual Assault Mandatory Reporting Policies
$502,113. . . . . NSF

Iverson, Nicole
Biological Systems Engineering
*CAREER: Extracellular Hydrogen Peroxide and Nitric Oxide Detection and Quantification Via Biocompatible Carbon Nanotubes
$550,000 . . . . . NSF

Jeffries, Jack
Mathematics
CAREER: Differential Operators and p-Derivations in Commutative Algebra
$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

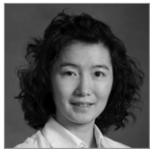
Nejati, Siamak
Chemical and Biomolecular Engineering
CAREER: Molecular Layer Deposition of Porous Organic Frameworks
$593,240 . . . . . NSF

Neta, Maital
Psychology
CAREER: Functional Brain Networks Mediating Positivity Bias in Healthy Aging
$766,508 . . . . . NSF

Obata, Toshihiro
Biochemistry/Center for Plant Science Innovation
CAREER: Establishing the Roles of Multi-Enzyme Complexes in Metabolic Network Regulation
$746,955 . . . . . NSF

Park, Jae Sung
Mechanical & Materials Engineering
*CAREER: Unraveling Predictive Dynamics and Multiscale Linkage in Turbulence for Flow Control
$506,780 . . . . . 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 Magnetoelectric Transformer: A New Voltage Conversion and Control Device for Smart Grids
$500,000 . . . . . 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 . . . . . NSF

Saha, Rajib
Chemical and Biomolecular Engineering
CAREER: Dissecting a Metabolically Versatile Non-Model Bacteriums Lignin-Derived Compound Catabolism
$747,855 . . . . . NSF

Sharif, Bonita
Computing
CAREER: Empowering Software Engineering with Eye Tracking
$257,331 . . . . . NSF

Shizuka, Dai
Biological Sciences
CAREER: Structure and Resilience of Social Networks under Population Turnover
$742,304 . . . . . .NSF

Sinitskii, 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

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

Yang, Ruiguo
Mechanical & Materials Engineering
*CAREER: Characterization of the Rate-Dependent Mechanical Behavior of the Cell-Cell Adhesion Interface
$536,907 . . . . . .NSF

Yesselman, Joseph
Chemistry
*CAREER: Determining the Fundamental Rules of RNA Tertiary Contact Formation
$1,235,574 . . . . . .NSF

Yin, Yanbin
Nebraska Food for Health Center
CAREER: Evolutionary Genomics of Enzymes for Complex Carbohydrate Metabolism
$656,429 . . . . . .NSF

Yu, Hongfeng
Computing
CAREER: Scalable Techniques for Visualizing Very Large Graphs
$476,951 . . . . . .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

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

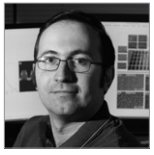
Chemical and Biomolecular Engineering
EARLY CAREER: Porin Inspired Ionomers with Sub-NM Gated Ion Channels for High Ion Conductivity and Selectivity
$750,000 . . . . . DOE

Kovalev, Alexey

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

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

Moore, Keegan

Mechanical & Materials Engineering
*YIP: Digital Engineering the Test and Modeling Process: Autonomous Methods for Reconciling Test and Model Results
$404,621 . . . . . .DoD-AFOSR

Arts and Humanities Awards $250,000 or More

Active awards, July 1, 2021–June 30, 2022

* Indicates new in 2021–2022

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.

Dawes, Kwame — English

*The African Poetry Book Distribution Project

$343,750 . . . . . Poetry Foundation

5/15/22 – 5/31/25

Under the leadership of Kwame Dawes, George W. Holmes University Professor of English and Glenna Luschei Editor of Prairie Schooner, the African Poetry Book Fund is using a nearly $350,000 grant from the Poetry Foundation to study poetry book distribution in Africa. The project team's goal is to better understand the complexities of poetry and poetry publishing on the African continent. The researchers are examining bookseller networks, international trade, literary venues, programming and more to develop a more comprehensive picture of Africa's book distribution landscape. The project advances the African Poetry Book Fund's larger goal of making its titles available to a wider audience in Africa. The fund, which Dawes established in 2012, promotes and advances the development and publication of the poetic arts.

African Poetry Digital Portal

$750,000 . . . . . Andrew W. Mellon Foundation

6/23/21 – 6/30/24

Dawes, Lorna . . . . . University Libraries

Professor Dawes and Lorna Dawes, associate professor of University Libraries, are leading an international team in expanding the African Poetry Digital Portal. This online tool documents the work of African poets and provides digital access to related creative and intellectual artifacts, materials and research. The team is using a $750,000 grant from the Andrew W. Mellon Foundation to launch the portal into its next phase to expand research and scholarship related to African poetry. They also are collaborating with other institutions to create a digital collections hub that provides access to materials held by institutions worldwide. The initiative is aimed at bringing to light the rich and sophisticated poetic practices and traditions that have long existed in African societies but are not always well understood.

American Life in Poetry Project

$575,739 . . . . . Poetry Foundation
1/1/05 – 12/31/22

The Poetry Foundation, in partnership with the Library of Congress, supports the American Life in Poetry Project, an initiative established by Ted Kooser, the 2004-2006 Poet Laureate Consultant in Poetry to the Library of Congress. Now edited by Kwame Dawes, "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 Professor Dawes, with a brief introduction written by Dawes. 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.

Jacobs, Margaret — Center for Great Plains Studies/ History/Center for Digital Research in the Humanities

Genoa Indian School Digital Reconciliation Project

$349,899 . . . . . NEH
6/1/19 – 5/30/23
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 – 5/31/22
Lorang, Elizabeth . . . . . University Libraries/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, Charles J. Mach Professor of history and director of the Center for Great Plains Studies, 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

$529,410 . . . . . NSF
6/1/20 – 8/31/23

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). 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.

Krehbiel, Michelle — **4-H Youth Development**

Library Innovation Studios: Transforming Rural Communities
$287,568 . . . . . .IMLS through Nebraska Library Commission
7/1/17 – 12/31/21
Barker, Bradley . . . . . .Extension
Farritor, Shane . . . . . Mechanical & Materials Engineering

Michelle Krehbiel, professor in 4-H Youth Development, is leading a university contingent in partnering with the Nebraska Library Commission to bring portable makerspaces to rural public libraries. With help from Nebraska Innovation Studio, the program brings high-tech electronic and computerized tools and equipment to libraries for periods of up to five months. Patrons can use them to learn, explore and create in forward-thinking ways. The program also fosters economic development and entrepreneurship in these communities. In total, approximately 40 communities in Nebraska host makerspaces in their public libraries.

Arts and Humanities Awards
$50,000 to $249,999

Active awards, July 1, 2021–June 30, 2022

* Indicates new in 2021–2022

Dalziel, Karin — **University Libraries/ Center for Digital Research in the Humanities**

*Getting the Latest Scoop:
A New Tool to Expand Access to Online Newspaper Collections
$115,653 . . . . . NEH through University of Oregon
Tunink, Greg . . . . . Center for Digital Research in the Humanities
Weakly, Laura . . . . . University Libraries/ Center for Digital Research in the Humanities

Dawes, Kwame — **English**

*American Life in Poetry
$80,470 . . . . . Poetry Foundation

African Poetry Digital Project
$150,000 . . . . . Ford Foundation
Dawes, Lorna . . . . . University Libraries

Hoff, Michael — **Art, Art History and Design**

Antiochia ad Cragum Excavations: 2019 Season
$145,119 . . . . . Merops Foundation

Jones, Jeannette — **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

Price, Kenneth — **English/Center for Digital Research in the Humanities**

*A Life in Letters: Walt Whitman's Complete Correspondence
$130,544 . . National Historical Publications and Records Commission
McMullen, Kevin . . . . . English/Center for Digital Research in the Humanities

Walt Whitman's Journalism:
Finding the Poet in the Brooklyn Daily Times
$249,941 . . . . . NEH

The Complete Correspondence of Charles W. Chesnutt
$152,648 . . . . . National Archives and Records Administration
Cohen, Matt . . . . . English/Center for Digital Research in the Humanities

Fame and Infamy: Walt Whitman's Old-Age Correspondence
$92,111 . . . . . National Historical Publications and Records Commission through University of Iowa
McMullen, Kevin . . . . . English/Center for Digital Research in the Humanities

Seger, Casey — **Center for Great Plains Studies**

*Enhancing Access and Preservation at the Great Plains Art Museum
$177,000 . . . . . NEH

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

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

Active awards, July 1, 2021–June 30, 2022

* Indicates new in 2021–2022

Castro, Mary Alice — **Textiles, Merchandising and Fashion Design**

*Global Textiles Storage Assessment in University of Nebraska–Lincoln's Historic Costume and Textile Collection

$10,000 . . . . . NEH

Starkey, Sandra . . . . . Textiles, Merchandising and Fashion Design

Dawes, Kwame — **English**

*Literary Arts Emergency Fund: APBF Publication Subvention

$10,000 . . . . . Andrew W. Mellon Foundation through Academy of American Poets/National Book Foundation-Literary Arts Emergency Fund

Literary Arts Emergency Fund for *Prairie Schooner* Production

$5,000 . . . . . Andrew W. Mellon Foundation through Academy of American Poets/National Book Foundation-Literary Arts Emergency Fund

Engen-Wedin, Nancy — **Lied Center for Performing Arts**

*SLSO Comes to Nebraska

$5,000 . . . . . Mid-America Arts Alliance

Ajijaak on Turtle Island - Arts for ALL

$20,000 . . . . . NEA

Ganser, Timothy — **Johnny Carson School of Theatre and Film**

*Shubert Foundation Theatre Grant

$15,000 . . . . . Shubert Foundation

*Nebraska Repertory Theatre Application to Pace Woods Foundation

$25,000 . . . . . Pace Woods Foundation

Heitman, Carrie C. — **Center for Digital Research in the Humanities**

Humanities Without Walls Pass-through Grants

$20,000 . . . . . Andrew W. Mellon Foundation through University of Illinois

Homestead, Melissa — **English/Center for Digital Research in the Humanities**

Society for the Study of American Women Writers Digital Recovery Hub

$8,369 . . . . . NEH

Rau, Emily . . . . . Center for Digital Research in the Humanities

Jacobs, Margaret — **Center for Great Plains Studies**

*Reckoning and Reconciliation on the Great Plains Conference

$10,000 . . . . . 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

Kirk, Christina — **Johnny Carson School of Theatre and Film**

Nebraska Rep and The Black Rep Outreach for #realchange

$20,000 . . . . . Woods Charitable Foundation

Kohen, Ari — **Political Science/Center for Digital Research in the Humanities**

*The Nebraska Stories of Humanity: Holocaust Survivors and WWII Veterans Educational Portal

$9,500 . . . . . Humanities Nebraska

Dotan, Beth . . . . . Teaching, Learning and Teacher Education/ Center for Digital Research in the Humanities

*NE Stories of Humanity - Nebraska Holocaust Survivor and WWII Veteran Web Portal

$8,000 . . . . . Jewish Federation of Omaha Foundation

Dotan, Beth . . . . . Teaching, Learning and Teacher Education/ Center for Digital Research in the Humanities

Le Sueur, James — **History**

*Four Seasons of COVID Pandemic on the Plains: A Feature Documentary Film

$5,000 . . . . . Humanities Nebraska

Michl, Bob — **Education and Human Sciences**

*The Fragile Future of Democracy

$6,000 . . . . . Humanities Nebraska

Muchiri, Nganga — **English/Center for Digital Research in the Humanities**

*Recovering the Histories of Land Treaties in East and Southern Africa
$25,000 . . . . . American Council of Learned Societies
Wisnicki, Adrian . . . . . English/Center for Digital Research in the Humanities

Ramsay, Stephen — **English/Center for Digital Research in the Humanities**

Digital Notation Across the Movement-Based Arts
$15,800 . . . . . NEH
Pytlik 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)
$34,355 . . . . . Institute of Museum and Library Services through Purdue University

Weller, Susan — **University of Nebraska State Museum**

Exploring a Square Meter of Prairie Exhibit
$7,500 . . . . . Humanities Nebraska

Wisnicki, Adrian — **English/Center for Digital Research in the Humanities**

*Recovering BIPOC Voices from the Victorian Periodical Press
$8,400 . . . . . Research Society for Victorian Proposals through Purdue University

NUtech VENTURES®

Pioneering Partnerships for Innovation

NUtech Ventures' mission is to facilitate the commercialization and practical use of innovations generated through the research activities at the University of Nebraska–Lincoln. NUtech does 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 2021-2022

Recognition for faculty and other Nebraska researchers and other personnel who received patents for their inventions
July 1, 2021-June 30, 2022
(patents are listed by issue date)

Jason Dumpert, Shane Farritor, Mechanical & Materials Engineering; **Yutaka Tsutano,** Computing; Erik Mumm, Nishant Kumar, Philip Chu

Title: Robotic Surgical Devices, Systems, and Related Methods
Date: 7/6/2021
Number: 11051895
Country: United States

Joe Bartels, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Methods, Systems, and Devices Relating to Surgical End Effectors
Date: 7/20/2021
Number: 11065050
Country: United States

Forrest Kievit, Biological Systems Engineering; Anthony Convertine, Donghoon Lee, Joshua Sang Hun Park, Julia Mengyun Xu, Menko Ypma, Patrick Stayton, Peter Chiarelli, Pierre Mourad, Richard Ellenbogen

Title: Oxygen Reactive Polymers for Treatment of Traumatic Brain Injury
Date: 7/20/2021
Number: 11065272
Country: United States

Eric Markvicka, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Local Control Robotic Surgical Devices
Date: 9/1/2021
Number: 3680071
Countries: France, Germany, United Kingdom

Amy Lehman, Jeff Hawks, Shane Farritor, Stephen Platt, Mechanical & Materials Engineering; Mark Rentschler

Title: Systems of Actuation in Robotic Devices
Date: 9/8/2021
Number: 3673855
Countries: France, Germany, United Kingdom

Benjamin Pavlik, Kevin Van Cott, Chemical and Biomolecular Engineering; **Paul Blum,** Biological Sciences

Title: Engineered *Clostridium Botulinum* Toxin Adapted to Deliver Molecules into Selected Cells
Date: 9/14/2021
Number: 11118170
Country: United States

Eric Markvicka, Jack Mondry, Joe Bartels, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Single Site Robotic Device
Date: 9/27/2021
Number: 6949894
Country: Japan

Asit Pattnaik, Fernando Osorio, Hiep Vu, Veterinary Medicine and Biomedical Sciences; **Fangrui Ma,** Biological Sciences; William Laegreid

Title: A Non-naturally Occuring Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) and Methods of Using
Date: 10/5/2021
Number: 11136355
Country: United States

Edgar Cahoon, Biochemistry; Chunyu Zhang, Diana Berman, Kent Chapman, Robert Minto, Trevor Romsdahl

Title: Liquid and Semisolid Lubricant Compositions, Methods of Making, and Uses Thereof
Date: 10/5/2021
Number: 11136525
Country: United States

Ali Tamayol, Carina Russell, Zack Bonick, Mechanical & Materials Engineering; Bahar Aliakbarian

Title: Medication Bottle with Anti-Tampering Features
Date: 10/5/2021
Number: 11135131
Country: United States

Hendrik Viljoen, Chemical and Biomolecular Engineering

Title: Expedited PCR with Stirring
Date: 10/26/2021
Number: 11155773
Country: United States

Barry Cheung, Mark Helle, Chemistry

Title: Methods of Making and Using Lignin Derivatives
Date: 10/26/2021
Number: 11155568
Country: United States

Shane Farritor, Thomas Frederick, Eric Markvicka, Mechanical & Materials Engineering; **Dmitry Oleynikov,** Surgery

Title: Methods, Systems, and Devices for Surgical Access and Insertion
Date: 10/27/2021
Number: 2806941
Countries: France, Germany, United Kingdom

Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Quick-Release End Effector Tool Interface
Date: 11/16/2021
Number: 11173617
Country: United States

Daniel Ciobanu, Lianna Walker, Taylor Engle, Animal Science; **Hiep Vu,** Veterinary Medicine and Biomedical Sciences

Title: Biomarkers for Resistance to Porcine Circovirus 2 Associated Disease
Date: 11/23/2021
Number: 11178859
Country: United States

Carrick Detweiler, Evan Beachly, Sebastian Elbaum, Computing; **Christian Laney, James Higgins,** Mechanical & Materials Engineering; **Craig Allen,** Natural Resources; **Dirac Twidwell Jr.,** Agronomy and Horticulture

Title: Fire Suppression and Ignition with Unmanned Aerial Vehicles
Date: 12/2/2021
Number: 2016337531
Country: Australia

Jacob Greenwood, Biological Systems Engineering; **Steven Barlow,** Special Education and Communication Disorders

Title: Muscle Assessment System and Method
Date: 12/21/2021
Number: 11202595
Country: United States

Srivatsan Kidambi, Stephen Hayward, Chemical and Biomolecular Engineering

Title: Substrate Delivery of Embedded Liposomes
Date: 12/21/2021
Number: 11202838
Country: United States

Wei Qiao, Yue Zhao, Electrical and Computer Engineering; Long Wu

Title: Methods of Estimating a Position of a Rotor in a Motor Under Transient and Systems Thereof
Date: 12/22/2021
Number: GB2592166
Country: United Kingdom

Roberto De la Rosa Santamaria, Sally Mackenzie, Agronomy and Horticulture

Title: Plants with Useful Traits and Related Methods
Date: 12/28/2021
Number: 2834679
Country: Canada

Eric Markvicka, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering; **Dmitry Oleynikov,** Surgery

Title: Robotic Devices with Small Joint Design and Related Systems and Methods
Date: 1/7/2022
Number: 7005572 B2
Country: Japan

Nikhil Salvi, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Methods, Systems, and Devices Related to Robotic Surgical Devices, End Effectors and Controllers
Date: 1/11/2022
Number: 2906672
Country: Canada

Ather Mahmood, Christian Binek, Will Echtenkamp, Physics and Astronomy

Title: Hall Bar Device for Memory and Logic Applications
Date: 1/25/2022
Number: 11233192
Country: United States

Andrew Olson, Patrick Dussault, Chemistry

Title: Decomposition of Organic Peroxides and Hydrogen Peroxide by the Iron Thiolates and Related Complexes
Date: 2/8/2022
Number: 11242296
Country: United States

Jennifer Rasmussen (Schmidt), Jim Holloway, John Reid, Karla Lechtenberg, Robert Bielenberg, Ronald Faller, Scott Rosenbaugh, Midwest Roadside Safety Facility

Title: Barrier System
Date: 2/15/2022
Number: GB2579509A
Country: United Kingdom

Jacob Greenburg, Joe Bartels, Kearney Lackas, Shane Farritor, Thomas Frederick, Mechanical & Materials Engineering

Title: Methods, Systems and Devices Relating to Force Control Surgical Systems
Date: 3/15/2022
Number: 2906672
Country: Canada

Fadi Alsaleem, Durham School of Architectural Engineering and Construction

Title: Neuromorphic Computing Using Electrostatic Mems Devices
Date: 4/26/2022
Number: 11314210
Country: United States

Edward Harris, Biochemistry; Jian Liu, Robert Linhardt, Yongmei Xu

Title: Reversible Heparin Molecules
Date: 5/11/2022
Number: EP3011043B1
Countries: France, Italy, Spain, United Kingdom
Number: 602014083716.6
Country: Germany

Derrick White, Paul Blum, Raghuveer Singh, Biological Sciences

Title: Mutant Microorganisms and Methods of Making and Using
Date: 5/17/2022
Number: 11332763
Country: United States

Jinsong Huang, Xiaopeng Zheng, Mechanical & Materials Engineering

Title: Passivation of Defects in Perovskite Materials for Improved Solar Cell Efficiency and Stability
Date: 5/17/2022
Number: 11335513
Country: United States

Peter Dowben, Physics and Astronomy; Andrew Marshall, Dmitri Nikonov, Nishtha Sharma

Title: Circuits Based on Magnetoelectric Transistor Devices
Date: 5/31/2022
Number: 11349480
Country: United States

Jinsong Huang, Mechanical & Materials Engineering; Wei Wei

Title: Monolithic Integration of Hybrid Perovskite Single Crystals with Silicon for Highly Sensitive X-Ray Detectors
Date: 5/31/2022
Number: 11345123
Country: United States

Liyan Qu, Taesic Kim, Wei Qiao, Electrical and Computer Engineering

Title: Rechargeable Multi-Cell Battery
Date: 5/31/2022
Number: 11349144
Country: United States

David Anthony, Mehmet Vuran, Xin Dong, Computing

Title: Antenna for Wireless Underground Communication
Date: 6/14/2022
Number: 2684
Country: Brazil

Mark Reichenbach, Shane Farritor, Mechanical & Materials Engineering

Title: Improved Gross Positioning Device and Related Systems and Methods
Date: 6/14/2022
Number: 11357595
Country: United States

Carl Nelson, Nicholas Nelson, Mechanical & Materials Engineering

Title: Modular Cable-Driven Surgical Robots
Date: 6/28/2022
Number: 11369449
Country: United States

Ozan Ciftci, Food Science and Technology

Title: Nanoporous Starch Aerogels Impregnated with Phytosterols and Methods of Preparing the Nanoporous Starch Aerogels
Date: 6/28/2022
Number: 11369895
Country: United States

2021-2022 License Agreements

Recognition for **faculty and other Nebraska researchers** whose technologies formed the basis of licensing agreements with industry partners
July 1, 2021–June 30, 2022

Gary Anderson, Clayton Kelling
Veterinary Medicine and Biomedical Sciences
Agreement Number: 2022-0035A
Technology: Hybridoma Cell Line

P. Stephen Baenziger, Carol Speth, Mitchell Montgomery, Greg Dorn
Agronomy and Horticulture
Agreement Number: 2022-0055A
Technology: Winter Barley

P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn
Agronomy and Horticulture
Agreement Number: 2022-0085A
Technology: Wheat
Agreement Number: 2022-0093A
Technology: Barley
Agreement Number: 2022-0101A
Technology: Barley
Agreement Number: 2022-0102A
Technology: Wheat
Agreement Number: 2022-0109A
Technology: Wheat
Agreement Number: 2022-0110A
Technology: Wheat
Agreement Number: 2022-0116A
Technology: Wheat

P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn, Richard Little
Agronomy and Horticulture
Agreement Number: 2022-0086A
Technology: Wheat
Agreement Number: 2022-0100A
Technology: Wheat
Agreement Number: 2022-0117A
Technology: Wheat

P. Stephen Baenziger, Mitchell Montgomery, Greg Dorn, Richard Little, Chris Hoagland
Agronomy and Horticulture
Agreement Number: 2022-0126A
Technology: Triticale

Greg Bashford
Biological Systems Engineering
Agreement Number: 2022-0016A
Technology: Ultrasound Technology

Paul Blum, Raghuveer Singh, Derrick White
Biological Sciences
Agreement Number: 2022-0161A
Technology: Microbial Strains Producing Higher Amounts of Hydrogen
Agreement Number: 2022-0394A
Technology: Microbial Strains Producing Higher Amounts of Hydrogen

Nicole Buan, Jennifer Catlett
Biochemistry
Agreement Number: 2022-0162A
Technology: Microbial Strains Producing Higher Amounts of Methane

Nicole Buan, Jared T. Aldridge, Sean R. Carr, Karrie A. Weber
Biochemistry; Biological Sciences
Agreement Number: 2022-0472A
Technology: Production of Isoprene

Ed Cahoon, Tara J. Nazarenus
Biochemistry; Center for Plant Science Innovation
Agreement Number: 2022-0328A
Technology: Camelina Technology

Bai Cui, Yongfeng Lu, Michael Nastasi, Fei Wang, Nathan Snyder, Kevin Zhao
Mechanical & Materials Engineering; Center for Energy Sciences Research
Agreement Number: 2022-0159A
Technology: Ceramic Dental Crown Technology

Ismail Dweikat, John Rajewski
Agronomy and Horticulture
Agreement Number: 2022-0065A
Technology: Seedless Sweet Sorghum

George Graef
Agronomy and Horticulture
Agreement Number: 2022-0031A
Technology: Soybean Varieties
Agreement Number: 2022-0141A
Technology: Soybean Varieties
Agreement Number: 2022-0378A
Technology: Soybean Varieties

George Graef, Leslie Korte, Orlando Zapata, Rebecca Ott, Aaron Clark Hoagland, Luis Posadas
Agronomy and Horticulture
Agreement Number: 2022-0432A
Technology: Soybean Varieties

Patricio Grassini, Kenneth Cassman, Juan Ignacio Rattallino Edreira, Justin Van Wart
Agronomy and Horticulture
Agreement Number: 2022-0218A
Technology: Farming Software

Megan Hopkins, Linda Major, Duane Shell, Ian Newman, Dennis McChargue, Robert Schroeder
Educational Psychology; Student Affairs; Psychology
Agreement Number: 2022-0087A
Technology: Software
Agreement Number: 2022-0231A
Technology: Software

Gus Hurwitz, Elsbeth Magilton, Lysandra Marquez
Law
Agreement Number: 2022-0078A
Technology: Educational Tool

James D. La Sueur
History
Agreement Number: 2022-0042A
Technology: Art of Dissent Movie

Kevin Lee, Christopher Siedell
Physics and Astronomy; Center for Science, Mathematics and Computer Education
Agreement Number: 2022-0151A
Technology: Astronomy Smartphone Software

Yuguo Lei, Hendrik Viljoen, Qiang Li, Ou Wang
Chemical and Biomolecular Engineering
Agreement Number: 2022-0190A
Technology: Cell Manufacturing System

Joe Luck, Jackson Stansell, Daran Rudnick, Brian Krienke, Tyler Smith, Samantha Teten
Biological Systems Engineering
Agreement Number: 2022-0384A
Technology: Fertigation Management

Eric Markvicka, Evan Hailey
Mechanical & Materials Engineering; Electrical and Computer Engineering
Agreement Number: 2022-0144A
Technology: Development of a Multi-Energy Haptic Generator

Scott Rosenbaugh, Robert W. Bielenberg, Ronald K. Faller, Jennifer D. Rasmussen, Cody Stolle, Brock David Schroder, Wyatt Gregory Fallet, Karla A. Lechtenberg
Midwest Roadside Safety Facility; Civil and Environmental Engineering
Agreement Number: 2022-0165A
Technology: Roadside Barrier Technology

Michael Sealy, Guru Charan Reddy Madireddy, Haitham Hadidi, Cody Kanger, Mehrdad Negahban
Mechanical & Materials Engineering
Agreement Number: 2021-0360A
Technology: Stainless Steel Additive Manufacturing

Patricia Sollars, Gary Pickard
Veterinary Medicine and Biomedical Sciences
Agreement Number: 2022-0366A
Technology: Vaccine
Agreement Number: 2022-0368A
Technology: Vaccine

Li Tan, Yifan Huang, Xuejing Shen, Tao Sun, Gordon Chou
Mechanical & Materials Engineering
Agreement Number: 2022-0124A
Technology: Additive Manufacturing

Stephen Taylor, Joseph Baumert
Food Science and Technology
Agreement Number: 2022-0063A
Technology: Peanut Allergen Testing Kit

Chris Tuan, Bing Chen, Lim Nguyen
Civil and Environmental Engineering; Electrical and Computer Engineering
Agreement Number: 2021-0190A
Technology: Concrete Technology
Agreement Number: 2021-0439A
Technology: Concrete Technology

Hiep Vu
Veterinary Medicine and Biomedical Sciences
Agreement Number: 2022-0226A
Technology: Animal Vaccine

Changmou Xu, Rui Huang, Xiaoquing Xie
Food Science and Technology
Agreement Number: 2022-0037A
Technology: Aronia Berry Technology

Yiqi Yang, Bingnan Mu, Faqrul Hassan
Textiles, Merchandising and Fashion Design
Agreement Number: 2021-0424A
Technology: Method for Fiber Production

National Science Foundation Innovation Corps Teams

The National Science Foundation's Innovation Core (I-Corps) Program is designed to spur translation of fundamental research to the marketplace, spark collaboration between academia and industry and train NSF-funded faculty, students and other researchers in innovation and entrepreneurship skills. NUtech Ventures, the university's intellectual property and commercialization unit, supports Husker researchers in learning about and preparing to apply for the program. I-Corps awards are worth $50,000 and enable recipients to participate in real-world, hands-on learning focused on how to evaluate commercial opportunity around an innovation.

Daniel Schachtman

Agronomy and Horticulture; Center for Plant Science Innovation; Center for Biotechnology

I-Corps: Combinatorial Phage Display for the Development of Specific, Single Target Biopesticides Against Invasive Plant Pathogens

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Li Tan

Mechanical & Materials Engineering

I-Corps: Room Temperature Titanium Extraction from Low-Cost Pigments

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Creative Activity

Faculty who created, performed or produced works in the fine and performing arts and architecture, literature, television and film, or digital/software design, nationally or internationally
July 1, 2021–June 30, 2022
Submitted by faculty, chairs/heads or deans

Marco Abel — **English**
Curator and author of program notes. Retrospective of 21 short, medium-length and feature-length films by the New Munich Group. May 7-27, 2022, Zeughauskino Cinema, Deutsches Historisches Museum (German Historical Museum). Berlin, Germany.

Katie Anania — **Art, Art History and Design**
Curator, visual arts exhibition. "The Nature of Waste: Material Pathways, Discarded World." Sheldon Museum of Art, Lincoln, NE.

Hamid Bagheri — **Computing**
Software designer. "FLACK: Localizing Faults in Alloy Models." Lincoln, NE.

John R. Bailey — **Glenn Korff School of Music**
Flautist, solo performance. "Concertino for Flute and Orchestra" by Daniel Dorff. Lincoln Symphony Orchestra concert (plus livestream feed). Lied Center for Performing Arts, Lincoln, NE.

Carolyn Barber — **Glenn Korff School of Music**
Conductor, wind band, group performance. College Band Directors National Association Eastern Division Intercollegiate Band Concert. Peabody Institute. Johns Hopkins University, Baltimore, MD.

Conductor, UNL Wind Ensemble, group performance. "Perspective." College Band Directors National Association North Central Division Conference. University of Wisconsin, Mead Witter School of Music, Madison, WI.

Diane Barger — **Glenn Korff School of Music**
Clarinetist, group performance. "Phanfarinette" by Andrew Wilson; "BFF" by Daniel Dorff (premier performance); "Sonata Classica" by Alexis Ciesla; "H-O-L-D F-A-S-T" by Scott McAllister (premiere performance). International Clarinet Association ClarinetFest®. Peppermill Resort, Reno, NV.

Paul E. Barnes — **Glenn Korff School of Music**
Pianist, recording. "Illumination: The Piano Works of Victoria Bond." Albany Records, Albany, NY.

Stephen Behrendt — **English**
Writer, poem. "Asparagus." *The Briar Cliff Review*, April 15, 2022.

Michael H. Burton — **Textiles, Merchandising and Fashion Design**
Co-producer and art director, animated feature film. "Bell Affair." World premiere, June 2, 2022, Publick Playhouse, Prince George's County, MD.

Animator, animated film. "The Diary of Michael Shiner." Washington, D.C.

Visual artist, solo digital art exhibition. "Floor of the Sky." Kiechel Fine Art, Lincoln, NE.

Joy Castro — **Ethnic Studies/English**
Writer, essay. "On the life and under-recognized work of Margery Latimer, visionary modernist writer." *Literary Hub*, Sept. 1, 2021.

Writer, essay. "How crime fiction can help us understand the many layers of violence in society." *CrimeReads*, Nov. 1, 2021.

Writer, short story. "Ein Haus am Meer." *The Brooklyn Rail*, June 1, 2022.

Eddie Dominguez — **Art, Art History and Design**
Visual artist, ceramics/mosaic. Community art project (three pillars, planter and bench) celebrating first responders. Bryan Medical Center East and Bryan Medical Center West, Lincoln, NE.

Kwakiutl Dreher — **English**
Co-writer and director, animated film. "Bell Affair." World premiere, June 2, 2022, Publick Playhouse, Prince George's County, MD.

Ben Evjen — **Art, Art History and Design**
Visual artist, collage/animation exhibition. "Religious Façade." Konstepidemin Artist Talk. Konstepidemin Artist Residency, Gothenburg, Sweden.

Graphic designer, group exhibition. "Allay Series." Evolving Graphic Design. Art Loft Gallery and Backspace Gallery, University of Wisconsin, Madison, WI.

Jesse R. Fleming — **Johnny Carson Center for Emerging Media Arts**

Digital creativity director, mobile application, mixed reality/ augmented reality. "Quantum Sight."

Digital creativity director, mobile application, mixed reality/ augmented reality. "Wall Gazing."

Digital creativity director, mobile application, mixed reality/ augmented reality. "See Seeing."

Digital creativity director, mobile application, mixed reality/ augmented reality. "Wall Gazing."

Video artist, video exhibition. "Apart and Together." Light Year. Public projected exhibition, Berlin, Germany.

Visual artist, cyanotype exhibition. "Nuclei." Eisentrager-Howard Gallery, Lincoln, NE.

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

Visual artist, two-person photography exhibition. "Selections from 'Views Removed'." Landscapes: East and West. Ryniker-Morrison Gallery, Rocky Mountain College, Billings, MT.

Visual artist, photography exhibition. "Selections from 'Views Removed'." Views Removed. Eide/Dalrymple Gallery, Augustana University, Sioux Falls, SD.

Marques L.A. Garrett — **Glenn Korff School of Music**

Composer, vocal score. "My Heart Be Brave." Oxford University Press. January 2022.

Composer and conductor, vocal score for choir. "Cantate Domino" (premiere). Eileen Southern Celebration, Harvard University, Cambridge, MA.

Composer for choir, soloists and chamber orchestra. "Dreamland." Turtle Creek Chorale, Dallas, TX.

Jason Griffiths — **Architecture**

Interior designer, architect, architectural installation. "XX-LAM." XX-LAM exhibition. Omaha by Design, Omaha, NE.

Michelle Harvey — **Johnny Carson School of Theatre and Film**

Lighting designer, theatrical production. "Presto! @ The Magic Parlor." Presto!. The Magic Parlor, Destin, FL.

Lighting director, theatrical production. "Coal + Ice." Asia Society presents Coal + Ice. REACH at the Kennedy Center, Washington, D.C.

Anna Henson — **Johnny Carson Center for Emerging Media Arts**

Digital creativity artist, virtual reality exhibition. "Far Field." LENS: National Dance Day. The John F. Kennedy Center for the Performing Arts, Washington, D.C.

Hye-Won Hwang — **Glenn Korff School of Music**

Dance choreographer. "e/motional landscapes." Evenings of Dance. Johnny Carson Theater, Lincoln, NE.

Dance choreographer. "Namoo." Dancing Uphill. University of Vermont, Burlington, VT.

Dancer. "La Muszette à Deux" (c.1713) and "Musette for Dancing" (2022). A Celebration: Music and Prose by Byron Adams. University of California, Riverside, Riverside, CA.

Christina M. Kirk — **Johnny Carson School of Theatre and Film**

Director, theatrical production. "A Midsummer Night's Dream" by William Shakespeare. Nebraska Repertory Theatre, Lincoln, NE.

Ari Kohen — **Political Science**

Producer, with Beth Dotan, online digital website. "Nebraska Stories of Humanity: Holocaust Survivors & WWII Veterans, Network Portal and Educational Website."

David Long — **Johnny Carson School of Theatre and Film**

Producer, writer, director, performer, short film. "Betty Lou Had a Son." "TOP 20" films for public screening, Louisiana Film Prize Festival, Shreveport, LA.

Barney McCoy — **Broadcasting**

Digital creativity producer, radio broadcast and digital story. "Ukrainian Refugees Find Refuge in Lincoln but Need Housing Options." Nebraska Public Media, Lincoln, NE.

Digital creativity producer, radio broadcast and digital story. "For Sale: A Blast from the Past that's Built to Last." Nebraska Public Media, Lincoln, NE.

Traci Robison — **University Libraries**

Writer, essay/physical and digital exhibition. "Unkissed Kisses." University Libraries, Lincoln, NE. *(With co-creators Timothy Schaffert, Andrew Jewell and Erin Colonna of UNL).*

Ash Eliza Smith — **Johnny Carson Center for Emerging Media Arts/ Art, Art History and Design**

Director, radio play. "Radio Play: Live Participatory Worldbuilding with GPT-3." Centre de Cultura Contemporània de Barcelona, Barcelona, Spain.

Film performer. "The New Inflation" by Liv Shulman. Bemis Center for Contemporary Art, curated by Sylvie Fortin, Omaha, NE.

Television producer. "Flyover Summit." Flyover Fictions. Global online broadcast.

Director, film screening. "The Invocation." Mingei International Museum, San Diego, CA.

Digital creativity artist/producer. "Artificial Rural Imagination." Online, global.

Curator, visual arts exhibition. "Talk" by Jean-Charles de Quillacq. I Don't Know You Like That: The Bodywork of Hospitality curated by Sylvie Fortin. Bemis Center for the Arts, Omaha, NE.

Matthew S. Sontheimer — **Art, Art History and Design**

Visual artist, solo art exhibition. "Traveling Without Moving." Moving Pictures. Tugboat Gallery, Lincoln, NE.

Francisco Souto — **Art, Art History and Design**

Visual artist, drawing and print exhibition. "Diaspora III." K Contemporary Gallery, Denver, CO.

Visual artist, drawing and print exhibition. "State of the Art: Locate." Museum of Contemporary Art, Jacksonville, FL.

Visual artist, drawing and print exhibition. "Diaspora II." Kiechel Fine Art gallery, Lincoln, NE.

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

Bassist, double bass, solo recording. "Voyage: Hommage á François Rabbath." Avant Bass, Lincoln, NE.

William G. Thomas — **History**

Co-writer and historian, animated film. "Bell Affair." World premiere, June 2, 2022, Publick Playhouse, Prince George's County, MD.

Robert Twomey — **Johnny Carson Center for Emerging Media Arts**

Digital creativity artist, producer of AI radio play (workshop and performance). "Live Participatory Worldbuilding with GPT-3: A Radio Play and Transmission." International Symposium on Electronic Art, Centre de Cultura Contemporània de Barcelona, Barcelona, Spain. *(With Ash Smith and Jinku Kim of UNL and Stephanie Sherman of the University of California, San Diego).*

Digital creativity artist - AI, robot and drawing exhibition. "Three Stage Drawing Transfer." International Symposium on Electronic Art, Centre de Cultura Contemporània de Barcelona, Barcelona, Spain.

Rafael Untalan — **Johnny Carson School of Theatre and Film**

Actor, theatrical production. Oberon/Theseus in "A Midsummer Night's Dream" by William Shakespeare. Nebraska Repertory Theatre, Lincoln, NE.

Actor, theatrical production. Leonato in "What Happened While Hero Was Dead" by Meghan Brown. Ashland New Plays Festival (Zoom production), Ashland, OR.

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

Composer. "12 More Very Short Pieces for Solo Piano." Recording released on all streaming platforms; musical score published at MusicSpoke, Kansas City, MO.

Tyler Goodrich White — **Glenn Korff School of Music**

Composer for string orchestra, group performance. "The Four Elements (Chamber Symphony No. 2)" (world premiere). Lincoln Symphony Orchestra. Lied Center for Performing Arts, Lincoln, NE.

Composer for tuba and orchestra, group performance. "Resilience: Fantasy for Tuba and Orchestra" (world premiere). UNL Symphony Orchestra (Bo Atlas, tuba). Lied Center for Performing Arts, Lincoln, NE.

Composer for tenor, baritone and piano, group performance. "Tangling with the Epic: Six Poems of John Kinsella and Kwame Dawes" (world premiere). Westbrook Music Building, Lincoln, NE.

Composer for chamber music (violin, viola, cello, double bass and piano), group performance. "Divertimentoscuro." Across Five Decades: A Retrospective of Solo and Chamber Music by Tyler Goodrich White. Kimball Recital Hall, Lincoln, NE.

Composer for viola, solo performance. "Suite for Unaccompanied Viola" (world premiere). Across Five Decades: A Retrospective of Solo and Chamber Music by Tyler Goodrich White. Kimball Recital Hall, Lincoln, NE.

Composer for voice and piano, group performance. “Set Me as a Seal (Wedding Cantata)” for soprano and piano (Nebraska premiere). Across Five Decades: A Retrospective of Solo and Chamber Music by Tyler Goodrich White. Kimball Recital Hall, Lincoln, NE.

Composer for chamber music (violin and piano), group performance. “Revelationes Iuventutis,” sonata for violin and piano, Yoon/Beaver/Savage Trio: Guest Artist Recital. Kimball Recital Hall, Lincoln, NE.

Composer for chamber music (cello and piano), group performance. “A Summer Sonata for cello and piano” (world premiere). Yoon/Beaver/Savage Trio: Guest Artist Recital. Kimball Recital Hall, Lincoln, NE.

Composer for chamber music (violin, cello and piano), group performance. “Three Views from the Mountain” (world premiere). Yoon/Beaver/Savage Trio: Guest Artist Recital. Kimball Recital Hall, Lincoln, NE.

Sandra M. Williams — **Art, Art History and Design**

Visual artist, cut paper exhibition. “Anthropocene Blues: Nature and the Social Imagination.” Sandra M. Williams. Blanden Memorial Art Museum, Fort Dodge, IA.

Published Books

Faculty who wrote or edited books or chapters in books published July 1, 2021–June 30, 2022

UNL co-authors/editors designated in red
(identified by those who submitted items for inclusion)
Submitted by faculty, chairs/heads or deans

Dena M. Abbott — **Educational Psychology**

Chapter author, with Jessica Boyles. Consensually non-monogamous families and their children. In M. Vaughn, T. Burnes (Eds.), *Handbook of Clinical Practice with Consensually Non-Monogamous Clients.* Lanham, MD: Rowman & Littlefield Publishers.

Craig R. Allen — **Natural Resources**

Editor, with L.H. Gunderson, A.G. Garmestani. *Applied Panarchy: Applications and Diffusion Across Disciplines.* Washington, D.C.: Island Press.

Chapter author, with J.L. Burnett. Continental analysis of invasive birds: North America. In C.T. Downs, L.A. Hart (Eds.), *Invasive Birds: Global Trends and Impacts.* Wallingford, UK: CABI.

Sam A. Allgood — **Economics**

Chapter author, with William B. Walstad. The likely influence of financial literacy on financial behaviors. In Gianni Nicolini, Brenda J. Cude (Eds.), *The Routledge Handbook of Financial Literacy.* London, UK: Routledge.

Christos Argyropoulos — **Electrical and Computer Engineering**

Chapter author, with Ying Li. Epsilon-near-zero plasmonic waveguides for enhanced coherent optical effects. In Peng Yu, Hongxing Xu, Zhiming M. Wang (Eds.), *Plasmon-Enhanced Light-Matter Interactions.* Cham, Switzerland: Springer.

Hamid Bagheri — **Computing**

Chapter author, with Zhen Hu, Bruno Vieira Resende e Silva, Witawas Srisa-an et al. SEMEO: A semantic equivalence analysis framework for obfuscated android applications. In T. Hara, H. Yamaguchi (Eds.), *Mobile and Ubiquitous Systems: Computing, Networking and Services. MobiQuitous 2021.* Cham, Switzerland: Springer.

Carolyn Barber — **Glenn Korff School of Music**

Chapter author. Creativity: A paradigm shift. In William M. Perrine (Ed.), *The Future of the Wind Band.* Chicago, IL: GIA Publications.

Raul G. Barletta — **Veterinary Medicine and Biomedical Sciences**

Chapter author, with David J. Steffen. Mycobacteria. In D.S. McVey, M. Kennedy, M.M. Chengappa, R. Wilkes (Eds.), *Veterinary Microbiology (4th ed.).* Hoboken, NJ: Wiley-Blackwell Publishing.

Steven M. Barlow — **Special Education and Communication Disorders/ Biological Systems Engineering/ Center for Brain, Biology and Behavior**

Chapter author, with A. Rosner, D. Song. Feeding and brain development in preterm infants: Central pattern generation and suck dynamics. In B. Govindaswami (Ed.), *Practical Approaches to Newborn Care: A Global Perspective in the Age of Information.* New Delhi, India: Jaypee Brothers Medical Publishers.

Chapter author, with A. Rosner, D. Song. Feeding and brain development in preterm infants: Role of sensory stimulation. In B. Govindaswami (Ed.), *Practical Approaches to Newborn Care: A Global Perspective in the Age of Information.* New Delhi, India: Jaypee Brothers Medical Publishers.

Erin C. Bauer — **Entomology**

Author, with Larry E. Barksdale, Emma Sidel. *Death Scene Insect Succession in Nebraska: A Guidebook.* Lincoln, NE: University of Nebraska–Lincoln.

Stephen Behrendt — **English**

Chapter author. Women readers. In Natasha Duquette (Ed.), *The Palgrave Encyclopedia of Romantic-Era Women's Writing.* Basingstoke (London), UK: Palgrave Macmillan.

Dawn O. Braithwaite — **Communication Studies**

Editor, with P. Schrodt. *Engaging Theories in Interpersonal Communication: Multiple Perspectives (3rd ed.).* New York, NY: Routledge.

Editor, with B.W. Bach, S. Ganesh. *By Degrees: Resilience, Relationships and Success in Communication Graduate Studies.* San Diego, CA: Cognella.

Kathleen Brazeal — **Biological Sciences**

Chapter author. Annual schedules. In Colin Scanes, Sami Dridi (Eds.), *Avian Physiology.* London, UK: Elsevier Inc.

Joy Castro — **Ethnic Studies/English**

Author. *Flight Risk.* Seattle, WA: Lake Union.

Theresa Catalano — **Teaching, Learning and Teacher Education/ Modern Languages and Literatures**

Chapter author, with Peiwen Wang. Social media, right-wing populism, and COVID-19: A multimodal critical discourse analysis of reactions to the "Chinese Virus" discourse. In A. Musolff, R. Breeze, K. Kondo, S. Vilar-Lluch (Eds.), *Pandemic and Crisis Discourse.* London, UK: Bloomsbury Linguistics.

Elaine Chan — **Teaching, Learning and Teacher Education**

Chapter author. Teacher experiences of culture in the curriculum. In D.J. Flinders, S.J. Thornton (Eds.), *The Curriculum Studies Reader (6th ed.).* New York, NY: Routledge.

Chapter author, with C. Schlein, J. Phillion. Cross-cultural and multicultural narrative inquiry. In M.F. He, W.H. Schubert (Eds.), *Oxford Research Encyclopedia of Education.* New York, NY: Oxford University Press.

Matt Cohen — **English**

Chapter author. How to read texts that weren't written down in early America. In Bryce Traister (Ed.), *The Cambridge Companion to Early American Literature.* Cambridge, UK: Cambridge University Press.

Edward Dawson — **Modern Languages and Literatures**

Chapter author. Cat art and climate change: Collecting in the data Anthropocene. In Johannes Endres, Christoph Zeller (Eds.), *Collecting in the Twenty-First Century: From Museums to the Web.* Rochester, NY: Camden House.

John P. DeLong — **Biological Sciences**

Author. *Predator Ecology: Evolutionary Ecology of the Functional Response.* Oxford, UK: Oxford University Press.

Rhae Drijber — **Agronomy and Horticulture**

Chapter author, with Morgan R. McPherson. Mycorrhizal symbiosis. In Terry J. Gentry, Jeffry J. Fuhrmann, David A. Zuberer (Eds.), *Principles and Applications of Soil Microbiology (3rd ed.).* Amsterdam, Netherlands: Elsevier.

Irina Filina — **Earth and Atmospheric Sciences**

Chapter author, with Erin Beutel. Geological and geophysical constraints guiding new tectonic reconstruction of the Gulf of Mexico. In I. Çemen, E. Catlos (Eds.), Tectonic Processes: *A Global View, Volume 1. Extensional Tectonics: Continental Breakup to Formation of Oceanic Basins.* Hoboken, NJ: Wiley-Blackley.

Scott Gardner — **Biological Sciences**

Author. *Parasites: The Inside Scoop.* Lincoln, NE: Zea Books.

Frauke Hachtmann — **Advertising and Public Relations/ Sports Media and Communication**

Chapter author. Emerging trends in computer-mediated communication and social media in sport: Theory and practice. In J.H. Lipschultz, K. Freberg, R. Luttrell (Eds.), *The Emerald Handbook of Computer-Mediated Communication and Social Media.* Bingley, UK: Emerald Publishing Limited.

Edmund 'Ted' Hamann — **Teaching, Learning and Teacher Education**

Chapter author, with Linda Harklau. Changing faces and persistent patterns for education in the New Latinx Diaspora. In Enrique G. Murillo, Jr. (Ed.), *Handbook of Latinos and Education (2nd ed.).* New York, NY: Routledge.

Andrew A. Hanna — **Management**

Chapter author, with Ricky W. Griffin, Troy A. Smith, Bradley L. Kirkman. How bad leaders impact organizational effectiveness. In Derek Lusk, Theodore L. Hayes (Eds.), *Overcoming Bad Leadership in Organizations.* New York, NY: Oxford University Press.

Robert M. Harveson — **Plant Pathology/ Panhandle Research and Extension Center**

Chapter author, with S. Markell, F. Mathew. Diseases of sunflower. In Febina Mathew, Ruth Beck, Patrick Wagner, Adam Varenhorst (Eds.), *Best Management Practices for Sunflower Production.* Brookings, SD: South Dakota State University.

Abla Hasan — **Modern Languages and Literatures**

Author. *On Pain and Suffering: A Qur'anic Perspective.* Lanham, MD: Lexington Books.

Derek M. Heeren — **Biological Systems Engineering/ Daugherty Water for Food Global Institute**

General editor and author, with Dean E. Eisenhauer, Derrel L. Martin, Glenn J. Hoffman. *Irrigation Systems Management.* St. Joseph, MO: American Society of Agricultural and Biological Engineers.

Courtney Hillebrecht — **Political Science**

Author. *Saving the International Justice Regime: Beyond Backlash Against International Courts.* Cambridge, UK: Cambridge University Press.

Soo-Young Hong — **Child, Youth and Family Studies**

Chapter author, with Elizabeth Steed, Lori E. Meyer, Ibrahim H. Acar. The development of social competence in children with disabilities. In Peter K. Smith, Craig H. Hart (Eds.), *The Wiley-Blackwell Handbook of Childhood Social Development (3rd ed.).* West Sussex, UK: Wiley-Blackwell Ltd.

Reka Howard — **Statistics**

Chapter author, with Diego Jarquin, Jose Crossa. Overview of genomic prediction methods and the associated assumptions on the variance of marker effect, and on the architecture of the target trait. In Nourollah Ahmadi, Jérôme Bartholomé (Eds.), *Genomic Prediction of Complex Traits.* New York, NY: Humana.

Margaret D. Jacobs — **Center for Great Plains Studies/History**

Author. *After One Hundred Winters: In Search of Reconciliation on America's Stolen Lands.* Princeton, NJ: Princeton University Press.

Jessica L. Jonson — **Buros Center for Testing/Educational Psychology**

Editor, with Kurt F. Geisinger. *Fairness in Educational and Psychological Testing: Examining the Theoretical, Research, Practice, and Policy Implications of the 2014 Standards.* Washington, DC: American Educational Research Association.

Alice Kang — **Political Science/Ethnic Studies**

Author, with Maria Escobar-Lemmon, Valerie Hoekstra, Miki Kittilson. *Reimagining the Judiciary: Women's Representation on High Courts Worldwide.* Oxford, UK: Oxford University Press.

Wendy J. Katz — **Art, Art History and Design**

Author. *A True American: William Walcutt, Nativism and Nineteenth-Century Art.* New York, NY: Fordham University Press.

Ari Kohen — **Political Science**

Editor, with Gerald Steinacher. *Antisemitism on the Rise: The 1930s and Today.* Lincoln, NE: University of Nebraska Press.

Thomas R. Kubick — **Accountancy**

Author, with Sally M. Jones, Shelley C. Rhoades-Catanach, Sandra R. Callaghan. *Principles of Taxation for Business and Investment Planning 2023.* New York, NY: McGraw Hill.

Laurie Thomas Lee — **Broadcasting**

Author, with Dom Caristi, William R. Davie. *Communication Law: Practical Applications in the Digital Age (3rd ed.).* New York, NY: Routledge.

Daniel Linzell — **Civil and Environmental Engineering**

Chapter author, with A. Rageh, S. Eftekhar Azam, Q. Alomari, R. Wood. Model updating and parameter identification for developing digital twins for riveted steel railway bridges. In A. Haldar, A. Al-Hussein (Eds.), *Recent Developments in Structural Health Monitoring and Assessment – Opportunities and Challenges, Bridges, Buildings and Other Infrastructures.* Sinagpore: World Scientific.

Suping Lu — **University Libraries**

Author. 日军南京暴行：德国外交文件中记载的南京大屠杀与劫后社会状况 *(Japanese Atrocities in Nanjing: The Nanjing Massacre and Post-Massacre Social Conditions Recorded in German Diplomatic Documents - Chinese edition).* Nanjing, China: Nanjing Publishing House.

Arindam Malakar — **Nebraska Water Center/Natural Resources**

Chapter author. Assessment of health, safety, and economics of surface-modified nanomaterials for catalytic applications: A review. In Manoj Gawande, Chaudhery Hussain, Yusuke Yamauchi (Eds.), *Surface Modified Nanomaterials for Applications in Catalysis.* Cambridge, MA: Elsevier.

Chapter author. Nanotechnology at the juncture of water, food, and energy nexus: Boon or bane? In Chittaranjan Ray, Sekhar Muddu, Sudhirendar Sharma (Eds.), *Food, Energy, and Water Nexus: A Consideration for the 21st Century.* Cham, Switzerland: Springer Nature.

Charlene Maxey-Harris — **University Libraries**

Chapter author, with Toni Anaya. Diversity, equity, and inclusion plans and programs in ARL libraries. In Corliss Lee, Brian Lym (Eds.), *Implementing Excellence in Diversity, Equity, and Inclusion: A Handbook for Academic Libraries.* Lincoln, NE: Association of College and Research Libraries.

Nicholas Monk — **English/Center for Transformative Teaching**

Chapter author. Cormac McCarthy made me do it. In Stacey Peebles, Benjamin West (Eds.), *Approaches to Teaching the Works of Cormac McCarthy.* New York, NY: Modern Language Association.

Nicholas J. Pace — **Educational Administration**

Author, with Shavonna L. Holman, Cailen M. O'Shea. *The Principal's Hot Seat: Observing Real-World Dilemmas (2nd ed.).* Lanham, MD: Rowman and Littlefield.

Nora Peterson — **Modern Languages and Literatures**

Editor, with Jordan Stump. *Prodiges d'Amour/Miracles of Love: French Fairy Tales by Women.* New York, NY: Modern Language Association.

Yi Qian — **Electrical and Computer Engineering**

Author, with Feng Ye, Hsiao-Hwa Chen. *Security in Wireless Communication Networks.* Hoboken, NJ: John Wiley/IEEE Press.

Chittaranjan Ray — **Nebraska Water Center/ Civil and Environmental Engineering**

Editor, with Sekhar Muddu and Sudhirendar Sharma. *Food, Energy, and Water Nexus: A Consideration for the 21st Century.* Cham, Switzerland: Springer.

Heather Richards-Rissetto — **Global Integrative Studies/ Center for Digital Research in the Humanities**

Chapter author, with Francesca Albrezzi, John Bonnett, Tassie Gniady, Lisa M. Snyder. Accessing 3D data. In Jennifer Moore, Adam Rountrey, Hannah Scates Kettle (Eds.), *3D Data Creation to Curation: Community Standards for 3D Data Preservation.* Chicago, IL: Association of College and Research Libraries.

Chapter author, with Rachel Opitz, Karin Dalziel, Jessica Dussault, Greg Tunink. Exploring 3D data reuse and repurposing through procedural modeling. In Kevin Garstki (Ed.), *Critical Archaeology in the Digital Age.* Los Angeles, CA: UCLA Cotsen Institute of Archaeology Press.

Khalid Sayood — **Electrical and Computer Engineering**

Author. *Signal and Systems: A One Semester Modular Course.* New York, NY: Springer.

Timothy Schaffert — **English**

Author. *The Perfume Thief.* New York, NY: Doubleday.

Julia Schleck — **English**

Author. *Dirty Knowledge: Academic Freedom in the Age of Neoliberalism.* Lincoln, NE: University of Nebraska Press.

Mardi Schmeichel — **Teaching, Learning and Teacher Education**

Editor, with Ajay Sharma, Elizabeth Wurzburg. *Progressive Neoliberalism in Education: Critical Perspectives on Manifestations and Resistance.* New York, NY: Routledge.

Katherine Schmid Henson — **English**

Author. *Nowhere.* Albuquerque, NM: University of New Mexico Press.

Anne R. Schutte — **Psychology**

Editor, with Julia C. Torquati, Jeffrey R. Stevens. *Nature and Psychology: Biological, Cognitive, Developmental, and Social Pathways to Well-being.* Cham, Switzerland: Springer.

Susan M. Sheridan — **Education and Human Sciences/ Center for Research on Children, Youth, Families and Schools**

Editor, with K.L. Bierman. *Family–School Partnerships in the Early School Years: Advancing Science to Influence Practice.* Cham, Switzerland: Springer.

Chapter author, with L.L. Knoche, C. Boise. Getting Ready: A relationship-based approach to parent engagement in early childhood education settings. In K.L. Bierman, S.M. Sheridan (Eds.), *Family–School Partnerships in the Early School Years: Advancing Science to Influence Practice (Vol. 5).* Cham, Switzerland: Springer.

Chapter author, with S.R. Holmes. Considerations for family–school partnerships in rural communities. In G. Miller, A. Arthur, R. Banerjee (Eds.), *Advances in Family–School–Community Partnering (FSCP): A Practical Guide for School Mental Health Professionals and Education Stakeholders.* New York, NY: Routledge.

Chapter author, with L.L. Knoche, H.M. Kerby. Early childhood education in rural communities. In A. Anzano, K. Eppley, C. Biddle (Eds.), *Bloomsbury Handbook of Rural Education in the USA.* New York, NY: Bloomsbury Publishing.

Patricia A. Simpson — **Modern Languages and Literatures**

Editor, with Elisabeth Krimmer. *German #MeToo: Rape Cultures and Resistance, 1770-2020.* Rochester, NY: Camden House.

Editor, with Birgit Tautz. *Goethe Yearbook 29.* Rochester, NY: Camden House.

Chapter author. #MeToo: Prostitution and the syntax of sexuality around 1800. In P.A. Simpson, E. Krimmer (Eds.), *German #MeToo: Rape Cultures and Resistance, 1770-2020.* Rochester, NY: Camden House.

Chapter author, with Elisabeth Krimmer. Introduction. In P.A. Simpson, E. Krimmer (Eds.), *German #MeToo: Rape Cultures and Resistance, 1770-2020.* Rochester, NY: Camden House.

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

Chapter author, with Brett Criswell, Jan Yow, Christine Lotter et al. Viewing STEM teacher leadership through a communities-of-practice lens. In Lauren Manier, T.T. York, Betty Callinger (Eds.), *Research in Practice: Preparing and Retaining K-12 STEM Teachers in High-Need School Districts.* Washington, D.C.: American Association for the Advancement of Science.

Daniel D. Snow — **Nebraska Water Center/Natural Resources**

Editor, with Paromita Chakraborty. *Legacy and Emerging Contaminants in Water and Wastewater - Monitoring, Risk Assessment and Remediation Techniques.* Cham, Switzerland: Springer.

Kelly Stage — **English/Medieval and Renaissance Studies**

Editor, with Gordon McMullan. *The Changeling: The State of Play.* London, UK: Arden Shakespeare.

Jason Stamm — **Sports Media and Communication**

Chapter author. Social media: Private conversations in public places. In Norman J. Medoff, Barbara K. Kaye (Eds.), *Now Media: The Evolution of Electronic Communication.* New York, NY: Routledge-Taylor & Francis.

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

Author. *75 Years on 4 Strings: The Life and Music of François Rabbath.* Lincoln, NE: Avant Bass.

Sonya Grace Türkman — **Interior Design**

Chapter author. Symphonies of performance: Traces of pandemic pedagogy. In Kip Jones (Ed.), *Doing Performative Social Science: Creativity in Doing Research and Reaching Communities.* New York, NY: Routledge.

Roland Végső — **English**

Chapter author. 'Death by water': Moby-Dick und die propheten der heteronomie. In Irene Albers, Marcus Hahn, Frederic Ponten (Eds.), *Heteronomieästhetik der Moderne: Jenseits Literarischer Autonomie.* Lincoln, NE: DeGruyter Press.

Shari R. Veil — **Advertising and Public Relations**

Chapter author, with Chelsea Woods, Ryan Crace. Crisis memorials: Balancing renewal and resilience. In Eric Stern (Ed.), *Oxford Encyclopedia of Crisis Analysis.* New York, NY: Oxford University Press.

Joseph Weber — **Journalism and Mass Communications**

Author. *Rhymes with Fighter: Clayton Yeutter, American Statesman.* Lincoln, NE: University of Nebraska Press.

Richard L. Wood — **Civil and Environmental Engineering**

Chapter author, with Mohammad Ebrahim Mohammadi. Machine learning-based structural damage identification within three-dimensional point clouds. In Alexandre Cury, Diogo Ribeiro, Filippo Ubertini, Michael D. Todd (Eds.), *Structural Health Monitoring Based on Data Science Techniques.* Chan, Switzerland: Springer.

Robert H. Woody — **Glenn Korff School of Music**

Author. *Psychology for Musicians: Understanding and Acquiring the Skills (2nd ed.).* New York, NY: Oxford University Press.

Sarah J. Zuckerman — **Educational Administration**

Chapter author. Collective impact in rural places. In K. Eppley, A.P. Azano, C. Biddle (Eds.), *Bloomsbury Handbook of Rural Education in the United States.* New York, NY: Bloomsbury.

Recognitions and Honors

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

July 1, 2021–June 30, 2022

Submitted by faculty, chairs/heads or deans

Donald Cox — **Electrical and Computer Engineering**
National Academy of Engineering

Raymond Hames — **Anthropology**
National Academy of Sciences

Margaret Jacobs — **History**
American Academy of Arts and Sciences

James Van Etten — **Plant Pathology**
National Academy of Sciences

Jonis Agee — **English**
2022 One Book One Nebraska Selection: *The Bones of Paradise*, Nebraska Center for the Book

Christos Argyropoulos — **Electrical and Computer Engineering**
Senior Member (2021), Society of Photo-Optical Instrumentation Engineers

Jena Asgarpoor — **Engineering**
Keating Award for Innovation and Leadership in Lifelong Learning in Graduate Engineering Education, American Society for Engineering Education (Graduate Studies Division)

Best Paper Award, American Society for Engineering Education (Management Division)

Paul Barnes — **Glenn Korff School of Music**
Fellow, Nebraska Music Teachers Association Foundation

Tim Borstelmann — **History**
Tonous and Warda Johns Family Book Award, Pacific Coast Branch of the American Historical Association

Dawn O. Braithwaite — **Communication Studies**
Namesake of the Dawn O. Braithwaite Distinguished Book Award, National Communication Association Family Communication Division

Nicole Buan — **Biochemistry**
Outstanding Editor, *Frontiers in Microbiology Journal*

Associate Editor, American Society for Microbiology

Chuck A. Burr — **West Central Research and Extension Center**
Superior Paper Award, American Society of Agricultural and Biological Engineers (with D. Rudnick, M. Stockton and X. Qiao)

Chris Calkins — **Animal Science**
Fellow, American Society of Animal Science

Matt Cohen — **English**
President, Society for Textual Scholarship

Heidi Diefes-Dux — **Biological Systems Engineering**
Fellow, American Society for Engineering Education

Angela M. Dietsch — **Special Education and Communication Disorders/ Center for Brain, Biology, and Behavior**
Editor's Award, Teaching and Learning in Communication Sciences and Disorders

Katie Edwards — **Educational Psychology**
Fellow, American Psychological Association

Community Engaged Scholar Award, American Society of Criminology, Division on Women and Crime

Richard D. Endacott — **Johnny Carson School of Theatre and Film/ Johnny Carson Center for Emerging Media Arts**
Best Short Screenplay - Drama, Cowpokes Film Festival, Harrah, OK

Dennis Ferraro — **Natural Resources**
2021 Conservation Education Award, Wildlife Society

Catherine Fraser Riehle — **University Libraries**
Open Education Leadership Fellowship, SPARC

Sheri Fritz — **Earth and Atmospheric Sciences/ Biological Sciences**
Distinguished Fellow Award, International Biogeography Society

Matthias Fuchs — **Physics and Astronomy**
Kavli Fellow, National Academy of Sciences

Crystal Garcia — **Educational Administration**
Early Career Award, Student Affairs Administrators in Higher Education

Doug Golick — **Entomology**
Distinguished Achievement Award in Teaching, Entomological Society of America's North Central Branch

Patricio Grassini — **Agronomy and Horticulture**
Gamma Sigma Delta Research Award, Gamma Sigma Delta Nebraska Chapter

John Guretzky — **Agronomy and Horticulture**
Outstanding Paper Award, *Crop, Forage and Turfgrass Management Journal* (with M. Mamo, W.H. Schacht, J.D. Volesky and A.B. Wingeyer)

Frauke Hachtmann — **Advertising and Public Relations/ Sports Media and Communication**
Distinguished Teaching Award - Advertising Division, Association for Education in Journalism and Mass Communication

David Hage — **Chemistry**
Outstanding Contributions to Education in Clinical Chemistry Award, American Association for Clinical Chemistry

Andrew Hamann — **Biological Systems Engineering**
Career Development Award, American Society of Gene and Cell Therapy

Brian Harbourne — **Mathematics**
Fellow, American Mathematical Society

Robert Harveson — **Plant Pathology**
Fellow, American Phytopathological Society

Holly Hatton-Bowers — **Child, Youth, and Family Studies/Extension**
Emerging Leadership Research Award, Zero to Three

Gary Hein — **Entomology**
Fulbright Specialist Award, U.S. Department of State, Bureau of Educational and Cultural Affairs

Carrie Heitman — **Anthropology/Global Integrative Studies**
Book Award - Popular Category, Society for American Archaeology

Melissa J. Homestead — **English**
Member, American Antiquarian Society

Margaret Huettl — **History and Ethnic Studies**
Fellowship, American Council of Learned Societies

Emira Ibrahimpasic — **Global Integrative Studies**
Award for Excellence in Education Abroad Curriculum Design, Forum on Education Abroad (with K. Kunzman)

Margaret Jacobs — **History**
Gold Winner in the General-Television category, Telly Awards

Jennifer Johnson Jorgensen — **Textiles, Merchandising and Fashion Design**
Nancy Rutherford Teaching Innovation Award, International Textile and Apparel Association

Steven Jones — **Animal Science**
Signal Service Award, American Meat Science Association

Valerie Jones — **Advertising and Public Relations**
Fulbright Global Scholar Award, Council for International Exchange of Scholars (to Melbourne, Australia)

Alice Kang — **Political Science/Ethnic Studies**
C. Herman Pritchett Book Award, American Political Science Association (Law and Courts Section)

David Karle — **Architecture**
2021 Architectural | Design Education Award, American Institute of Architects Nebraska

Casey Ryan Kelly — **Communication Studies**
Outstanding Academic Titles for 2021, *Choice* Magazine

Taeyeon Kim — **Educational Administration**
Outstanding Research Paper Award, Korean-American Educational Researchers Association

Best Paper Award - East Asia Special Interest Group, Comparative and International Education Society

Eric Knoll — **Agricultural Leadership, Education and Communication**
Post-Secondary Teacher of the Year, Association for Career and Technical Education

Katie Kunzman — **Education Abroad Program**
Award for Excellence in Education Abroad Curriculum Design, Forum on Education Abroad (with E. Ibrahimpasic)

Yingchao Lan — **Supply Chain Management and Analytics**
Chan Hahn Best Paper Award – Operations and Supply Management Division, Academy of Management

Neal Lewis — **Engineering**
Best Paper Award, American Society for Engineering Education (Management Division)

Best Paper Award, American Society for Engineering Education (Engineering Economy Division)

Ronald Lewis — **Animal Science**
Fellow Award for Research, American Society of Animal Science

Dustin Loy — **Veterinary Medicine and Biomedical Sciences**
Outstanding Young Alumni Award, Iowa State University Alumni Association

Martha Mamo — **Agronomy and Horticulture**
Outstanding Paper Award, *Crop, Forage and Turfgrass Management Journal* (with J. Guretzky, W.H. Schacht, J.D. Volesky and A.B. Wingeyer)

Maria Marron — **Journalism and Mass Communications**
Donna Allen Award for Feminist Advocacy, Commission on the Status of Women

Barney McCoy — **Broadcasting**
Eric Sevareid Award, First Place: Hard Radio Feature reporting, Midwest Broadcast Journalists Association

Eric Sevareid Award, Award of Merit: Soft Radio Feature reporting, Midwest Broadcast Journalists Association

Patrice McMahon — **Political Science**
Fulbright U.S. Scholar Award, Council for International Exchange of Scholars (to Poznań, Poland)

Julia McQuillan — **Sociology**
Fellow, American Association for the Advancement of Science

Jake Messersmith — **Management**
Best Paper Award for HR-Entrepreneurship Research, Academy of Management (Human Resources Division)

Phillip Miller — **Animal Science**
AFIA Award in Nonruminant Nutrition Research, American Society of Animal Science

George Morcous — **Durham School of Architectural Engineering and Construction**
Fellow, Precast/Prestressed Concrete Institute

Christopher Neale — **Biological Systems Engineering**
Royce J. Tipton Award, American Society of Civil Engineers

Carl Nelson — **Mechanical & Materials Engineering**
Senior Member, National Academy of Inventors

Elizabeth Niehaus — **Educational Administration**
Senior Fellow, University of California's National Center for Free Speech and Civic Engagement

Kendra L. Ordia — **Interior Design**
Equity Council Member, International Interior Design Association

Members Choice Award, Interior Design Educators Council

Gabrielle (Brie) Owen — **English**
Honor Book Award, Children's Literature Association

Angela Pannier — **Biological Systems Engineering**
College of Fellows, American Institute for Medical and Biological Engineering

Julie A. Peterson — **Entomology/West Central Research and Extension Center**
Conservation Research Award, Soil and Water Conservation Society

Santosh Pitla — **Biological Systems Engineering**
A. W. Farrall Young Educator Award, American Society of Agricultural and Biological Engineers

Ann Marie Pollard — **Johnny Carson School of Theatre and Film**
Linklater Voice Designation, Kristin Linklater Voice Centre

Larkin Powell — **Natural Resources**
Fellow, The Wildlife Society

Wei Qiao — **Electrical and Computer Engineering**
Fellow, Asia-Pacific Artificial Intelligence Association

Xin Qiao — **Biological Systems Engineering**
Superior Paper Award, American Society of Agricultural and Biological Engineers (with D. Rudnick, M. Stockton and C. Burr)

Daran R. Rudnick — **Biological Systems Engineering**
Larry W. Turner Young Extension Professional Award, American Society of Agricultural and Biological Engineers

Superior Paper Award, American Society of Agricultural and Biological Engineers (with M. Stockton, X. Qiao and C. Burr)

Erica Ryherd — **Durham School of Architectural Engineering and Construction**
Fellow, Acoustical Society of America

Walter H. Schacht — **Agronomy and Horticulture**
Outstanding Paper Award, *Crop, Forage and Turfgrass Management Journal* (with J. Guretzky, M. Mamo, J.D. Volesky and A.B. Wingeyer)

Timothy Schaffert — **English**
One World One Book Program Selection: *The Perfume Thief*, Penguin Random House International

Anthony Schutz — **Law**
Distinguished Service Award, American Agricultural Law Association

Rachael Shah — **English**
Outstanding Book in Community Writing Award, Coalition for Community Writing

Publication of the Year Award, International Association for Research on Service-Learning and Community Engagement

Daizaburo Shizuka — **Biological Sciences**
Fellow, American Ornithological Society

Jessica Shoemaker — **Law**
Professional Scholarship Award, American Agricultural Law Association

Chungwook Sim — **Civil and Environmental Engineering**
George D. Nasser Award, Precast/Prestressed Concrete Institute (with M. Tadros, D. Gee and M. Assad)

Ash Eliza Smith — **Johnny Carson Center for Emerging Media Arts/ Art, Art History and Design**
Fellow, Nebraska Governance and Technology Center

Kevin Smith — **Political Science**
McGuffey Longevity Award, Textbook and Academic Authors Association (with Alan Greenblatt)

Dan Stehlik — **Agricultural Production Systems/ Agricultural Mechanics**
Outstanding Postsecondary Agriculture Program, National Association of Ag Educators

Matt Stockton — **Agricultural Economics**
Superior Paper Award, American Society of Agricultural and Biological Engineers (with D. Rudnick, C. Burr and X. Qiao)

Rick Stowell — **Biological Systems Engineering**
G.B. Gunlogson Countryside Engineering Award, American Society of Agricultural and Biological Engineers

Ryan Sullivan — **Law**
Access to Justice Award, Association of American Law Schools

Pat Tetreault — **LGBTQA+ Resource Center/Women's Resource Center**
Voice of Inclusion Award, College Student Educators International

James F. Tierney — **Law**
Selected for Junior Faculty Forum, Harvard-Yale-Stanford Junior Faculty Forum

Joseph A. Turner — **Mechanical & Materials Engineering**
Fellow, American Society of Nondestructive Testing

Vinodchandran Variyam — **Computing**
Research Highlight Award, Association for Computing Machinery's Special Interest Group on Management of Data

Jerry D. Volesky — **Agronomy and Horticulture**
Outstanding Paper Award, *Crop, Forage and Turfgrass Management Journal* (with J. Guretzky, M. Mamo, W.H. Schacht and A.B. Wingeyer)

Judy Walker — **Mathematics**
Fellow, American Association for the Advancement of Science

Jian Wang — **Mechanical & Materials Engineering**
Distinguished Scientist/Engineer Award, Materials Processing and Manufacturing Division, Minerals, Metals and Materials Society

Yanan Wang — **Electrical and Computer Engineering**
Career Mentoring Fellow, American Physical Society

Ana B. Wingeyer — **Agronomy and Horticulture**
Outstanding Paper Award, *Crop, Forage and Turfgrass Management Journal* (with J. Guretzky, M. Mamo, W.H. Schacht and J.D. Volesky)

Marilyn Wolf — **Computing**
Leon K. Kirchmayer Graduate Teaching Award, Institute for Electrical and Electronics Engineers

Julie Wu — **Finance**
Spängler-IQAM Award for the Best Investments Paper, *Review of Finance*

Janos Zempleni — **Nutrition and Health Sciences**
Distinguished Achievement in Agriculture Award of Merit, Gamma Sigma Delta Honor Society of Agriculture

Tian Zhang — **Civil and Environmental Engineering**
Distinguished Member, American Society of Civil Engineers

Publications in Scholarly Journals

Faculty who have published in peer-reviewed scholarly journals or publications considered scholarly in their field
July 1, 2021–June 30, 2022
UNL co-authors designated in red
(identified by those who submitted articles for inclusion)
Submitted by faculty, chairs/heads or deans

Dena M. Abbott — Educational Psychology

With Caitlin Mercier, Michael Ternes. Coping matters: An examination of Black Americans' coping with the COVID-19. *The Counseling Psychologist*. Aug. 2, 2021.

With Paul Yeatts, Debra Mollen. Development and validation of the Atheist Identity Concealment Scale (AICS). *Journal of Religion & Health*. Nov. 15, 2021.

With Jessica Boyles, Elyxcus Anaya. Hidden in plain sight: Low-income and working-class atheists. *Journal of Counseling Psychology*. July 15, 2021.

Mirzokhidjon Abdurakhmonov — Management

With J. Ridge, A. Hill, H. Loncarich. Strategic risk and lobbying: Investigating lobbying breadth as risk management. *Journal of Management*. May 2022.

Herita Akamah — Accountancy

With J. Ahn, K. Bills, K. Kelli Saunders. Accounting firm association membership and audit firm growth. *Auditing: A Journal of Practice & Theory*. Dec. 15, 2021.

With J. Ahn, Q. Shu. The effect of disclosing audit quality control deficiencies on non-audit tax services: Evidence from Deloitte's 2007 PCAOB Part II inspection report. Jou*rnal of Accounting and Public Policy*. Fall 2021.

With J. Ahn. Is there a dark side to societal trust in auditors' going concern assessments? *Auditing: A Journal of Practice & Theory*. Dec. 15, 2021.

Sam A. Allgood — Economics

With KimMarie McGoldrick. Team-based learning in economics: A symposium. *Journal of Economic Education*. July 1, 2021.

With KimMarie McGoldrick. Using readings beyond the textbook: A survey. *Journal of Economic Education*. Sept. 14, 2021.

Özgür M. Araz — Supply Chain Management and Analytics

With F. Sahinyazan. An alternative vaccine prioritization approach in response to COVID-19 pandemic. *Journal of Humanitarian Logistics and Supply Chain Management*. June 15, 2022.

With S. Sajeesh, T.T.K. Huang. Market positioning in food industry in response to public health policies. *Production and Operations Management*. March 15, 2022.

With J. Brittin, A. Ramirez, T. Huang. An agent-based simulation model for testing novel obesity interventions in school environment. *IEEE Transactions on Engineering Management*. July 15, 2021.

With Hugo Briseño, Adrian Ramirez-Nafarrate. A multivariate analysis of hybrid and electrical vehicles sales in Mexico. *Socio-Economic Planning Sciences*. Aug. 2021.

With C. Mirzayi, Emily Ferris, H. Ozcebe et al. A structural equation model of physical activity in Turkish schoolchildren: An application of the integrated health behavior model. *BMJ Open*. Dec. 13, 2021.

Christos Argyropoulos — Electrical and Computer Engineering

With Ying Li. Multiqubit entanglement and quantum phase gates with epsilon-near-zero plasmonic waveguides. *Applied Physics Letters*. Oct. 23, 2021.

With Boyuan Jin, Dhananjay Mishra. Efficient single-photon pair generation by spontaneous parametric down-conversion in nonlinear plasmonic metasurfaces. *Nanoscale*. Oct. 1, 2021.

With Andrew Butler. Mechanically tunable radiative cooling for adaptive thermal control. *Applied Thermal Engineering*. June 5, 2022.

With Larousse Khosravi Khorashad. Unraveling the temperature dynamics and hot electron generation in tunable gap-plasmon metasurface absorbers. *Nanophotonics*. April 12, 2022.

With Ying Li. Plasmonic waveguides: Enhancing quantum electrodynamic phenomena at nanoscale. *IEEE Antennas Propagation Magazine*. Sept. 9, 2021.

Hamid Bagheri — Computing

With Clay Stevens. Combining solution reuse and bound tightening for efficient analysis of evolving systems. *Proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis*. June 30, 2022.

With Guolong Zheng, ThanhVu Nguyen, Simón Gutiérrez Brida et al. ATR: Template-based repair for alloy specifications. *Proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis*. June 30, 2022.

With Bruno Vieira Resende e Silva, Clay Stevens, Niloofar Mansoor, Witawas Srisa-An et al. SAINTDroid: Scalable, automated incompatibility detection for Android. *Proceedings of the IEEE/IFIP International Conference on Dependable Systems and Networks*. June 27, 2022.

With Jianghao Wang, Jarod Aerts, Negar Ghorbani, Sam Malek. Flair: Efficient analysis of Android inter-component vulnerabilities in response to incremental changes. *Springer Empirical Software Engineering*. July 1, 2021.

With Guolong Zheng, ThanhVu Nguyen, Simón Gutiérrez Brida et al. FLACK: Counterexample-guided fault localization for alloy models. *Proceedings of the IEEE/ACM 43rd International Conference on Software Engineering*. July 21, 2021.

With Simón Gutiérrez Brida, ThanhVu Nguyen, Guolong Zheng et al. Bounded exhaustive search of alloy specification repairs. *Proceedings of the IEEE/ACM 43rd International Conference on Software Engineering*. July 21, 2021.

With Mohannad Alhanahnah, Clay Stevens, Bocheng Chen, Qiben Yan. IoTCOM: Dissecting interaction threats in IoT systems. *IEEE Transactions on Software Engineering*. May 31, 2022.

With Simón Gutiérrez Brida, ThanhVu Nguyen, Guolong Zheng et al. BeAFix: An automated repair tool for faulty alloy models. *Proceedings of the IEEE/ACM International Conference on Automated Software Engineering*. Nov. 15, 2021.

Edward J. Balistreri — Economics

With Petros C. Mavroidis, Thomas J. Prusa. What if? Tinkering with the counterfactual: A comment on "US–Washing Machines (Article 22.6-US)." *World Trade Review*. Oct. 2021.

Is the United States trying to undermine the WTO? *Agricultural Policy Review*. Winter 2021.

With Sangho Shin. The other trade war: Quantifying the Korea-Japan trade dispute. *Journal of Asian Economics*. April 2022.

With Xi He, Gyu Hyun Kim, Wendong Zhang. A general equilibrium assessment of COVID-19's labor productivity impacts on China's regional economies. *Journal of Productivity Analysis*. June 26, 2022.

Wei Bao — Electrical and Computer Engineering

With Renjie Tao, Kai Peng, Louis Haeberlé et al. Halide perovskites enable polaritonic XY spin Hamiltonian at room temperature. *Nature Materials*. June 9, 2022.

Raul G. Barletta — Veterinary Medicine and Biomedical Sciences

With R.G. Bastos, H.F. Alzan, V.A. Rathinasamy et al. Harnessing *Mycobacterium bovis* BCG trained immunity to control human and bovine babesiosis. *Vaccine*. Jan. 25, 2022.

With J.P. Bannantine, T. Gupta, D.K. Zinniel et al. Use of a ferret model to test efficacy and immunogenicity of live attenuated *Mycobacterium avium* subspecies *paratuberculosis* vaccines. *Methods in Molecular Biology*. Jan. 15, 2022.

Steven M. Barlow — Special Education and Communication Disorders/ Biological Systems Engineering/ Center for Brain, Biology, and Behavior

With Yingying Wang, Hyuntaek Oh. Dynamic causal modeling of sensorimotor networks elicited by saltatory pneumotactile velocity in glabrous hand. *Neuroimaging*. Feb. 1, 2022.

With Yingying Wang, Rebecca Custead, Hyuntaek Oh. Dynamic causal modeling of neural responses to an orofacial pneumotactile velocity array. *Neuroimage Reports*. March 1, 2022.

With Elizabeth Sandfort, Jaehoon Lee, Mohsen Hozan, Jacob Greenwood. Orofacial and digit force dynamics in neurotypical children. *Biomedical Journal Scientific Technical Research*. June 10, 2022.

Amy Bartels — Management

With M.M. Luciano, V.W. Fenters, S. Park, S.I. Tannenbaum. When to take on tasks that are outside of your job description. *Harvard Business Review*. July 8, 2021.

With J. Nahrgang, J. Sessions, K.S. Wilson et al. With a frown or a smile: How leader affective states spark the leader-follower reciprocal exchange process. *Personnel Psychology*. Feb. 10, 2022.

With M.M. Luciano, V.W. Fenters, S. Park, S.I. Tannenbaum. The double-edged sword of leadership task transitions in emergency response multiteam systems. *Academy of Management Journal*. Aug. 1, 2021.

Brian Baugh — Finance

With Filipe Correia. Does paycheck frequency matter? Evidence from micro data. *Journal of Financial Economics*. March 2022.

Christopher R. Bilder — Statistics

With J. Tebbs, C. McMahan. Discussion on "Is group testing ready for prime-time in disease identification?" *Statistics in Medicine*. July 30, 2021.

With Y. Liu, C. McMahan, J. Tebbs, C. Gallagher. Generalized additive regression for group testing data. *Biostatistics*. Oct. 1, 2021.

Florin Bobaru — **Mechanical & Materials Engineering**

With S. Jafarzadeh, F. Mousavi, A. Larios. A general and fast convolution-based method for peridynamics: Applications to elasticity and brittle fracture. *Computer Methods in Applied Mechanics and Engineering*. Feb. 17, 2022.

With S. Jafarzadeh, J. Zhao, M. Shakouri. A peridynamic model for crevice corrosion damage. *Electrochimica Acta*. Oct. 31, 2021.

With J. Zhao, S. Jafarzadeh, M. Rahmani et al. A peridynamic model for galvanic corrosion and fracture. *Electrochimica Acta*. Aug. 8, 2021.

With Z. Chen, X. Peng, S. Jafarzadeh. Analytical solutions of peridynamic equations. Part I: Transient heat diffusion. *Journal of Peridynamics and Nonlocal Modeling*. March 21, 2022.

With P. Wu, F. Yang, Z. Chen. Stochastically homogenized peridynamic model for dynamic fracture analysis of concrete. *Engineering Fracture Mechanics*. Aug. 2021.

Kelli S. Boling — **Advertising and Public Relations**

"We matter": The cultural significance of a counter-narrative Black public affairs program in Columbia, S.C. *Journalism History*. Oct. 15, 2021.

With Leigh M. Moscowitz. Truth, justice, and sexual harassment: A comparative analysis of the op-eds in the Hill-Thomas and Ford-Kavanaugh hearings. *Journalism Studies*. Oct. 30, 2021.

With Denetra Walker. How race and gender impact perceived objectivity of broadcast women of color on Twitter. *Social Media + Society*. Dec. 13, 2021.

With Denetra Walker. Black maternal mortality in the media: How journalists cover a deadly racial disparity. *Journalism*. Jan. 3, 2022.

With Khalid Alharbi. Saudi women take the wheel: A content analysis of how Saudi Arabian car companies reached women on social media. *Journal of Current Issues & Research in Advertising*. Feb. 11, 2022.

It's that "There but for the grace of God go I" piece of it: Domestic violence survivors in true crime podcast audiences. *Mass Communication and Society*. May 6, 2022.

Wesley Boyce — **Supply Chain Management and Analytics**

With Joseph Morris, Patrick Tracy. COVID-19 and the changes in daily streaming behavior of consumers in the United States. *International Journal of Business Analytics*. July 2021.

With Douglas L. Smith, Anthony G. Vatterott. Measuring supply-chain performance and related risks: Insights from text analytics for strategic management and managerial control. *Supply Chain Forum: An International Journal*. Jan. 2022.

Dawn O. Braithwaite — **Communication Studies**

With V. Waldron, B. Oliver-Blackburn, B. Avalos. Paths to positivity: Relational trajectories and interaction in positive stepparent-stepchild dyads. *Journal of Family Communication*. Dec. 20, 2021.

With B. Oliver-Blackburn, V. Waldron, R. Hall et al. Protector and friend: Turning points and discursive constructions of the stepparent role. *Family Relations*. Jan. 19, 2022.

Chad Brassil — **Biological Sciences**

With E. Fyfe, J.R. de Leeuw, P.F. Carvalho et al. ManyClasses 1: Assessing the generalizable effect of immediate versus delayed feedback across many college classes. *Advances in Methods and Practices in Psychological Science*. July 1, 2021.

Kathleen Brazeal — **Biological Sciences**

With T.L. Brown, B.A. Couch. Connecting activity implementation characteristics to student buy-in toward and utilization of formative assessments within undergraduate biology courses. *Journal for STEM Education Research*. July 1, 2021.

Gary J. Brewer — **Entomology**

With D.J. Boxler, L.D. Domingues, R.T. Trout Fryxell et al. Horn fly (Diptera: Muscidae)—Biology, management, and future research directions. *Journal of Integrated Pest Management*. Oct. 27, 2021.

Kathleen Brooks — **Agricultural Economics**

With Shane Roberts, Lia Nogueira, Cory G. Walters. The role of quality characteristics in pricing hard red winter wheat. *Food Policy*. March 18, 2022.

John Brunero — **Philosophy**

Rationality and normativity. *International Encyclopedia of Ethics*. Feb. 21, 2022.

Practical reasons, theoretical reasons, and permissive and prohibitive balancing. *Synthese*. March 12, 2022.

Nicole Buan — **Biochemistry**

With K.L. Hoke, S.L. Zimmer, A.B. Roddy et al. Reintegrating biology through the nexus of energy, information and matter. *Integrative and Comparative Biology*. Feb. 5, 2022.

With K. White, K. McEntire, L. Robinson, E. Barbar. Charting a new frontier integrating mathematical modeling in complex biological systems from molecules to ecosystems. *Integrative and Comparative Biology*. Feb. 5, 2022.

With J.L. Catlett, C. Kelley, M. Pierobon et al. Metabolic synergy between human symbionts *Bacteroides* and *Methanobrevibacter*. *Microbiology Spectrum*. May 10, 2022.

Robert Campbell — **Management**

With John R. Busenbark, Scott D. Graffin, Steven Boivie. Retaining problems or solutions? The post-acquisition performance implications of director retention. *Strategic Management Journal*. Sept. 2021.

Theresa Catalano — **Teaching, Learning and Teacher Education/ Modern Languages and Literatures**

With Uma Ganesan, Alessia Barbici-Wagner, Alison Leonard, Stephanie Wessels, Jenelle Reeves. Dance as dialog: A metaphor analysis of arts and community-based learning with preservice teachers and a local refugee community. *Teaching and Teacher Education*. Aug. 1, 2021.

With Peiwen Wang. Social media, populism, and COVID-19: Weibo users' reactions to anti-Chinese discourse. *Studies in Media and Communication*. Dec. 1, 2021.

With Amanda Morales. Dancing across difference: Arts and community-based interventions as intercultural education. *Intercultural Education*. Feb. 1, 2022.

With Dan Moran, Hector Palala Martinez. 'I See You': Indigenous language study in a bilingual teacher education program. *International Journal of Bilingual Education and Bilingualism*. May 6, 2022.

Terence J. Centner — **Agricultural Economics/Law**

Reconciling agricultural production and property rights with the use of dicamba herbicides. *Lewis & Clark Law Review*. Oct. 28, 2021.

A proposal for insurance to address offsite injuries accompanying dicamba usage. *Cornhusker Economics*. Dec. 1, 2021.

A review of registrations for over-the-top dicamba products and liability for state governments for appropriating neighbors' right to exclude. *Environmental Challenges*. Dec. 21, 2021.

Elaine Chan — **Teaching, Learning and Teacher Education**

Seeking clarity in murky waters: Nuances of equity and social justice from a teacher perspective. *Frontiers in Education: Special Issue – Teacher Education, Equity, and Social Justice*. May 2, 2022.

Heng Chen — **Supply Chain Management and Analytics**

With Zhangchen Hu, Senay Solak. Improved delivery policies for future drone-based delivery systems. *European Journal of Operational Research*. Jan. 1, 2021.

Qian Chen — **Marketing**

With Kevin Lee, Wayne S. DeSarbo, Lingzhou Xue. Estimating finite mixtures of ordinal graphical models. *Psychometrika*. March 1, 2022.

Bertrand Clarke — **Statistics**

With Yuepend Sun, Jennifer Clarke, Xu Li. Predicting antibiotic resistance gene abundance in activated sludge using shotgun metagenomics and machine learning. *Water Research*. Sept. 1, 2021.

With Tri Le. Model averaging is asymptotically better than model selection for prediction. *Journal of Machine Learning Research*. Jan. 2, 2022.

With Tri Le. Interpreting uninterpretable predictors: Kernel methods, Shtarkov solutions, and random forests. *Statistical Theory and Related Fields*. Jan. 15, 2022.

Katelyn Coburn — **Child, Youth, and Family Studies**

With Sandra M. Stith, Glade L. Topham, Chelsea Spencer et al. Using systemic interventions to reduce intimate partner violence or child maltreatment: A systematic review of publications between 2010 and 2019. *Journal of Marital and Family Therapy*. Jan. 14, 2022.

Matt Cohen — **English**

With Nicole Gray. Printers of the Kosmos: Modeling variation in the 1855 *Leaves of Grass*. *Textual Cultures*. Feb. 2, 2022.

Clay Cressler — **Biological Sciences**

With R.O. Cooper, J.M. Vavra. Targeted manipulation of abundant and rare taxa in the *Daphnia magna* microbiota with antibiotics impacts host fitness differentially. *mSystems*. Oct. 21, 2021.

With A.C. Pfenning-Butterworth, T.J. Davies. Identifying co-phylogenetic hotspots for zoonotic disease. *Philosophical Transactions of the Royal Society*. Nov. 8, 2021.

With A.C. Pfenning-Butterworth, K. Amato. Circadian rhythm in feeding behavior of *Daphnia dentifera*. *Journal of Biological Rhythms*. Nov. 10, 2021.

Sruti Das Choudhury — **Natural Resources**

With Rubi Quiñones, Francisco Munoz-Arriola, Ashok Samal. Multi-feature data repository development and analytics for image cosegmentation in high-throughput plant phenotyping. *PLOS One*. Sept. 2, 2021.

With Xijian Fan, Rui Zhou, Tardi Tjahjadi, Qiaolin Ye. A segmentation-guided deep learning framework for leaf counting. *Frontiers in Plant Science*. May 19, 2022.

Edward Dawson — **Modern Languages and Literatures**

Perpetual motion, time, and power: Christoph Ransymayr's "Cox" as novel of the Anthropocene. *The German Quarterly*. Jan. 31, 2022.

John DeLong — **Biological Sciences**

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CMS COLLABORATION:

Ken Bloom, Dan Claes, Frank Golf, Ilya Kravchenko 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.

Search for nonresonant Higgs boson pair production in final state with two bottom quarks and two tau leptons in proton-proton collisions at $\sqrt{s}$ = 13 TeV. *Physics Letters B*. June 19, 2022.

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Presentations at Professional Conferences

Faculty who have presented at professional conferences
July 1, 2021–June 30, 2022
UNL co-presenters designated in red
(identified by those who submitted items for inclusion)
Submitted by faculty, chairs/heads or deans

Dena M. Abbott — Educational Psychology

Presenter/speaker, with Carrie Bohmer, Millie Myers, Elxycus Anaya. Sexual and reproductive health equity as liberation. Winter Roundtable Conference in Psychology and Education. Teachers College, Columbia University. Virtual. Feb. 24-25, 2022.

Panel discussion participant, with Jessica Boyles, Carrie Bohmer, Rin Nguyen. Liberation-centered sexuality education. Winter Roundtable Conference in Psychology and Education. Teachers College, Columbia University. Virtual. Feb. 24-25, 2022.

Marco Abel — English

Keynote speaker. Mit nonchalance am abgrund: Die Neue Münchner Gruppe. Retrospective of the Films of the New Munich Group, curated by Marco Abel. Zeughauskino Cinema, Deutsches Historisches Museum (German Historical Museum). Berlin, Germany. May 7-27, 2022.

Presenter/speaker. (Don't) look back on SYLVIE: Klaus Lemke, D.A. Pennebaker, and the "Lightness" of a "Left Without Leftism." German Studies Association. Indianapolis, IN. Virtual. Sept. 30-Oct. 3, 2021.

Blessing F. Ademokoya — Entomology

Keynote speaker, with Thomas E. Hunt, Robert J. Wright. Parasitism of stink bugs by native parasitoids in Nebraska. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

John E. Anderson — Economics

Presenter/speaker, with Muazzam Tashmatovs. Infrastructure impacts on business environment and enterprise performance in East and Southeast Europe. Leibniz Institute for East and Southeast European Studies Annual Conference: Infrastructure in East and Southeast Europe in Comparative Perspective: Past, Present and Future. Regensburg, Germany. Sept. 23-24, 2021.

Hamid Bagheri — Computing

Keynote speaker. Analyzing IoT systems formally and efficiently. Software Engineering Research and Practices for the Internet of Things, ACM/IEEE. Virtual. May 19, 2022.

Carolyn Barber — Glenn Korff School of Music

Presenter/speaker. Welcome to the lab: An introduction to UNL's ensemble performance lab. Wisconsin State Music Conference, Wisconsin Music Educators Association. Madison, WI. Oct. 28-30, 2021.

Raul G. Barletta — Veterinary Medicine and Biomedical Sciences

Presenter/speaker, with E. Muthukrishnan, D.K. Zinniel, V. Manthena. *Mycobacterium avium* subsp. *paratuberculosis* attenuated mutants induce apoptosis and secondary necrosis in RAW 264.7 macrophage cells. Microbe Annual Meeting, American Society For Microbiology. Washington, D.C. June 9-13, 2022.

Presenter/speaker, with D.K. Zinniel, E. Muthukrishnan, A. Turner, J.R. Stabel, J.P. Bannantine. Development and testing of *Mycobacterium avium* subsp. *paratuberculosis* DIVA vaccines in ruminants. Conference of Research Workers in Animal Diseases. Chicago, IL. December 3-7, 2021.

Presenter/speaker, with I.T. Sakallioglu, A.D.-L. Liete, B. Evans, D.K. Zinniel, P. Dussault, R. Powers. A novel compound, DACB, alters mycolic acid biosynthesis and proteins related with cell wall in *Mycobacterium smegmatis*. Conference on Mass Spectrometry and Allied Topics, American Society of Mass Spectrometry. Minneapolis, MN. Oct. 4-Nov. 4, 2021.

Steven M. Barlow — Special Education and Communication Disorders/ Biological Systems Engineering/ Center for Brain, Biology, and Behavior

Keynote speaker. Neonatal Feeding Club: Somatosensory-modulated ororythmic patterning and transition to oral feeds in EPIs: NIH RCT data. Pediatric Academic Society (Society for Pediatric Research). Denver, CO. April 21-25, 2022.

Presenter/speaker, with Kristy Weissling, Judy Harvey, Jacob Greenwood, Greg Bashford. ForceWIN and Galileo: Translational applications in stroke rehabilitation. Stroke Advance-NE, American Heart Association. Via Zoom. May 4, 2022.

Keynote speaker. Crafting a successful programmatic research career. American Speech-Language-Hearing Association 2022 Pathways Conference. Via Zoom. June 13-15, 2022.

Christopher R. Bilder — Statistics

Presenter/speaker. Alpha Seminar: A course for new graduate students in statistics. Joint Statistical Meetings, American Statistical Association and 11 others. Online. Aug. 8-12, 2021.

Anita Breckbill — University Libraries

Presenter/speaker, with Ellwood Colohan. Honey, I shrunk the reference collection. Mountain-Plains Music Library Association. University of Nebraska–Lincoln, Lincoln, NE. Online. May 19-20, 2022.

Kelli Britten — Advertising and Public Relations

Panel discussion moderator, with Heather Akin. Popular culture as a pedagogy for teaching power and influence. Association of Leadership Educators Annual Conference. Kansas City, MO. June 27-29, 2022.

John Brunero — Philosophy

Presenter/speaker. Presidential address: Conditional requirements and hypocrisy. Central States Philosophical Association Annual Conference. Lincoln, NE. April 29-30, 2022.

Presenter/speaker. Precis of instrumental rationality / Response to Stroud and Paul (book symposium). American Philosophical Association, Eastern Division. Baltimore, MD. Jan. 6-9, 2022.

Presenter/speaker. Practical reasons, theoretical reasons, and underdetermination. St. Louis Annual Conference on Reasons and Rationality. University of Missouri-St. Louis/St. Louis University/ Washington University, St. Louis, MO. Aug. 10-13, 2021.

Anthony 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. National Meeting of the College Music Society. Rochester, NY. Oct. 7-9, 2021.

Theresa Catalano — Teaching, Learning and Teacher Education/ Modern Languages and Literatures

Presenter/speaker, with Ted Hamann, Víctor Zúñiga. The possibilities and limitations of binational virtual professional development: Schooling the students that Mexico and the United States share. Anthropology, AI and the Future of Human Society Conference, Royal Anthropological Institute. Virtual. June 6-10, 2022.

Presenter/speaker, with Ted Hamann. De-centering and centering mobility in educator professional development. International Conference on the Development and Assessment of Intercultural Competence. Center for Educational Resources in Culture, Language and Literacy. University of Arizona, Tucson, AZ. Virtual. Jan. 27-30, 2022.

Presenter/speaker, with Ted Hamann. Visual representations of dual language programs: 'Showing' who these programs are for. Multidisciplinary Approaches in Language Policy and Planning Conference. McGill University, Montréal, Canada. Virtual. Aug. 20-22, 2021.

Presenter/speaker, with Ted Hamann, Dan Moran. Connecting LPP research to policy and practice: A planning guide for starting dual-language immersion programs. Multidisciplinary Approaches in Language Policy and Planning Conference. McGill University, Montréal, Canada. Virtual. Aug. 20-22, 2021.

Presenter/speaker, with Jenelle Reeves, Alison Leonard, Stephanie Wessels, Uma Ganesan. Creative inquiry and community engagement: Bringing refugees and preservice teachers together through arts-based interventions. Association Internationale de Linguistique Appliquée World Congress. Virtual. Aug. 9-14, 2021.

Katelyn Coburn — Child, Youth and Family Studies

Presenter/speaker, with Christi McGeorge. Accepting or rejecting: What religious leaders can teach family therapists about working with the families of LGB people. National Council on Family Relations Annual Conference. Virtual. Nov. 2-5, 2021.

Presenter/speaker, with Amber Vennum. Joyful authenticity: Nonbinary people navigating gender norms. Queer and Trans Advocacy Network Conference, American Association of Marriage and Family Therapy. Virtual. June 10-11, 2022.

Matt Cohen — English

Presenter/speaker. Textual scholarship in the situation. Society for Textual Scholarship. Chicago, IL. May 26-28, 2022.

Presenter/speaker. Disappropriative editing, destituent philology: Redacting textual scholarship today. Fales Lecture, New York University Libraries and English Department. New York, NY. April 7-8, 2022.

Presenter/speaker, with Ashlyn Stewart. Walt Whitman's Archives. American Literature Association Conference. Chicago, IL. May 26-28, 2022.

Edward Dawson — Modern Languages and Literatures

Presenter/speaker. The promise of bad subtitles: Film translation and linguistic indifference. Annual Convention of the German Studies Association. Indianapolis, IN. Oct. 1, 2021.

Kiyomi D. Deards — University Libraries

Presenter/speaker, with Katelyn Manwiller, Samantha Peter. Creating an inclusive and accessible culture: Supportive management for people with disabilities. Conference on Academic Library Management, University of California, San Diego Libraries. Online. April 25-29, 2022.

Presenter/speaker. Communicating science with little (or no) budget: Design rules and tricks for the non-artist. American Chemical Society National Meeting and Exposition. Online and San Diego, CA. March 20-24, 2022.

Presenter/speaker, with Casey Hoeve. Creating a popular science collection to support interest, research, and curriculum support at the University of Nebraska–Lincoln Libraries. Pop Culture Association National Conference. Online. April 13-16, 2022.

Heidi A. Diefes-Dux — Biological Systems Engineering

Presenter/speaker, with Morgan McArthur, Ece Erdogmus, Erica Ryherd, Catherine Armwood-Gordon. Impact of a VR/AR module on first-year students' understanding of architectural engineering: A comparison across demographics. American Society for Engineering Education Annual Conference and Exposition. Minneapolis, MN. June 26-29, 2022.

Thomas Dotzel — Marketing

Presenter/speaker, with Venkatesh Shankar. The differential effects of goods, services, and software innovations on firm value and firm risk for technology firms. Theory and Practice in Marketing Conference. Emory University, Atlanta, GA. May 10-12, 2022.

David D. Dunigan — Plant Pathology/Nebraska Center for Virology

Presenter/speaker, with Marcie Marston. The fourth great question. 2021 Summer Workshop for the NSF-EPSCoR program in Genomes to Phenomes in the Viruses of Microbes. Virtual. July 12, 2021.

Presenter/speaker, with Gary L. Pattee, Thomas M. Petro, Irina V. Agarkova, James Van Etten. Chlorovirus exposure in ALS patients as detected through serum antibodies also accelerates motor deterioration in SOD1G93A transgenic mice. American Academy of Neurology Conference. Seattle, WA. April 2-7, 2022.

Pierce D. Ekstrom — Political Science

Presenter/speaker. Racial demographics explain the link between racial disparities in traffic stops and county-level racial attitudes. International Society for Political Psychology Annual Meeting. Athens, Greece. July 14-17, 2022.

Julia L. Frengs — Modern Languages and Literatures

Presenter/speaker. Oceania: On the front lines of the climate crisis. Annual Convention of the Rocky Mountain Modern Language Association. Online. Oct. 14-16, 2021.

Presenter/speaker. Sur un sable de turquoise et de résine toxine: Denis Pourawa. Une réponse poétique à la pollution en Océanie. Colloque International: Les Pratiques Artistiques Environnementales Autochtones comme Réponses à la Pollution: Recherches Comparatives entre les Amériques et l'Océanie. Université de la Bretagne Occidentale, Brest, France. Oct. 21-22, 2021.

Presenter/speaker. Performing Polynesia in the 21st century: "Hina, Maui et Compagnie" by Titaua Porcher. International Colloquium on 20th/21st Centuries French and Francophone Studies. Pittsburgh, PA. March 24-26, 2022.

Presenter/speaker. Mère, "métisse," marginalisée: The Poetry of Imasango. 10th International Women in French Conference. Iowa State University, Ames, IA. Virtual. May 12-14, 2022.

Presenter/speaker. Au cœur de l'océan un conflit. Congrès du Conseil International d'Études Francophones. University of Trento, Trento, Italy. June 20-26, 2022

Sue Ann Gardner — University Libraries

Presenter/speaker, with Paul Royster. Valid naming of species: All-electronic process. Open Repositories 2022, Coalition for Networked Information. Denver, CO. June 6-9, 2022.

Marques Garrett — Glenn Korff School of Music

Keynote speaker. Embracing historical composers; Engaging singers in rehearsals. Kansas Choral Directors Association Summer Convention. Topeka, KS. July 9, 2021.

Presenter/speaker. Beyond Elijah Rock: The non-idiomatic choral music of Black composers. Podium 2022: Choral Canada. Toronto, Ontario, Canada. May 22, 2022.

Keynote speaker. Sacred choral music of Black composers. Conference of the Association of Anglican Musicians. Richmond, VA. June 22-23, 2022.

Danni Gilbert — Glenn Korff School of Music

Presenter/speaker. Action research for pre-service music educators in field experiences. Florida Music Educators Association Conference. Tampa, FL. Jan. 11-15, 2021.

Presenter/speaker, with Briana Nannen, Susan Vollbrecht. Faculty opportunities for advancement in higher education music settings. Florida Music Educators Association Conference. Tampa, FL. Jan. 11-15, 2021.

Presenter/speaker. Music technology to create, perform, and respond for ALL students. International Society for Technology in Education. New Orleans, LA. June 27-30, 2022.

Presenter/speaker. "You'll need to unmute yourself!" Strategies for engaging all students online. Educated Elevated Conference. Kent State University, Kent, OH. Remote/online. March 18, 2022.

Presenter/speaker. Getting the most out of field experiences: Strategies for cooperating teachers and university students. Nebraska Music Educators Association Conference. Lincoln, NE. Nov. 17-19, 2021.

Iker González-Allende — Modern Languages and Literatures

Presenter/speaker. Los hombres expuestos: Masculinidad, patrilinealidad y feminismo en los relatos de Karmele Jaio. Karmele Jaiorekin Literaturaz / La literatura de Karmele Jaio. San Sebastian, Spain. Sept. 3, 2021.

Presenter/speaker. El mito del gudari: La masculinidad del soldado vasco en "Euzkadi en Llamas" de Ramón Belaustegigoitia. Congreso sobre los Mitos del Exilio: Homenaje a José Ángel Ascunce. San Sebastian, Spain. Nov. 18, 2021.

Presenter/speaker. El dolor que redime: Sacrificio y género durante la Guerra Civil española en "En la Gloria de Aquel Amanecer" (1937) de María Sepúlveda. Simposio Internacional sobre Ideología, Política y Reivindicaciones en Lengua, Literatura y Cine. Salamanca, Spain. June 3, 2022.

Patricio Grassini — Agronomy and Horticulture

Keynote speaker. Oil palm in Indonesia: Reconciling crop production and environmental goals through sustainable intensification. G-20 Session on Climate Change. Indonesia. Aug. 2-4, 2022.

Keynote speaker. Learning from farmers' fields to improve soybean yield and profit. X CBSoja and Mercosoja 2022, EMBRAPA. Foz do Iguazu, Brazil. March 16-19, 2022.

Jason Griffiths — Architecture

Presenter/speaker. Emerald ash borer & ASHED. Deconstruction + Reuse Conference. Virtual. Oct. 19-22, 2021.

Presenter/speaker, with Caroline Goertz and Jacob Urban. XX-LAM. The International Mass Timber Conference. Portland, OR. March 27-29, 2022.

Yawen Guan — Statistics

Presenter/speaker. Fast expectation-maximization algorithms for spatial generalized linear mixed models. International Conference on Computational and Methodological Statistics. Hybrid. Dec. 18-20, 2021.

Presenter/speaker. A spectral adjustment for spatial confounding. Conference on Econometrics and Statistics, CMStatistics. Hybrid. June 4-6, 2022.

Presenter/speaker. Computer model calibration based on image warping metrics: An application for sea ice deformation. SIAM Conference on Uncertainty Quantification. Hybrid. April 12-15, 2022.

Presenter/speaker. A spectral adjustment for spatial confounding. Quality and Productivity Research Conference. Hybrid. June 13-16, 2022.

Frauke Hachtmann — Advertising and Public Relations/ Sports Media and Communication

Presenter/speaker, with Brandon Nutting. The impact of top college football teams' social media value on institutions' admissions and persistence rates. International Association for Communication and Sport Summit. Glassboro, NJ. March 3-6, 2022.

Presenter/speaker. What Ad Age's A-List agencies learned from COVID-19: A phenomenological approach. Association for Education in Journalism and Mass Communication Convention. Virtual. Aug. 4-7, 2021.

Andrew Hamann — Biological Systems Engineering

Presenter/speaker, with J. Weerakkody, K. Broad, A.K. Pannier. Engineering cells to produce miRNA-loaded exosomes for potential biotherapeutics. American Society of Gene and Cell Therapy National Conference. Washington, D.C. May 16-19, 2022.

Presenter/speaker, with K. Broad, A.K. Pannier. Optimizing nonviral CRISPR epigenome editing in human mesenchymal stem cells. American Society of Gene and Cell Therapy National Conference. Washington D.C. May 16-19, 2022.

Presenter/speaker, with K. Broad, A.K. Pannier. Nonviral delivery of CRISPR epigenome editing system to human mesenchymal stem cells. Biomedical Engineering Society Annual Meeting. Orlando, FL. Oct. 6-9, 2021.

Presenter/speaker, with K. Broad, A.K. Pannier. A transgenic system for active loading of miRNAs into exosomes using aptamers. Biomedical Engineering Society Annual Meeting. Orlando, FL. Oct. 6-9, 2021.

Presenter/speaker, with K. Broad, A.K. Pannier. Transgenic system for loading miRNAs into exosomes using aptamer-linked precursors. Controlled Release Society Annual Meeting. Virtual. July 25-29, 2021.

Edmund 'Ted' Hamann — Teaching, Learning and Teacher Education

Presenter/speaker. Better integrating U.S.-origin students in the Mexican education system. Forum on Education and Migration: The Future of the U.S.-Mexico Human Capital Opportunities for a Bilateral Agenda on Education and Migration, University of California, El Colegio de México, the Autonomous University of Nuevo León, and the Mexico Cultural Institute. Washington, D.C. Virtual. Feb. 2, 2022.

Keynote speaker. Pensando en Cynthia, todavía: Reflexiones sobre las circunstancias, retos, y posibilidades encontrados por alumnos transnacionales en México. Foro Internacional sobre Infancias y Juventudes en Educación. Universidad Autónoma de Baja California, Tijuana, México. April 27-29, 2022.

Andrew A. Hanna — Management

Presenter/speaker. The impression management-emergent leadership relationship: The mediating role of trustworthiness. Academy of Management Conference. Virtual. Aug. 5-9, 2021.

Presenter/speaker, with Izu Mbaraonye, Varkey K. Titus, Jr. What about my family? The role of negative family feedback in entrepreneurial opportunity evaluation. Academy of Management Conference. Virtual. Aug. 5-9, 2021.

Presenter/speaker, with Cameron J. Borgholthaus, Eric Y. Lee. Performance feedback and corporate risk-taking: The moderating effects of CEO personality. Annual Meeting of the Southern Management Association. New Orleans, LA. Nov. 2-6, 2021.

Presenter/speaker, with Larry J. Williams. An introduction to factor analysis and scale design. Annual Meeting of the Southern Management Association. New Orleans, LA. Nov. 2-6, 2021.

Presenter/speaker, with Larry J. Williams. The use of parcels with multidimensional latent variables. Society for Industrial-Organizational Psychology Annual Conference. Seattle, WA. April 27-30, 2022.

Jillian Harpster — Teaching, Learning and Teacher Education

Presenter/speaker, with Lauren Gatti, Katherine Hill, Alexis Gardner. Supporting the whole student teacher: Balancing as a way of wellness. Conference on English Leadership, National Council of Teachers of English. Virtual. Nov. 21-23, 2021.

Presenter/speaker, with Katherine Hill, Alexis Gardner. Dynamic leadership: Inspiring literacy leaders. Plum Creek Literacy Festival. Concordia University, Seward, NE. Sept. 25, 2021.

Ling L. Harris — Accountancy

Presenter/speaker. Prompt payment incentives and trade credit. American Accounting Association Annual Meeting. Virtual. Aug. 2-5, 2021.

Robert M. Harveson — Plant Pathology/ Panhandle Research and Extension Center

Presenter/speaker. Pulse crop diseases and their management. Panhandle Agricultural Research and Technology Tour Field Day. Scottsbluff, NE. Aug. 1, 2021.

Presenter/speaker. Pathology in new pulse crops. Nebraska Dry Bean Commission Reporting Session. Scottsbluff, NE. Dec. 7, 2021.

Presenter/speaker. Crop disease update: Specialty crops, corn, and wheat. Crop Production Clinic, University of Nebraska–Lincoln Extension. Gering, NE. Jan. 5, 2022.

Presenter/speaker. *Rhizopus* head rot of sunflower. Virtual Sunflower University, Nuseed. Fargo, ND. Jan. 11, 2022.

Presenter/speaker. Diseases of specialty crop in the Central High Plains. Rocky Mountain Agribusiness Association Annual Convention and Trade Show. Broomfield, CO. Jan. 9, 2022.

Presenter/speaker. Fungicides: Usage and methods for resistance management. Rocky Mountain Agribusiness Association Annual Convention and Trade Show. Broomfield, CO. Jan. 9, 2022.

Presenter/speaker. On-farm research panel discussion. Nebraska Dry Bean Association Bean Day. Gering, NE. Feb. 8, 2022.

Abla Hasan — Modern Languages and Literatures

Presenter/speaker. Kufr from a pure Qur'anic perspective: A hermeneutical investigation. Pacifism and Nonviolence in Contemporary Islam International Conference. University of Manchester, Manchester, UK. May 17, 2022.

A divine mission: Not exile. Midwest American Academy of Religion Annual Conference. Virtual. March 3-5, 2022.

Panel discussion moderator. ISLAM: Studies in classical and medieval Islam. Midwest American Academy of Religion Annual Conference. Virtual. March 3-5, 2022.

Presenter/speaker. Mary: The lost Qur'anic prophet. Gender Equity Conference, The Women's Center of the University of Nebraska–Lincoln. Lincoln, NE. Nov. 11, 2021.

Presenter/speaker. Rethinking the beginning: A key to solving the problem of pain and suffering. Faith in the Story: Trialogues for Enhancing Religious Literacy, The Arthur Vining Davis Foundations and the Ansari Institute for Global Engagement with Religion in Notre Dame's Keough School of Global Affairs. University of Notre Dame, South Bend, IN. Dec. 13-15, 2021.

Panel discussion participant. Beyond economic necessity: Against hardship as a condition for women's participation in the workforce. International Law Weekend. Virtual. Oct. 28-30, 2021.

Presenter/speaker. The most controversial verse in the Qur'an: A new interpretation. International Qur'anic Studies Association Conference. Virtual. July 4-11, 2021.

Gary L. Hein — Entomology

Presenter/speaker, with Elliot Knoell, A. Justin McMechan, Lindsay Overmyer, Abby Stilwell. Spatial interactions and management implications of the mite-virus complex in winter wheat. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Soo-Young Hong — Child, Youth and Family Studies

Presenter/speaker, with Holly Hatton-Bowers, Qingyu Jiang, HyeonJin Yoon, Yao Yao, LaDonna Werth, Jackie Guzman. Working families' infant care decisions: A longitudinal study. National Research Conference on Early Childhood, Office of Planning, Research & Evaluation: An Office of the Administration for Children and Families. Virtual. June 27-29, 2022.

Presenter/speaker, with Yao Yao, Sarah Roberts. Enhancing preschool teachers' reflection on science teaching and learning in the U.S. and Brazil. CYFS Summit on Research in Early Childhood. Lincoln, NE. April 13, 2022.

Jiong Hu — Civil and Environmental Engineering

Presenter/speaker. Eco-efficient self consolidating concrete (Eco-SCC) with low powder content and recycled concrete aggregate. American Concrete Institute Spring Convention. Orlando, FL. March 27-30, 2022.

Presenter/speaker, with Miras Mamirov. Optimization of pavement concrete based on theoretical and experimental particle packing methods and pavement workability test. American Concrete Institute Spring Convention. Orlando, FL. March 27-30, 2022.

Qi S. Hu — Natural Resources/Earth and Atmospheric Sciences

Keynote speaker. Northward expansion of desert climate in Central Asia in recent decades. Clubhouse, National Podcast. June 23, 2022.

Presenter/speaker. Northward expansion of desert climate in Central Asia in recent decades and effects on the ecosystem and agriculture of Kyrgyzstan. Kyrgyzstan National TV presentation. Skype. June 22, 2022.

Michelle Hughes — Special Education and Communication Disorders

Presenter/speaker, with Megan Peterson. Communication profile for the hearing impaired: Outcomes for cochlear implants. 49th Annual Scientific and Technology Meeting of the American Auditory Society. Scottsdale, AZ. Feb. 24-26, 2022.

Presenter/speaker, with Amanda Rodriguez, Kenneth Zoucha. Effects of substance misuse on auditory and vestibular function. Annual Scientific and Technology Meeting of the American Auditory Society. Scottsdale, AZ. Feb. 24-26, 2022.

Tom E. Hunt — Entomology

Presenter/speaker, with A.V. Ribeiro, R.C. Aita, Robert J. Wright et al. Optimizing sample unit size for sampling stink bugs in Midwest soybean. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Presenter/speaker, with Edson L. Baldin, Sabrina Ongaratto, Debora Montezano, E. Robinson. Using a video tracking system to assess intraguild interaction between *Anticarsia gemmatalis* (Lepidoptera: Erebidae) and *Chrysodeixis includens* (Lepidoptera: Noctuidae) in soybean. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Presenter/speaker, with Elliot A. Knoell, A. Justin McMechan, K. Tilmon et al. Effect of rye cover crop termination timing on arthropods in soybean. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Hye-Won Hwang — **Glenn Korff School of Music**

Presenter/speaker. Toward a new perception of modern dance technique. Dance Studies Association International Conference. Rutgers University, New Brunswick, NJ. Oct. 14-17, 2021.

Danielle C. Jefferis — **Law**

Presenter/speaker. Carceral competencies. W.G. Hart Legal Workshop. Institute of Advanced Legal Studies, School of Advanced Study, University of London, London, UK. June 9-10, 2022.

Keynote speaker. Success as a new law teacher. New Law Teachers Workshop, American Association of Law Schools-Women in Legal Education Section. Washington, D.C. June 2-4, 2022.

Jennifer Johnson Jorgensen — **Textiles, Merchandising and Fashion Design**

Presenter/speaker, with Katelyn Sorensen. Should a retailer take a political stance on social media? A case study of a small retailer's struggle over time. International Textiles and Apparel Association Conference. Virtual. Nov. 3-6, 2021.

Presenter/speaker, with Andrew Zimbroff. Stakeholder perceptions of entrepreneurial ecosystems in rural communities. International Society for the Scientific Study of Subjectivity. Virtual. Sept. 16-18, 2021.

Valerie K. Jones — **Advertising and Public Relations**

Presenter/speaker, with Jessica Fargen Walsh. "The only woman I can tell to shut up": Exploring continued personal voice assistant use among older, socially isolated adults during the pandemic. Association for Education in Journalism and Mass Communication Midwinter Conference. Gaylord, OK. March 4-5, 2022.

David Karle — **Architecture/Landscape Architecture**

Presenter/speaker, with Dana McIntyre. Revealing Iowa 80: How experience economy shapes the world's largest truckstop. Architecture, Media, Politics, Society Conference. Calgary, Alberta, Canada. Virtual. June 28-30, 2022.

Presenter/speaker. Infinite space of the U.S. interior. Architecture, Media, Politics, Society Conference. School of Architecture, Planning and Landscape at the University of Calgary, Calgary, Canada. Virtual. June 28-30, 2022.

Dane Kiambi — **Public Relations and Advertising**

Presenter/speaker, with Phillip Arceneaux, Guy Golan. Corporate-government relations in Africa: The emerging public affairs industry in Kenya. International Public Relations Research Conference. Orlando, FL. March 3-5, 2022.

Jinku Kim — **Johnny Carson Center for Emerging Media Arts**

Presenter/speaker, with Ash Smith, Robert Twomey. Radio play: Live participatory worldbuilding with GPT-3. International Symposium on Electronic Art. Barcelona, Spain. June 10-16, 2022.

Ciera E. Kirkpatrick — **Advertising and Public Relations**

Presenter/speaker, with Sisi Hu, Namyeon Lee, Yoorim Hong et al. Overcoming barriers to clinical trial participation among Black Americans. International Communication Association Conference. Paris, France. May 26-30, 2022.

Presenter/speaker, with Courtney Boman, Sungkyoung Lee, Amanda Hinnant. Testing the combined effects of temporal distance and loss/gain framing on health topics. International Communication Association Conference. Paris, France. May 26-30, 2022.

Presenter/speaker, with Yoorim Hong, Namyeon Lee, Sisi Hu et al. Effects of framing and visuals in COVID-19 vaccination messages: Race and vaccine status as moderators. International Communication Association Conference. Paris, France. May 26-30, 2022.

Stanley V. Kleppinger — **Glenn Korff School of Music**

Presenter/speaker. Analytic perspectives for graduate students. Pedagogy into Practice: Music Theory Pedagogy Conference. Michigan State University, East Lansing, MI. June 2-4, 2022.

Iason Konstantzos — **Durham School of Architectural Engineering and Construction**

Presenter/speaker. View clarity towards visual satisfaction. Symposium on Research and Design Practice Related to Window Views, Center for the Built Environment. UC Berkeley, Berkeley, CA. Virtual. Oct. 13, 2021.

Alexey Kovalev — **Physics and Astronomy**

Invited speaker. Superfluid spin transistor. Spin Caloritronics XI, IEEE Magnetics. University of Illinois at Urbana-Champaign, Urbana-Champaign, IL. May 23-27, 2022.

Invited speaker. Towards control of spin currents in magnetic insulators. TopMax22, International Workshop, Max Planck Institute. Dresden, Germany. June 12-15, 2022.

Alok Kumar — **Marketing**

Presenter/speaker, with Ravi Agarwal. Emerging perspectives in B2B relationship management. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Yingchao Lan — **Supply Chain Management and Analytics**

Presenter/speaker, with D. Wani, A. Chandrasekaran. Ancillary cost implications of physicians multisiting and organizational boundary spanning during healthcare delivery. Academy of Management Annual Meeting. Virtual. July 30-Aug. 3, 2021.

Tom Larson — **Glenn Korff School of Music/ Johnny Carson Center for Emerging Media Arts**

Presenter/speaker. Trilateral. International Society of Jazz Arrangers and Composers. Butler School of Music, University of Texas at Austin, Austin, TX. May 12-14, 2022.

Ronald M. Lewis — **Animal Science**

Invited speaker. Filling knowledge gaps in quantitative genetics through online education. American Society of Animal Science Annual Meeting and Trade Show Site. Louisville, KY. July 14-17, 2021.

Yijia Lin — **Finance**

Presenter/speaker, with Sheen Liu, Ken Seng Tan, Xun Zhang. Asset-liability management of life insurers in the negative interest rate environment. American Risk and Insurance Association Annual Meeting. Virtual. Aug. 2-4, 2021.

Daniel Linzell — **Civil and Environmental Engineering**

Presenter/speaker, with M.A. Moreyra Garlock, G.R. Bell, J.F. Hajjar. SE of 2040? Structural engineering education from plans to action. American Society of Civil Engineers Structures Congress. Structural Engineeering Institute, Atlanta, GA. April 20-23, 2022.

Presenter/speaker, with E. Akintunde, S. Eftekhar Azam. Damage detection in bridges using a singular value decomposition based novelty index. American Society of Civil Engineers Structures Congress. Structural Engineeering Institute, Atlanta, GA. April 20-23, 2022.

Panel discussion participant, with R. Gandhi, J. Burke. Edge computing for data sharing, data infrastructure for situational awareness of infrastructure. U.S. Army Corps of Engineers Virtual Innovation Summit, Session on Artificial Intelligence. Virtual. Oct. 27, 2021.

Susan Loveall-Hague — **Special Education and Communication Disorders**

Presenter/speaker, with M.M Channell, M. Burke, D.B. Rodgers. Post-high school outcomes for young adults with Down syndrome in the United States. Down Syndrome Research Forum, Down Syndrome Education International. Online. March 10-11, 2022.

Presenter/speaker, with M. Henson. Parent-child interaction therapy for children with autism spectrum disorder. CYFS Summit on Research in Early Childhood. University of Nebraska–Lincoln, Lincoln, NE. April 18, 2022.

Presenter/speaker, with K. Willems-Cygan, M. Goodrich, D. Lang. Correlation between emergent literacy skills and conventional reading ability for young children with autism spectrum disorder: A meta-analysis. CYFS Summit on Research in Early Childhood. University of Nebraska–Lincoln, Lincoln, NE. April 18, 2022.

Presenter/speaker, with D.B. Rodgers, A. Suppes. Teachers' perceptions about the malleability of the reading and writing skills of students with intellectual and developmental disabilities: A national survey. Council for Exceptional Children. Orlando, FL. Jan. 16-19, 2022.

Presenter/speaker, with K. Willems-Cygan, J.M. Goodrich. Correlation between emergent literacy skills and conventional reading ability for young children with autism spectrum disorder: A meta-analysis. Council for Exceptional Children. Online. Feb. 1-4, 2022.

Presenter/speaker, with K.E. Hawthorne, L. Kingry. Prosody skills in adults with Down syndrome. American Speech-Language-Hearing Association's Annual Convention. Washington, DC. Nov. 18-20, 2021.

Presenter/speaker, with M.M. Channell, M. Burke. Post-high school employment outcomes for young adults with Down syndrome. American Association for Intellectual and Developmental Disabilities Annual Meeting. Online. June 21-24, 2022.

Andre Maciel — **Marketing**

Presenter/speaker. Athletic identity projects: How consumers construct high physical performance. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Keeley MacNeill — **Natural Resources**

Presenter/speaker. Effects of a mosaic of stream and riparian conditions on annual metabolic dynamics in streams of northern Yellowstone National Park. Joint Aquatic Sciences Meeting, Society of Freshwater Sciences. Grand Rapids, MI. May 14-20, 2022.

Izuchukwu Mbaraonye — **Management**

Presenter/speaker, with Andrew Hanna, Varkey Titus Jr. What about my family? The role of negative family feedback in entrepreneurial opportunity evaluation. Academy of Management Annual Meeting. Virtual. July 30-Aug. 3, 2021.

Anthony Justin McMechan — **Entomology**

Presenter/speaker, with Erin Hodgson, Thomas Hunt, Robert Wright. Soybean gall midge: Understanding a new and emerging pest of soybean. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Presenter/speaker, with Erin Hodgson, Robert Wright, Thomas Hunt et al. Soybean gall midge: Observations and challenges from the 2020 season. North Central Branch Meeting, Entomological Society of America. Virtual. June 20-23, 2021.

Lance J. Meinke — Entomology

Keynote presenter/speaker, with Jordan D. Reinders. A Nebraska perspective on western corn rootworm management in the transgenic era. Highlights of Field Crop Insect Pest Management: Invasive and Resistant Pests. North Central Branch Meeting, Entomological Society of America. Minneapolis, MN. March 20-23, 2022.

Presenter/speaker, with Jordan D. Reinders, Emily E. Reinders, B.W. French. Evidence of western corn rootworm (Coleoptera: Chrysomelidae) field-evolved resistance to Cry3Bb1 + Cry34/35Ab1 maize in Nebraska. Entomological Society of America National Meeting. Denver, CO. Oct. 31-Nov. 3, 2021.

Kendra L. Ordia — Interior Design

Presenter/speaker. Biophilic interior spatial ecologies. Interior Design Educators Council Annual Conference. Virtual. March 1-4, 2022.

Presenter/speaker. Nature integration, biophilic design, and equity in the urban interior. Environmental Design Research Association Annual Conference. Greenville, SC. June 1-4, 2022.

Morgan E. Palmer — Classics and Religious Studies/ Women's and Gender Studies

Presenter/speaker. Persistence amidst crisis: The Vestal Virgins and communal resilience. European Association for the Study of Religions. University of Pisa, Pisa, Italy. Aug. 30-Sept. 3, 2021.

Presenter/speaker. The Vestal Virgins and cross-gender mentoring at Rome: Epigraphic evidence from the Atrium Vestae. Society for Classical Studies Annual Meeting. San Francisco, CA. Jan. 5-8, 2022.

Presenter/speaker. Women, religion, and peacemaking: The Vestal Virgins and conflict resolution pedagogy. Classics and Conflict Resolution in Ancient and Modern Contexts III: Teaching Conflict Resolution from Antiquity to the Present/ Semana Internacional de Estudos Clássicos do Amazonas, United Kingdom Arts and Humanities Research Council. Universidade do Estado do Amazonas, Manaus, Brazil. June 14-17, 2022.

Presenter/speaker. The Vestal Virgins as ritual agents: Devalorization, advocacy, and empowerment. European Association for the Study of Religions. University College Cork, Cork, Ireland. June 27-July 1, 2022.

Logan A. Perry — Civil and Environmental Engineering

Presenter/speaker, with Jeremi London. Assessing head- hand- and heart-related competencies through augmented-reality. American Society for Engineering Education Conference and Exposition. Minneapolis, MN. June 25-30, 2022.

Julie A. Peterson — Entomology/ West Central Research and Extension Center

Keynote speaker, with A. Rilaković, R.M. Anderson, A.M. Vélez, et al. Investigation of different application methods for western bean cutworm management in corn. North Central Branch Meeting, Entomological Society of America. Minneapolis, MN. March 20-23, 2022.

Keynote speaker, with J.D. Cluever, R.J. Wright, J.D. Bradshaw. An integrated approach to western bean cutworm management in dry bean. North Central Branch Meeting, Entomological Society of America. Minneapolis, MN. March 20-23, 2022.

Nora M. Peterson — Modern Languages and Literatures

Presenter/speaker. Writing and erasing rape in Marguerite de Navarre's "Heptaméron." Sixteenth Century Society of America Conference. San Diego, CA. Oct. 28-31, 2021.

Presenter/speaker. Parler ou mourir: Speech and silence in the "Heptaméron." Conference of the International Marguerite de Navarre Society. Remote. April 23, 2022.

Brian A. Petrotta — Sports Media and Communication

Presenter/speaker. From prohibition to promotion: Discursive power in the legalization of sports betting. Association for Education in Journalism and Mass Communication Annual Conference. Virtual. Aug. 3-7, 2021.

Kenneth M. Price — English

Presenter/speaker, with Stephanie Browner. Short story to novel: Editing Charles Chesnutt's "The House Behind the Cedars." Genesis Conference. Oxford University, Oxford, UK. March 22-23, 2022.

Presenter/speaker, with Brett Barney. "To Think of Time": Editing Walt Whitman's heavily revised manuscripts and revising the TEI. European Society for Textual Scholarship. Oxford University, Oxford, UK. March 24-25, 2022.

Presenter/speaker, with Kevin McMullen, Stefan Schoeberlein. Whitman's trunk: Rethinking how Whitman composed society for textual scholarship. Loyola University, Chicago, IL. June 23-25, 2022.

Leslie C. Rault — Entomology

Keynote speaker, with Annie J. Krueger, Troy D. Anderson. Exploring acetylcholinesterase targets in *Varroa destructor* to overcome acaricide resistance. National Meeting, American Chemical Society - AGRO division. Atlanta, GA. Aug. 22-26, 2021.

Arman Roohi — Computing

Presenter/speaker. RNSiM: Efficient deep neural network accelerator using residue number systems. International Conference on Computer-Aided Design. Virtual and Munich, Germany. Nov. 1-6, 2021.

Presenter/speaker. ReFACE: Efficient design methodology for acceleration of digital filter implementations. International Symposium on Quality Electronic Design. Santa Clara, CA. April 6-7, 2022.

Presenter/speaker. Integrated sensing and computing using energy-efficient magnetic synapses. International Symposium on Quality Electronic Design. Santa Clara, CA. April 6-7, 2022.

Presenter/speaker. SCiMA: A generic single-cycle compute-in-memory acceleration scheme for matrix computations. International Symposium on Circuits and Systems. Austin, TX. May 28-June 1, 2022.

Presenter/speaker. Efficient targeted bit-flip attack against the local binary pattern network. International Symposium on Hardware Oriented Security and Trust. Washington, D.C. June 27-30, 2022.

Presenter/speaker. Enabling efficient training of convolutional neural networks for histopathology images. International Conference on Image Analysis and Processing, Springer. Lecce, Italy. May 23-27, 2022.

Presenter/speaker. EaseMiss: HW/SW co-optimization for efficient large matrix-matrix multiply operations. Dallas Circuits and Systems Conference. Dallas, TX. June 17-19, 2022.

Blake Runnalls — Marketing

Presenter/speaker, with Douglas E. Hughes, Pinar Kekec. The impact of salesperson intentions on sales training transfer. Academy of Marketing Science Annual Conference. Monterey, CA. May 25-27, 2022.

Presenter/speaker, with Pinar Kekec, K. Richards, Tawnya Means. Advancing sales training research through a blended learning approach. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Sangjin Ryu — Mechanical & Materials Engineering

Invited speaker, with Haipeng Zhang, Markeya Peteranetz, Tareq Daher. Using Japanese animation (anime) for teaching fluid mechanics. American Association of Physics Teachers Summer Meeting. Virtual. July 31-Aug. 4, 2021.

Rajib Saha — Chemical and Biomolecular Engineering

Presenter/speaker, with Niaz Bahar Chowdhury, Wheaton Lane Schroeder, Dongdong Zhang et al. Integrated computational and experimental study to dissect the stress response of maize root. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Wheaton Lane Schroeder. Introducing a pair of tools for the in silico design and dynamic simulation of eukaryotic genetic circuits. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Adil Al-siyabi, Brandi J. Brown, Cheryl M. Immethun, Dianna Morris. Model-guided design strategies for bioplastic overproduction in *rhodopseudomonas palustris*. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Cheryl M. Immethun. Creating stable mutants in the plant growth-promoting polyploid *Rhodopseudomonas palustris* CGA009. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Dianna Morris, Cheryl M. Immethun. Heterologous gene expression yields higher polyhydroxybutyrate production in *Paraburkholderia sacchari*. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Mohammad Mazharul Islam, Andrea Goertzen. Metabolic modeling to explore the landscape of pancreatic ductal adenocarcinoma cells in diverse physiological conditions. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker, with Mohammad Mazharul Islam. Omics-informed metabolic modeling identifies regulatory mechanisms in *Staphylococcus aureus* mutants. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker. Obstacles, disasters, and perseverance: A Penn State chemical engineer's story. Penn State ChemE Alumni Association Engagement Event, The Pennsylvania State University. State College, PA. April 8, 2022.

Presenter/speaker. Model-guided strategies for investigating biological systems. Joint Bioenergy Institute, United States Department of Energy. Emeryville, CA. Dec. 14, 2021.

Presenter/speaker. Modeling and omics-data integration in context of biological systems. American Institute of Chemical Engineers Annual Meeting. Boston, MA. Nov. 7-12, 2021.

Presenter/speaker. Model-guided analysis of biological systems. Louisiana State University, Baton Rouge, LA. Oct. 29, 2021.

Presenter/speaker. Systems biomedicine and its applications. University of Nebraska Medical Center, Omaha, NE. Oct. 22, 2021.

Presenter/speaker. Model-guided analysis of biological systems. Washington University in St. Louis, St. Louis, MO. Sept. 17, 2021.

Presenter/speaker. Model-guided design strategies for bioplastic overproduction in *Rhodopseudomonas palustris*. The Society for Industrial Microbiology and Biotechnology. Austin, TX. Aug. 8-11, 2021.

Amit Saini — Marketing

Presenter/speaker, with Plavini Punyatoya. Influence of online brand community management capability on firm performance. Academy of Marketing Science Annual Conference. Monterey, CA. May 25-28, 2022.

Sajeesh Sajeesh — Marketing

Presenter/speaker, with Michael Lash, Özgür Araz. Predicting mobility during early stages of the COVID-19 pandemic using limited data. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Susan M. Sheridan — Education and Human Sciences/ Center for Research on Children, Youth, Families and Schools

Presenter/speaker, with A.L. Witte, M.C. Willis, E.S. Brower. Teachers and parents as partners: Increasing accessibility through technology. Annual Convention of the International School Psychologists Association. Leuven, Belgium. June 2022.

Presenter/speaker, with H. Hatton-Bowers, C. Clark, L. Knoche, J. Foged, L.A. Wheeler et al. Cultivating healthy intentional mindful educators in Early Head Start and Head Start settings. Conceptualizing and Supporting the Well-Being of the Early Childhood Education Workforce: Head Start University Partnership Research. Symposium at the National Research Conference on Early Childhood. Virtual. June 2022.

Presenter/speaker, with T. Smith, M. Romero, S.R. Holmes. Evaluating the effects of family-school engagement intervention on parent-teacher relationships: A meta-analysis. Annual Convention of the National Association of School Psychologists. Boston, MA. Feb. 15-18, 2022.

Presenter/speaker, with E.S. Brower, S. Lee, K.E. Brown, D. Chen, L.A. Wheeler. CBC para Familias Latinas: Benefits to Teacher Strategies and Relationships. Annual Convention of the National Association of School Psychologists. Boston, MA. Feb. 15-18, 2022.

Presenter/speaker, with L.L. Knoche, C. Boise, A.L. Witte, N. Koziol, H.M. Kerby, R.E. Schumacher. Enhancing relationships during early childhood to promote children's social-behavioral skills. Annual Convention of the American Psychological Association. Virtual. Aug. 12-14, 2021.

Presenter/speaker, with L.A. Wheeler, K.E. Brown, D. Chen, J. Castillo, M. Gormley, E.S. Brower, K. Derr. Promoting Latinx children's social competencies: The role of relationship and sociocultural factors. Annual Convention of the American Psychological Association. Virtual. Aug. 12-14, 2021.

Presenter/speaker, with H.M. Kerby, R.E. Schumacher, R.T.M. Gomes, A. Rangel-Pacheco. Student-teacher relationships and children's early learning behaviors. Annual Convention of the International School Psychologists Association. Virtual, Cyprus. July 2021.

Patricia A. Simpson — Modern Languages and Literatures

Presenter/speaker. The politics of early modern women's work. Newberry Library German Studies Seminar. Virtual. April 8, 2022.

Invited speaker. The chemistry of skin and the "Souls of Slaves." Race Theory and Enlightenment Anthropology. Penn State University, State College, PA. March 24-25, 2022.

Presenter/speaker. Farming frontiers: The German woman pioneer. MLA International Symposium. Glasgow, UK, via Zoom. June 2-5, 2022.

Sunil K. Singh — Marketing

Presenter/speaker, with Ravipreet Sohi, Avinash Malshe. Internal self-promotion acts and marketing boundary spanners: When and why it is functional. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Ash Eliza Smith — Johnny Carson Center for Emerging Media Arts/ Art, Art History and Design

Presenter/speaker, with Stephanie Sherman, Robert Twomey. Radio play: Live participatory worldbuilding with GPT-3. ISEA 2022 Possibles, ISEA International. Barcelona, Spain. June 10-16, 2022.

Presenter/speaker. Narratives in the network. Popularizing STEM: Science & Tech in U.S. Pop Culture, Pop Mec International. Madrid, Spain. Nov. 15-19, 2021.

Presenter/speaker. Real-time collectivity: Speculative design, storytelling and LARPing (while remote). ZIP SCENE Conference. University of Art and Design Moholy-Nagy Művészeti Egyetem, Budapest, Hungary. Oct. 2-4, 2021.

Ravipreet S. Sohi — Marketing

Presenter/speaker, with Plavini Punyatoya. A conceptual framework for salesperson socialization. American Marketing Association Winter Academic Conference. Las Vegas, NV. Feb. 18-20, 2022.

Jason Stamm — Sports Media and Communication

Presenter/speaker, with Brandon Boatwright. An unspoken dance: Beat writer perceptions of their relationship with media relations. International Association for Communication and Sport. Rowan University, Philadelphia, PA. March 3-6, 2022.

Presenter/speaker, with Alex Carter. It just means more during a pandemic: Fan response to the SEC's 2020-21 and 2021-22 college football seasons. International Association for Communication and Sport. Rowan University, Philadelphia, PA. March 3-6, 2022.

Roberto Stein — Finance

Presenter/speaker. The top 5 predictable new entries in Robinhood's 100 most popular list. Financial Management Association Annual Meeting. Denver, CO. Oct. 20-23, 2021.

Hideo Suzuki — Educational Psychology

Presenter/speaker, with Alexa Yunes-Koch. Verbal bullying as a function of right hippocampal volume in individuals with a history of trauma. Meeting of the Organization for Human Brain Mapping. Glasgow, UK. June 7-23, 2022.

Presenter/speaker, with Keyoor Joshi, Matthew Brooks, and Maurizio Bergamino. Relationship between history of physical abuse and white matter tract integrity in the brain. Association for Psychological Science Convention. Chicago, IL. May 26-29, 2022.

Presenter/speaker, with Zach Short. Reduced subgenual anterior cingulate cortical volume in individuals with childhood physical trauma. Association for Psychological Science Convention. Chicago, IL. May 26-29, 2022.

James F. Tierney — Law

Presenter/speaker. Secretly recidivist stockbrokers. National Business Law Scholars Conference. University of Oklahoma, Norman, OK. June 16-17, 2022.

Presenter/speaker. Investment games. Fourth Annual Chicagoland Junior Scholars Conference. Loyola University Chicago School of Law, Chicago, IL. Oct. 1-2, 2021.

Invited speaker. Investment games. Kentucky Law Faculty Colloquium. University of Kentucky J. David Rosenberg College of Law, Lexington, KY. Oct. 14, 2021.

Varkey Titus Jr. — Management

Presenter/speaker, with O.N. Parker, Cole Short, Peter Nahm, Wayne Crawford. Negative impression management and its antecedents. Southern Management Association Annual Meeting. New Orleans, LA. Nov. 2-6, 2021.

Presenter/speaker, with R.W. Mui, O.N. Parker. Walking the talk: Public historical rhetoric, traditions, and external stakeholder perceptions. Academy of Management Annual Meeting. Virtual. July 30-Aug. 3, 2021.

Sonya Grace Türkman — Interior Design

Speaker/presenter. The COVID pandemic and the shifting domestic spatial practices within the urban Turkish home. Interior Design Educators' Council National Conference. Virtual. March 1-4, 2022.

Speaker/presenter. Post-truth and the significance of research and critical thinking in the studio. Interior Design Educator's Council National Conference. Virtual. March 1-4, 2022.

Robert Twomey — Johnny Carson Center for Emerging Media Arts

Presenter/speaker, with Tommy Sharkey, Timothy Wood, Ying Wu. Exploring virtual reality and embodied computational reasoning. International Computing Education Research Conference, Association for Computing Machinery. Virtual. Aug. 16-19, 2021.

Presenter/speaker, with Kenric McDowell, Stephanie Dinkins, Sang-Won Leigh, Eunsu Kang. Frontiers workshop on measurable creative AI. Special Interest Group on Computer Graphics and Interactive Techniques Conference, Association for Computing Machinery. Online. Aug. 9-13, 2021.

Presenter/speaker, with Ash Smith, Jinku Kim, Stephanie Sherman. Live participatory worldbuilding with GPT-3: A radio play and transmission. International Symposium on Electronic Art, ISEA International. Barcelona, Spain. June 10-16, 2022.

Presenter/speaker. Three stage drawing transfer. 27th International Symposium on Electronic Art, ISEA International. Barcelona, Spain. June 10-16, 2022.

Presenter/speaker, with Tommy Sharkey, Amy Eguchi, Monica Sweet, Ying Wu. Need finding for an embodied coding platform: Educators' practices and perspectives. International Conference on Computer Supported Education, Institute for Systems and Technologies of Information, Control and Communication. Online. April 22-24, 2022.

Presenter/speaker, with Tommy Sharkey, Timothy Wood, Amy Eguchi et al. An immersive environment for embodied code. Association for Computing Machinery CHI Conference on Human Factors in Computing Systems. New Orleans, LA, and Online. April 30-May 5, 2022.

Presenter/speaker. Three stage drawing transfer. Neural Information Processing Systems Workshop on Machine Learning for Creativity and Design. Online. Dec. 13, 2021.

Presenter/speaker, with Eunsu Kang, Joel Ong. Beyond classification - The machinic sublime (panel and performance). Politics of the Machines 2021, Rogue Research. Berlin, Germany, and Online. Sept. 14-17, 2021.

Mark van Roojen — Philosophy

Invited speaker. Russell Mini-Conference. Bruce Russell/Wayne State University, Healdsburg, CA. May 31-June 3, 2022.

Alex J. Vecchio — Biochemistry

Presenter/speaker. Natural and synthetic molecules that enable structure determination of claudins reveal mechanisms of and strategies to treat *Clostridium perfringens* enterotoxin-based gastrointestinal disorders. Membrane Proteins in Health and Disease, Canadian Society for Molecular Biosciences. Banff, Alberta, Canada. April 6-10, 2022.

Presenter/speaker. Cryo-EM structures of human claudin-4 in complex with its bacterial toxin antagonist enabled by synthetic antibody fragments reveal targeting mechanisms and therapeutic potential. Biophysical Society Annual Meeting. San Francisco, CA. Feb. 19-23, 2022.

Jessica Fargen Walsh — Journalism

Presenter/speaker, with Mildred Perreault, Gregory Perreault, Ruth Moon. Gleaning rural journalists' strategic responses to covering environment and agriculture. International Communication Association Annual Conference: One World, One Network. Paris, France. May 26-30, 2022.

Presenter/speaker, with Valerie Jones. "The only woman I can tell to shut up": Exploring continued PVA use among older, socially isolated adults during the pandemic. Association for Education in Journalism and Mass Communication MidWinter Conference. Norman, OK. March 4-5, 2022.

Presenter/speaker, with Jill Martin. A study of retention and recruitment at Southern and Midwestern weekly U.S. newspapers. International Society of Weekly News Editors Annual Conference. Virtual. July 15, 2021.

Liying Wang — Finance

Presenter/speaker, with Stanislava Nikolova. Corporate bond flipping. Financial Management Association Annual Meeting. Denver, CO. Oct. 20-23, 2021.

Presenter/speaker, with Yijia (Eddie) Zhao, Edith Hotchkiss, Hurong Sun. Credit supply and the real effects of capital raising: Evidence from upsized corporate bond offerings. Financial Management Association Annual Meeting. Denver, CO. Oct. 20-23, 2021.

Presenter/speaker, with Yijia (Eddie) Zhao, Edith Hotchkiss, Hurong Sun. Credit supply and the real effects of capital raising: Evidence from upsized corporate bond offerings. International Risk Management Conference. Cagliari, Italy. Oct. 1-2, 2021.

Presenter/speaker, with Edith Hotchkiss, Hurong Sun, Yijia (Eddie) Zhao. Reaching for (safer) yield, credit supply, and capital raising: Evidence from upsized corporate bond offerings. China International Conference in Finance Annual Meeting. Shanghai, China. July 6-9, 2021.

Yanan Wang — Electrical and Computer Engineering

Invited speaker. Wide-bandgap semiconductors for integrated quantum photonics: Silicon carbide (SiC) and beyond. Silicon Carbide (SiC) Materials & Devices Workshop. Virtual, Cleveland, OH. Sept. 29-30, 2021.

Yingying Wang — Special Education and Communication Disorders/ Center for Brain, Biology and Behavior

Presenter/speaker, with Yinbo Wu. Hemodynamics of speech-evoked networks in adults: An fNIRS study. 30th Anniversary Meeting of the Cognitive Neuroscience Society. San Francisco, CA. March 25-28, 2022.

Presenter/speaker. Dynamic causal modeling of neural responses to an orofacial pneumotactile velocity array. Annual Meeting of the Organization for Human Brain Mapping. Glasgow, UK. June 19-23, 2022.

Sandra Williams — Art, Art History and Design

Presenter/speaker. Magic and loss: Images of indigeneity in Latin American street art. Southwest Popular and American Culture Association Annual Conference. Albuquerque, NM. Feb. 21-27, 2022.

Janos Zempleni — Nutrition and Health Sciences

Presenter/speaker, with S. Wang, J. Auchtung. Milk exosomes select mutations that decrease the toxicity of *Clostridioides difficile*. American Society for Nutrition Conference. Virtual. June 14-16, 2022.

Presenter/speaker, with A. Ngu. Genetically altered bovine milk exosomes (BMEs) evade elimination by murine bone marrow-derived macrophages (BMDMs). American Society for Nutrition Conference Virtual. June 14-16, 2022.

Invited speaker. The use of milk exosomes to increase the expression of Syngap1 in Syngap1 mice. SynGAP Research Fund. Palo Alto, CA. Via Zoom. March 3, 2022.

Invited speaker. Novel bioactive compounds in milk: Exosomes. Harold Hamm Diabetes Center, University of Oklahoma, Oklahoma City, OK. Via Zoom. March 21, 2022.

Invited speaker. Milk exosomes and the gut brain axis. Extracellular Vesicles in GI Physiology and Beyond Symposium. American Physiological Society. Philadelphia, PA. April 4, 2022.

Invited speaker, with A. Ngu. Bovine mammary alveolar MAC-T cells afford a tool for designing milk exosomes optimized for drug delivery. Gordon Research Conference: Nanoscale Science and Engineering for Agriculture and Food Systems. Southern New Hampshire University, Hooksett, NH. June 19-24, 2022.

Invited speaker, with A. Khanam, J. Adamec. Time courses of milk-derived extracellular vesicles in murine plasma. Nebraska Research Days. University of Nebraska–Lincoln, Lincoln, NE. April 12, 2022.

Invited speaker, with A. Ngu. Genetically altered bovine milk exosomes (BMEs) evade elimination by murine bone marrow-derived macrophages (BMDMs). Spring 2022 Student Research Days. University of Nebraska–Lincoln, Lincoln, NE. April 12, 2022.

Invited speaker, with P.T. Mumtaz. Extracellular vesicles from *Bifidobacterium infantis* are bioavailable in C57BL/6J mice and human intestinal Caco-2 cells. Nebraska Center for the Prevention of Obesity Diseases Annual Spring Research Retreat. University of Nebraska–Lincoln, Lincoln, NE. April 19, 2022.

Invited speaker, with A. Ngu. Genetically altered bovine milk exosomes (BMEs) evade elimination by murine bone marrow-derived macrophages (BMDMs). NPOD Annual Spring Research Retreat. University of Nebraska–Lincoln, Lincoln, NE. April 19, 2022.

Invited speaker. Milk exosomes select mutations that decrease the toxicity of *Clostridioides difficile*. NPOD Annual Spring Research Retreat. University of Nebraska–Lincoln, Lincoln, NE. April 19, 2022.

Invited speaker, with T. Chen, H.C. Wang, S. Wang. Preliminary exploration of bovine milk exosome ncRNAs and their distribution in mice. NPOD Annual Spring Research Retreat. University of Nebraska–Lincoln, Lincoln, NE. April 19, 2022.

Sarah J. Zuckerman — Educational Administration

Presenter/speaker. Rural superintendent turnover in challenging times. University Council for Educational Administration Convention. Columbus, OH. Nov. 11-14, 2021.

Presenter/speaker, with Jeff Walls. Rural superintendents critical leadership of place: Creating caring during the COVID-19 pandemic. American Educational Research Association Annual Meeting. San Diego, CA. April 21-26, 2022.

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 during the summer of 2021 and/or the 2021-2022 academic year. Student UCARE researchers are identified by name, major and project title. FYRE students, who are assigned to laboratories rather than specific projects, are identified by name and major.

Compiled by the Office of Undergraduate Research and Fellowships

Jiri Adamec — **Biochemistry**

Samuel Aguilera Robledo, biochemistry. Metabolic Profiling of Selected Crop Genotypes

Heather Akin — **Agricultural Leadership, Education and Communication**

Divine Mbabazi, integrated science. Mental Health in Rwanda

Vitali Alexandrov — **Chemical and Biomolecular Engineering**

Adam Eddy, chemical engineering. Role of Electrical Double Layer in Alkaline Hydrogen Electrocatalysis

Katie Anania — **Art, Art History and Design**

Aster Canady, art history and criticism/art. Art and Design Database on Food Water and Ecological Disaster

Troy Anderson — **Entomology**

Skyler Gubbels, insect science/biological sciences. Ticks and Tick-borne Pathogens in Pollinator Gardens of Nebraska

Caesar Ian Manongas, pre-health/pre-medicine (FYRE)

Faith Podzimek, anthropology (FYRE)

Matthew Andrews — **Natural Resources**

Ashley McMurchie, Spanish/microbiology. Adapting Hibernation to Rat Hepatic Ischemia to Solve Donor Organ Shortage

Kevin Rugira, integrated science. Project title unknown

Byron Anway — **Art, Art History and Design**

Adriana Catalan, art. Pictorial Representations of Memory, Watercolor on Paper

Noah Giron, graphic design. Studio Assistant in Textile Research

Enrique Martinez, art. Drawing from Memory, Wood-cut Relief Printing

Jennie Wang, graphic design. Gatherings: Drawings of Spirituality, Memory, and Dreams

Effie Athanassopoulos — **Anthropology**

Aryca King, geology. UNL Campus Archaeology Project - 3D Modeling of Artifacts

Grant Neuverth, pre-health. UNL Campus Medical Archaeology Project

Ayla Volante, anthropology. UNL Campus Archaeology Project - 3D Modeling of Artifacts

Audrey Atkin — **Agricultural Leadership, Education and Communication**

Ester Uwamahoro, integrated science. Mental Health in Rwanda

Jennifer Auchtung — **Food Science and Technology**

Himanshu Gandhi, microbiology/English (FYRE)

Makenzie Maroney, biological sciences/psychology. The Effects of Mucosal Sugars on *Clostridioides Difficile* Colonization Resistance

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

Evan Anderson, biochemistry. Functional Analysis of Mycobacterial Enzymes Involved in Peptidoglycan Biosynthesis

Alexander Belashchenko, microbiology/biochemistry. Functional Analysis of Mycobacterial Enzymes Involved in Peptidoglycan Biosynthesis

Misha Gansvind, computer science. Functional Analysis of Mycobacterial Enzymes Involved in Peptidoglycan Biosynthesis

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

Seth Caines, biological systems engineering. Textiles as a Source of Microplastic Fibers to Nebraska Streams

Andrea Basche — **Agronomy and Horticulture**

Frazier Kaelin, grassland systems/animal science (FYRE)

Aime Christian Tuyishime, integrated science. Using Artificial Intelligence to Introduce Cover Crops in Sub-Saharan Africa

Yvon Ukwishaka, integrated science. Comparing Decomposition and Measuring Amount of Nitrogen and Carbon Released from Cereal Rye and Hairy Vetch

Greg Bashford — **Biological Systems Engineering**

Nate Brandyberry, biological systems engineering. A Low-cost, Portable Transcranial Doppler Instrument

Theo Joseph, biological systems engineering. Validating a Novel Index for Spatial Frequency Analysis of Human Tendons Using Ultrasound

Mona Bavarian — **Chemical and Biomolecular Engineering**

Jarod Harris, chemical engineering. CO2 Sorption Properties of Supported Ionic Liquid Membranes

Rick Bevins — **Psychology**

Eli Grablin, biochemistry. Effect of Methylphenidate on Ethanol Reward Enhancement

Sydney Houser, biological sciences/psychology. Investigation of Cotinine as a Positive Allosteric Modulator

Patrick White, biological sciences. Effects of Methylphenidate on Ethanol Reward Enhancement

Margaret Bohls — **Art, Art History and Design**

Rayetta Benson-Redinbaugh, art. Glaze Research and Testing

Humberto Blanco — **Agronomy and Horticulture**

Emaud Hossaini, undeclared (FYRE)

Page Nippert, applied climate science (FYRE)

Justin Bradley — **Computing**

Jack Cosson, mechanical engineering. Using Markov Decision Processes to Solve Complex Planning Problems in Unmanned Aircraft Systems

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

Angela Huebert, speech-language pathology. Effects of Hearing Aid Amplification on the Ability of Individuals with Hearing Loss to Perceive Spectral Information

Nicole Buan — **Biochemistry**

Amy Le, microbiology (FYRE)

Anh Le, pre-health/pre-nursing (FYRE)

Pamela Caudill Jordan — **Center on Children, Families and the Law**

Nayla Torres Ruiz, anthropology/Spanish (FYRE)

Hau Chan — **Computing**

Ryan Lampe, computer engineering. Intervention on Schelling's Models of Segregation

James Checco — **Chemistry**

Cole Blasing, biochemistry/chemistry. Examining if Isomerization of ATRP Causes Bias in Cell–Cell Signaling

Makayla Gill, chemistry. Labeling Membrane Proteins Using a Proximity-induced Approach to Identify New Receptors

Allison Ulness, biological sciences. Identification of the Anti-SARS-CoV2 Immunoglobulins by a Fluorescence-based Detection Method

Berthe Choueiry — **Computing**

Simreen Kaur, computer science. Visualizations to Explain the Behavior of Search

Caleb Koranda, computer science/mathematics. Constraint Processing Applied to the Game of SET

Chase Resio, computer science. Visualizations to Explain the Behavior of Search

Alan Christensen — **Biological Sciences**

Cambelle Johnson, biochemistry. Inducing Mutations in Mitochondrial and Chloroplast Genomes

Jacqueline Korth, biological sciences. Inducing Mutations in Mitochondrial and Chloroplast Genomes

Jessica Corman — **Natural Resources**

Maddie Carpenter, biological systems engineering. Niobrara River Project

Muzn Mohamed, biochemistry (FYRE)

Dominic Nath, psychology (FYRE)

Malayna Wingert, biological systems engineering. Niobrara River Project

Roberto Cortinas — **Veterinary Medicine and Biomedical Sciences**

Brittany Horbach, veterinary science/pre-veterinary medicine. Established Tick Species and Risk of Tick-borne Disease Along the Platte River Corridor

Miranda Kahn, veterinary science/pre-veterinary medicine. Established Tick Species and Risk of Tick-borne Disease Along the Platte River Corridor

Clay Cressler — **Biological Sciences**

Mason Bruggeman, biological sciences (FYRE)

Catherine Veseth, biological sciences. The Effect of *Daphnia Magna* on Harmful Algae Blooms *Microcystis* and *Anabaena*

Andrea Cupp — **Animal Science**

Brooke Bell (Rudloff), animal science/pre-veterinary medicine. Identification of Small Nucleotide Polymorphisms in FSHR, AMH and AMHR2 That May Predict Heifer Pubertal Attainment

Ailenn Castillo, forensic science (FYRE)

Josie Ganser, animal science: business and communications (FYRE)

Lory Dance — **Sociology/Ethnic Studies**

Batool Ibrahim, global studies/political science. Black Barriers in Higher Education: An Effort to Improve Black Undergraduate Retention at the University of Nebraska–Lincoln

Joseph Dauer — **Natural Resources**

McKenna Elliott, biological sciences. Correlation Between Model-based Learning and Student GPA

Jeffrey Day — **Architecture**

Ethan Boerner, architectural studies. FACT Omaha Mobile Stage

Amy Desaulniers — **Veterinary Medicine and Biomedical Sciences**

Steven Faltas, biological sciences (FYRE)

Carlene Nguyen, biological sciences (FYRE)

Dipti Dev — **Child, Youth and Family Studies**

Madeline Holland, biochemistry/nutritional science and dietetics. EAT Family Style Adaptations to the Childcare Home Setting

Sarah Deyong — **Architecture**

Rianna Gunter, architectural studies. A Speculative Design Proposal for an Inclusive Student Learning Center

Shudipto Dishari — **Chemical and Biomolecular Engineering**

Jackson Goddard, mathematics. Nanomechanical Characterization of Fuel Cell Ionomers at Interface

Serena Tenhumberg, chemical engineering. Hydration and Ion Transport Behavior of Ion Conducting Polymers: Optimizing Fuel Cell Performance

Ross Dixon — **Earth and Atmospheric Sciences**

Allyson Barry, political science/environmental studies. Extreme Changes in Precipitation Across the Great Plains Using a Regional Climate Model

Michael Dodd — **Psychology/Center for Brain, Biology and Behavior**

Audrey Denning, psychology (FYRE)

Justin Frandsen, psychology. The Effects of Desk Clutter on Cognitive Processing

Joshua Magee, psychology. Objectively Detecting Mind-wandering While Reading

Kaitlyn Meier, psychology (FYRE)

Danysha Rodriguez Bravo, criminology and criminal justice (FYRE)

Eddie Dominguez — **Art, Art History and Design**

Kinga Aletto, fisheries and wildlife/pre-veterinary medicine. Inventive Thinking: Exploring the Possibility of Creating a Series of Smaller Pieces Under One Theme

Mary Ellen Ducey — **University Libraries**

Jake Borgmann, history/ethnic studies. UNL Archives Indigenous History

Brittany Duncan — **Computing**

Lance Althouse, software engineering (FYRE)

Madison McCarthy, mechanical engineering (FYRE)

Clara Perez, software engineering. Understanding When, What, and How to Communicate with Unmanned Aerial Vehicles

Robert Dyer — **Computing**

Parul Aggarwal, computer science. Investigating the Use of Method Chains in Java and Python Programming Languages

Ali Keshk, computer science (FYRE)

Catherine Eichhorn — **Chemistry**

Luke Buettner, actuarial science. iCLIP Data Analysis of 7SK Related Proteins Using the Holland Computing Center

Amr Mohamed, biochemistry. In Vitro and In Vivo RBM7 Protein Expression Optimization and Purification to Investigate Protein Interactions upon DNA Damage

Jacob Sorensen, biochemistry. Protein-bound RNA Effect on 7SK Secondary Structure

Lynne Elkins — **Earth and Atmospheric Sciences**

Dana Andersen, English/geology. Analysis of 'Petit Spot' Volcanic Samples

Jessica Sorsen, geology. Kane-Atlantis

Dennis Ferraro — **Natural Resources**

Matthew Klein, fisheries and wildlife. Captive Feeding Regimes on Growth and Development in Colubrid Snake Hatchling: Implications for At-Risk Species Conservation Programs

Nicholas Kowal, fisheries and wildlife. Analyzing Genetic Diversity and Morphology of Nebraska's Short-horned Lizard Populations (*Phrynosoma hernandesi*) for Taxonomy and Conservation / Nebraska's Short-horned Lizard Genetic Diversity, Landscape Occupancy, and Population Status Assessment (Year Two)

Jenna Finch — **Psychology**

Ali Benda, psychology. Academic Success in Elementary School: An Evaluation of Executive Functions and Motivation

Riley Bittner, psychology/biological sciences. Creation and Validation of a Novel Behavioral Coding Scheme for Parent-Child Interactions Influencing Motivation

Isis Burks, psychology. Associations Between Children's Executive Functions and Academic Success: The Moderating Role of Parents' Self-Regulation

Peyton Geiser, psychology/sociology. Associations Between Children's Executive Functions and Academic Success: The Moderating Role of Parents' Self-Regulation

Nate McQueen, psychology. Academic Success in Elementary School: An Evaluation of Executive Functions and Motivation

Haley Witthuhn, psychology. Associations Between Children's Executive Functions and Academic Success: The Moderating Role of Parents' Self-Regulation

Jesse Fleming — **Johnny Carson Center for Emerging Media Arts**

Kai Okamoto, film studies (FYRE)

Mikil Foss — **Mathematics**

Michael Pieper, mathematics/philosophy. Nonlocal Generalizations of the Lavrentiev Gap Phenomenon

Trenton Franz — **Natural Resources**

Bailey Mullins, environmental studies. Comparing Corporate Greenhouse Gas Responsibility Programs and Methodologies

Lilyan Fulginiti — **Agricultural Economics**

Drew Havens, natural resources and environmental economics/environmental studies. Carbon Credits for Farming: How Could They Work?

Hernan Garcia Ruiz — **Plant Pathology**

Katie Tran, pre-health. Engineering a Virus to Activate Immunity in Plants

Mohammad Ghashami — **Mechanical & Materials Engineering**

Miguel Moreno Tenorio, mechanical engineering. Data-Driven Model for Optimum Design of Passive Radiative Coolers

Katarzyna Glowacka — **Biochemistry/ Center for Plant Science Innovation**

Bailey McLean, biological sciences. Verifying the Gene AT4G24680 (MOS1) Regulates Non-photochemical Quenching in *Arabidopsis thaliana*

Frank Golf — **Physics and Astronomy**

Nathan Kufner-Rodriguez, environmental science (FYRE)

Alberto Rodriguez, mechanical engineering (FYRE)

Hayden Swanson, physics. Methods to Assemble a Precision Timing Detector Using a Programmable Gantry

Robert Gorman — **Classics and Religious Studies**

Abigail Hanson, history/communication studies. The Valency Structure of Common Greek Verbs

Ryan Smelley, history/classics/religious studies. The Valency Structure of Common Greek Verbs

Kelly Zach, classics and religious studies/history. The Valency Structure of Common Greek Verbs

Mark Griep — **Chemistry**
Clarissa Mason, biochemistry/chemistry. Bacterial Inhibition

Ingrid Haas — **Political Science**
Jessica Stump, political science/psychology. Examining the Impact of Political Identification and Morality on Compliance with COVID-19 Public Health Recommendations

David Hansen — **Psychology**
Zoe Erickson, psychology. Assessing Project SAFE Effectiveness: Impact of Gender on Symptom Severity for Sexually Abused Youth

Edward Harris — **Biochemistry**
Reed Rohr, biochemistry. Bacterial Expression and Ligand Binding of Purified Domains of Stabilin-2

Evan Schroder, biochemistry/microbiology. Region-specific Interactions of Stabilin-2 and Electronegative Polymers

Lauren Vatter, biochemistry. Bacterial Expression and Ligand Binding of Purified Domains of Stabilin-2

David Harwood — **Earth and Atmospheric Sciences**
Rylan Chilcott, chemistry/English. Micro-spherules and the Eltanin Meteor Impact

Eileen Hebets — **Biological Sciences**
William Cao, business administration (FYRE)

Paul Mai, biochemistry (FYRE)

Michael Herman — **Biological Sciences**
Betty Dessie, microbiology. ASC-U

David Holding — **Agronomy and Horticulture**
Cleopatra Babor, plant biology. The Breeding of Novel Colored and High Protein Quality Popcorn and Sweet Corn Varieties

Joseph Holmes — **Art, Art History and Design**
Robin Tipton, psychology (FYRE)

Xia Hong — **Physics and Astronomy**
Hailey Anderson, physics. Probing 2D Ferroelectricity in van der Waals CuInP_2S_6 Using Piezoresponse Force Microscopy

Alyssa Simpson, physics. Ferroelectric Domain Studies in Free-standing PbZr0.2Ti0.8O3/ La0.67Sr0.33MnO3 Membranes

Debra Hope — **Psychology**
Christie Seyl, psychology. Differences in Perception of Resilience Factors of Trans and Gender Diverse People in Different Demographic Groups

Josselyn Telule, psychology. Affirming Psychotherapy for Transgender and Gender Diverse Adults: Understanding Affirming and Marginalizing Experiences in Therapy

Adam Houston — **Earth and Atmospheric Sciences**
Ryan Martz, meteorology/climatology. Urban Heat Islands and Convection Initiation/Rotor Downwash Effect on Temperature Measurements

Peisi Huang — **Physics and Astronomy**
Juan Silva, physics. New Method of Constricting the Charm Yukawa

Qing Hui — **Electrical and Computer Engineering**
Rochak Rijal, electrical engineering. The LEAP Project: Learning for Enhancement of Algorithms and Performance (LEAP): A Quorum Sensing Inspired Approach

Christopher Irvin — **Art, Art History and Design**
Ceyenna Kanne, psychology/art. The Metamorphosis

Nicole Iverson — **Biological Systems Engineering**
Carley Conovoer, biological systems engineering. Detection of Nitric Oxide for Each Phase of Breast Cancer Cell Growth and Proliferation

Anna Jaffe — **Psychology**
Jocelyn Covarrubias, psychology. Recovery of Men and Women Sexual Assault Survivors: An Examination of PTSD and Alcohol Use

Katrina Jagodinsky — **History**
Ashley Bruha, political science/public policy and analysis (FYRE)

Ethan Czapla, history/political science. Petitioning for Freedom: Habeas Corpus in the American West

Bethany Ham, forensic science. Petitioning for Freedom: Habeas Corpus in the American West

Meyri Ibrahim, journalism. Petitioning for Freedom: Habeas Corpus in the American West

Rosalia Paredes, sociology (FYRE)

Salma Silva, psychology. Habeas Corpus

Anna Synya, criminology and criminal justice (FYRE)

Grace Turner, political science. Petitioning for Freedom: Habeas Corpus in the American West

Andrew Jewell — **Center for Digital Research in the Humanities**

Margaret Rieckman, English/anthropology. The Complete Letters of Willa Cather

Michael Kaiser — **Agronomy and Horticulture**

Andromede Uwase, integrated science. Biochar: Properties and Potential Benefits for Agricultural Soil of Rwanda

David Karle — **Architecture**

Elena Garcia Tapia, architectural studies. Design for Decline

Anna Miles, architectural studies. Design for Decline

Sarah Karle — **Landscape Architecture**

Sarah Cope, landscape architecture. Prairie States Forestry Archive

Nikita Mansinghani, architectural studies. Prairie States Forestry Archive

Jenny Keshwani — **Biological Systems Engineering**

Shelly Dinh, individualized program of studies. A Pedagogical Investigation of the Potential Personal and Social Effects of After-school Programming on Lincoln K-5 Student Populations

Annie Nelson, biochemistry. A Pedagogical Investigation of the Potential Personal and Social Effects of After-school Programming on Lincoln K-12 Student Populations

Huey-Xian Wang, biochemistry/psychology. A Pedagogical Investigation of the Potential Personal and Social Effects of After-school Programming on Lincoln K-5 Student Populations

Oleh Khalimonchuk — **Biochemistry**

Elinor Stanley, biochemistry. Role of the Iron-Sulfur Cluster in Human Ferrochelatase in Sensing Changes in Mitochondrial Physiology

Srivatsan Kidambi — **Chemical and Biomolecular Engineering**

Noha Algahimi, chemical engineering. Gene Expression Analysis in Preeclampsia and Its Association with Substrate Rigidity

Samantha Harvat, chemical engineering. The Role of Liver Stiffness in Driving Changes in Liver Cell Function During Liver Fibrosis and Cancer

Allyson Henry, chemical engineering. In Vitro Engineering Models of Diseased Brains That Abnormally Demyelinate

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

Evelyn Estrada Gonzalez, psychology/ethnic studies. Parental Stress and Efficacy During Early Childhood: How Does Change Over One Year Relate to Parental Behaviors

Megan Kobiela — **Biological Sciences**

Alexus Hansen, biological sciences. Effects of Natural and Anthropogenic High-salt Environments on the Common Milkweed *Asclepias syriaca*

Kennedy Whiting, microbiology/biochemistry. Effects of Sodium on the Anatomy and Physiology of *Danaus plexippus*

Ari Kohen — **Political Science**

Lorenzo Catalano, political science. Nebraska Stories of Holocaust Survivors and WW II Veterans Portal

Aila Ganic, political science/public policy and analysis. Nebraska Holocaust Survivors and WWII Veteran Network and Educational Portal

Dylan Patrick, political science/global studies. Nebraska Stories of Holocaust Survivors and WWII Veterans Portal

Michelle Krehbiel — **4-H Youth Development**

Jessie Reed, sociology/anthropology. Raising Community-minded Citizens: 4-H and Students Engaging in Volunteering

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

Joselyn Andreasen, art. Studio Assistant at Constellation Studios 2021-2022

Patty Kuo — **Child, Youth and Family Studies**

Mona (Monique) Miller, child, youth and family studies (FYRE)

Amy Reisher, speech-language pathology. Cortisol and Salivary Alpha-amylase as Indicators of Stress Reactivity in Preschoolers

Jennifer Lather — **Durham School of Architectural Engineering and Construction**

Bryan Ramirez Hernandez, construction engineering. Construction Sequencing of Temporary Modular Healthcare Facility at Regional Hospital: A Case Study of the UNMC Emergency Response Natural Disaster System

Rebecca Lai — **Chemistry**

Kate Dvorak, biochemistry. Development of a Salivary Glucose Sensor for Diabetes Management

Jaekwon Lee — **Biochemistry**

Thomas Hugo, biochemistry. Mineral Deficiency-induced Metabolic Dysfunction in the Liver

Matthew Silver, biological sciences/Russian. Mineral-dependent Nutrient Metabolism in Adipocytes/Nutritional Minerals in Metabolism and Thermogenesis

Marc Libault — **Agronomy and Horticulture**

Marie Gisele Shimwa Souvenir, integrated science. Soybean Seed Nuclei Extraction

Salvador Lindquist — **Architecture**

Jake Essink, landscape architecture. Lead Pollution in Omaha: Proactive and Remedial Approaches to Environmental Justice in Landscape Architecture

Michael Lippman — **Classics and Religious Studies**

Dane Chamberlin, global studies/political science (FYRE)

David Fanta, civil engineering/classics and religious studies. Homerathon 2022

Nathan Hill, history/classics and religious studies (FYRE)

Paige Jennings, psychology/classics and religious studies. Homerathon 2022

Grady Wright, communication studies (FYRE)

Andrew Little — **Natural Resources**

Zachary Hess, fisheries and wildlife/pre-veterinary medicine. Habitat Selection for Territorial Male Pheasants in Correspondence to Mating Behavior: Qualifying Territorial Male Mapping in the Great Plains

Susan Loveall-Hague — **Special Education and Communication Disorders**

Kasandra De La Cruz-Gutierrez, athletic training (FYRE)

Claire Kubicek, speech-language pathology. Exploring the Literacy, Language, and Life Skills of Students with Intellectual and Developmental Disabilities

Hannah Newport, child, youth and family studies (FYRE)

Abbie Zoucha, speech-language pathology. Exploring the Literacy, Language, and Life Skills of Students with Intellectual and Developmental Disabilities

Dustin Loy — **Veterinary Medicine and Biomedical Sciences**

Kaitlyn Lilly, pre-veterinary medicine/veterinary science. Development and Validation of an Immunoassay to Determine Antibody Responses to Animals Infected with or Vaccinated Against *Mannheimia haemolytica*

Louise Lynch O'Brien — **Entomology**

Zoe Tomas, environmental studies. Digestion of Polystyrene in the Larvae of *Tenebrio molitor*

Eric Markvicka — **Mechanical & Materials Engineering**

Alexander Eisele, mechanical engineering. Wearable Computer

Aaron Haake, mechanical engineering. 3D Printing of Liquid Metal-embedded Elastomer with Programmable Droplet Morphology

Patrick McManigal, computer engineering. Wearable Electronic Bandage for Measuring Knee Joint Angles

Eric Vander Woude, mechanical engineering. Wireless Vital Monitoring for Detection of Changes in Health Status for Chronic Disease and Pandemic Related Events

Martha Mamo — **Agronomy and Horticulture**

Alexis Finch, biological sciences. Effect on Nitrogen Sources and Grazing Management on Nitrogen Cycling

Marissa Fouraker, agronomy. Effect on Nitrogen Sources and Grazing Management on Nitrogen Cycling

Christopher Mann — **Economics**

Zack Cheek, music/economics. The Role of Afghan Opium Production in the American Opioid Epidemic

Justin Ho, computer science/economics. Labor Market Dynamics and Human Capital Development

Laurene Lee, global studies/economics/political science. The Effects of the Design of Military Institutions on the Distribution of the Fatality Rates of Soldiers

Omera Matoo — **Biological Sciences**

Himani Patel, biological sciences. Investigating the Interplay of Mitonuclear Genetic Interaction and Environmental Stress on Energy Metabolism Using Natural Populations of Freshwater Snail, *Potamopyrgus antipodarum*

L.J. McElravy Agricultural Leadership, Education and Communication
Nevaeh Lofton, undeclared (FYRE)

Isabella Lone Hill, sociology (FYRE)

Colin Meiklejohn — **Biological Sciences**

Peyton Alder, biological sciences/psychology. Meiotic Drive: Suppressors and Distorters in *Drosophila*

Manal Amon, psychology (FYRE)

Violetta Bakunina, microbiology/psychology. Analysis of the Targeted Metabolomics of HPLC or LC-MS/MS Data

Mikah Hoppens, biological sciences. Sterility in Hybrid *Drosophila* Males

Kristi Montooth — **Biological Sciences**

Yousuf Al Farqani, biological sciences/microbiology. Effects of Temperature Across Levels of Biological Organization from Molecules to Populations

Zahra'a Al-Ghareeb, microbiology (FYRE)

Tori (Victoria) Randolph, pre-health (FYRE)

Carlie Saline, biological sciences. Testing the Compensatory Model of Nuclear and Mitochondrial Coevolution in Oxidative Phosphorylation Proteins Across Animal Taxa

Keegan Moore — **Mechanical & Materials Engineering**

Judith Brown, mechanical engineering. Enhanced Vibration Suppression in High-aspect-ratio Wings for Use in Commercial Aircraft

Anika Dujakovich, biological systems engineering. The Effect of Store-to-Store Energy Transfers on the Global Dynamics of Aircraft

Sean Griffin, mechanical engineering (FYRE)

Aden Hester, computer science (FYRE)

Guilherme Mainieri Eymael, mechanical engineering. The Effect of Store-to-Store Energy Transfers on the Global Dynamics of Aircraft

Stephanie Vavra, mechanical engineering. A Meta-structure Approach to Understanding Passenger Comfort and Safety in Commercial Aircraft

Amanda Morales — **Teaching, Learning and Teacher Education**

Emily Donnell, secondary English education (7-12). Paraeducator-to-Teacher Partnership Program Designed to Address Educator Workforce Demands in a Large Urban School District

Hideaki Moriyama — **Biological Sciences**

Hope Hixson, biochemistry. Neurotransmission Signals in Ganglia

Avery Miller, biochemistry/veterinary technology systems. Substrate Specificity of Viral Protease

Jeffrey Mower — **Center for Plant Science Innovation**

Susan Qudus, biological systems engineering. Transgenic Induction and High-throughput Characterization of Cytoplasmic Male Sterility in Plants

Max Mueller — **Classics and Religious Studies**

Chelsea Hanway, anthropology. Wakara's America: Mapping the Untold Story of the Native American Founding Father of the American West

Abbey O'Brien, anthropology/English. Wakara's America: Mapping the Untold Story of the Indian Founding Father of the American West

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

Nora Lucas, applied climate science. Combined Effects of Natural Hazards and COVID-19 on Community Resilience

Laetitia Sinyigenga, integrated science. Geospatial and Temporal Attributions of Surface Water and Groundwater Interactions for Climate-resilient Water Resources Management

Jessica Namkung — **Special Education and Communication Disorders**

Alison Best, speech-language pathology. Exploring Links Between Middle School Children's Attention and Pre-algebra Knowledge

Jena Cruse, elementary education and special education (K-6). Exploring the Relations Between Executive Functions and Pre-algebra Skills for Students With and Without Mathematics Learning Difficulties

Erika Gearhart, speech-language pathology. Exploring Links Between Middle School Children's Attention and Pre-algebra Knowledge

Paul Pechous, special education (7-12). Exploring the Relations Between Executive Functions and Pre-algebra Skills for Students With and Without Mathematics Learning Difficulties

Siamak Nejati — **Chemical and Biomolecular Engineering**

Aidan Larsen, chemical engineering. Investigating Ion Exchange with Poly(3,4-Ethylenedithiothiophene) when Synthesized in Oxidative Chemical Vapor Deposition Reactor

Brianna Ryan, chemical engineering. Correlating the Effective Pore Size of Deposited COFs with the Linker Size and Processing Condition

Carl Nelson — **Mechanical & Materials Engineering**

Noah Garcia, architectural studies. Robotic Hands-free Exoskeleton for Hemiparesis Patient Rehabilitation and ADL Assistance

Sarah Omar, psychology (FYRE)

Mo Sbai, mechanical engineering. Rehabilitation Exoskeleton–Wheelchair Robot

ThanhVu Nguyen — **Computing**

Linhan Li, computer science. SE4JAVA: A Symbolic Execution Tool for Java

Long Nguyen, software engineering. Using Machine Learning and Classification Techniques for Health Assessment

Wei Niu — **Chemical and Biomolecular Engineering**

Xuan Le, mathematics/chemical engineering. Structure-guided Engineering of Carboxylic Acid Reductases

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

Gracyn Green, computer science. The Use of Equitable Instructional Practices in Nebraska K-8 Computer Science Classrooms

Peter Olshavsky — **Architecture**

Hannah Kettle, architectural studies. Steven Holl Guidebook

Kathleen O'Gara, architectural studies. Digital Agency: The Role of Layer in Architectural History

Angie Pannier — **Biological Systems Engineering**

Madison Seefeld, biological systems engineering. Development of an Oral Gene Delivery System Using Bacterial Outer Membrane Vesicles

Grace Panther — **Civil and Environmental Engineering**

Dorian Bobbett, chemical engineering. Faculty Adaptability and Community Engagement When Teaching in a Crisis

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

Mohsin Al Barwani, mechanical engineering. Energy Analysis of Turbulent Flows for Energy Saving Engineering

Ryan Pedrigi — **Mechanical & Materials Engineering**

Thomas Ripperda, biological systems engineering. Ultrasonic Patch to Reduce the Progression of Atherosclerosis

Walker Pickering — **Art, Art History and Design**

Daniela Chavez, art/art history and criticism. Borderless

Adrienne Pitt — **Special Education and Communication Disorders**

Kendra Klopfenstein, speech-language pathology. Exploring the Impact of Symbol Selection on Word Learning for Children with Autism Spectrum Disorders

Katelyn Lawler, speech-language pathology. Exploring the Impact of Symbol Selection on Word Learning for Children with Autism Spectrum Disorders

Zac Porter — **Architecture**

Katherine Brashear, architectural studies. Expanding the Canon: A Survey of Nonwestern Approaches to Building and Ground

Caleb Laurence, architectural studies. Architectural Landings: An Investigation of the Relationship Between Building and Ground

Steven Powers, architectural studies. Interior Topographies: An Investigation into the Architectural Potential of Floors

Larkin Powell — **Natural Resources/Biological Sciences**

Kennadi Griffis, environmental science. The Effect of Seasonality, Species, Sex, and Owner-status on Kenyan Daasanach Livestock Body Condition

Robert Powers — **Chemistry**

Dignite Ngango, integrated science. Screening a Functional Library of Compounds Against Novel Proteins Using FAST-NMR

Thomas Powers — **Plant Pathology**

Katie Burton, nutritional science/dietetics. A Look at the Biodiversity Under a Footprint

Cassidy Thomas, animal science. Development of a Field Guide to the Micro Invertebrates of the Antarctic Dry Valleys by Morphological and Molecular Methods

Xin Qiao — **Biological Systems Engineering**

Joseph Oboamah, computer science. Low-cost Camera System for Recognition of Flow Meter Readings at Irrigation Wells

Petronela Radu — **Mathematics**

Anjaneshwar Ganesan, mathematics/physics. Analysis of Nonlocal Operators

Amanda Ramer-Tait — **Food Science and Technology**

Sukaina Al-Hamedi, biochemistry. Quantification of *Escherichia coli* and Other Gut Bacteria in a Mouse Model of Inflammatory Bowel Disease

Paul Read — **Agronomy and Horticulture**

Mark Iradukunda, integrated science. Influence of Fertilizer on Swollen Stem Formation (Bulbing) and Vitamin C Content in Kohlrabi

Jamie Reimer — **Glenn Korff School of Music**

Aleisha Gottwald, music education. Collaborative Vocalists and Pianists at the Undergraduate Level

Donald Reynolds — **Veterinary Medicine and Biomedical Sciences**

Zachary Hamilton, biological sciences. Exploring Antibody Dependent Enhancement (ADE) of Avian Infectious Bronchitis Virus

Regis Yizerwe, integrated science. A Method for Reducing *Salmonella* spp in Poultry Meat

Martha Rhoades — **Natural Resources**

Alyssa Russum, biochemistry/Spanish. Agrochemicals and Their Relationship with Pediatric Cancer in Nebraska

Wayne Riekhof — **Biological Sciences**

Quin Barton, biological sciences (FYRE)

Micaylon Moore, biological sciences. Anti-fungal Properties of a Lipid Biosynthesis Inhibitor

Lizzie Schousek, plant biology. Falcarindiol and its Effectiveness as an Antifungal Agent

Beverly Rilett — **English**

Sarah Guyer, English. Advancing the George Eliot Archive

Ritvik Handa, computer science/mathematics. Advancing the George Eliot Archive

Kaylen Michaelis, English. Advancing the George Eliot Archive

Thara Michaelis, English. Advancing the George Eliot Archive

Seung-Hyun Ro — **Biochemistry**

Julianne Fay, biochemistry/classical languages. Protective Role of Mammalian Sestrin2 Against Environmental Stresses

Cesar Iturerere Cyuzuzo, integrated science. Protective Role of Mammalian Sestrin2 Against Environmental Stresses

Derek Rodgers — **Special Education and Communication Disorders**

Hailey Droge, speech-language pathology. Exploring the Literacy, Language and Life Skills of Students with Intellectual and Developmental Disabilities

Anna Suppes, speech-language pathology. Exploring the Literacy, Language, and Life Skills of Students with Intellectual and Developmental Disabilities

Naomi Rodgers — **Special Education and Communication Disorders**

Olivia Book, speech-language pathology. Exploring the Psychosocial Factors Related to Stuttering

MaKenna Dahlgrin, speech-language pathology. Exploring the Psychosocial Factors Related to Stuttering

Carly Johnson, speech-language pathology. Exploring the Psychosocial Factors Related to Stuttering

Jennifer Rome — **Women's and Gender Studies**

Lizzy Lavin, English/women's and gender studies. Peer Advocate Programs in the Big Ten

Sabrina Russo — **Biological Sciences**

Amy Dang, biological sciences (FYRE)

Brittni McGuire, fisheries and wildlife. Detecting Signatures of Forest Change in Nebraska's Niobrara Valley

Fiona Walker, horticulture (FYRE)

Sangjin Ryu — **Mechanical & Materials Engineering**

Carson Emeigh, mechanical engineering. Development of Modular Microfluidic Device Platforms Using 3D Printing for Organ-on-a-Chip Studies/Creating Microfluidic Devices Using 3D Printed Molds for Mechanical Stimulation of Bone Cells

Elizabeth Gonzalez, undeclared (FYRE)

Dilziba Kizghin, biological systems engineering. Characterization of Swimming Patterns of *Vorticella*, a Model Unicellular Animal for Microscale Swimmers

Rajib Saha — **Chemical and Biomolecular Engineering**

Andrea Goertzen, chemical engineering. Assessing the Metabolic Landscape of Human Pancreatic Cells Through Genome-scale Metabolic Modeling

Amy Schmidt — **Biological Systems Engineering**
Jacob Stover, agricultural engineering. Soil Effects of Prescribed Burns and Eastern Red Cedar Repurposing

Douglas Schultz — **Psychology**
Zach Headley, biochemistry/Spanish. Using Functional Brain Connectivity Changes to Determine Biomarkers in Sports-related Concussion

Stephen Scott — **Computing**
Eylon Caplan, mathematics/computer science. Continuous-layered Dense Artificial Neural Networks

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Ash Eliza Smith — **Johnny Carson Center for Emerging Media Arts/ Art, Art History and Design**
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Amunra Jordan, emerging media arts. Story, Worlds, Speculative Design Lab: Seabreeze Bop City Immersive Storytelling Design

Megan Kortenhof, architectural studies. Story, Worlds and Speculative Design Lab: Seabreeze Bop City Immersive Storytelling Design

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Cody Stolle — **Mechanical & Materials Engineering/ Midwest Roadside Safety Facility**
Morgan Weis, secondary education (FYRE)

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Ruthi Zielenski, physics/mathematics. Yttrium Iron Garnet Based Ferromagnetic Resonators

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Pascaline Niyonshuti, integrated science. Role of Aryl Hydrocarbon Receptor in Bitter Taste Signaling

Hannah Sunderman — **Agricultural Leadership, Education and Communication**
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Tori Pedersen, agricultural education. Exploring the Influence of Meaning-making on Leader(ship) Identity Development

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Anna Levorson, biological systems engineering. Supporting Study to Transform en-Route Care System

Curtis Tomasevicz — **Biological Systems Engineering**
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Judith Turk — **Natural Resources**
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Blake Lindgren, geology. Invertebrate Fossil Identification

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Daniel Nguyen, psychology/political science. The Impact of the Intersectionality of Race/Ethnicity and LGBTQ+ Identity on Well-being

Chelsea Wit — **Psychology**
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Jared Mulder, nutritional science and dietetics. A Second Trial: Past Convictions and the Collapse of Compassion

Christine Wittich — **Civil and Environmental Engineering**
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Lindsay Peters, animal science. Evaluation of Automated Application of Electricity for On-site Mass Depopulation of Swine

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Luke Freyhof, biological systems engineering. Identification of Bioactive Lipids with Anti-Inflammatory Properties in Chive Derived Exosome-like Nanoparticles

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Limei Zhang — **Biochemistry**

Amber Gadeken, microbiology/biochemistry. Identification and Characterization of Novel Iron-Sulfur Proteins in *Mycobacterium tuberculosis*

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Allison Zetterman, biological sciences. Investigating a Potential Intermediate Host for COVID-19

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Gabriel Adams, mathematics/philosophy. Possible Counterexamples to the Slice Ribbon Conjecture

Glossary of Federal Agency Abbreviations

- 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
  - ARI Aviation Restructuring Initiative
  - DTRA Defense Threat Reduction Agency
  - DURIP Defense University Research Instrumentation Program
  - ERDC Engineer Research and Development Center
  - MDA Missile Defense Agency
  - NAVSEA Naval Sea Systems Command
  - ONR Office of Naval Research
  - STRATCOM U.S. Strategic Command
- DOE Department of Energy
  - ARPA-E Advanced Research Projects Agency-Energy
  - EERE Energy Efficiency and Renewable Energy
  - NETL National Energy Technology Laboratory
  - NEUP Nuclear Energy University Programs
- DOI Department of Interior
  - FWS Fish and Wildlife Service
- DOJ Department of Justice
  - BJA Bureau of Justice Assistance
  - NIJ National Institute of Justice
- DOT Department of Transportation
  - FHWA Federal Highway Administration
  - PHMSA Pipeline and Hazardous Materials Safety Administration
  - FRA Federal Railroad Administration
- ED Department of Education
  - IES Institute of Education Sciences
- EPA Environmental Protection Agency
- 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
  - 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
  - NIAMS National Institute of Arthritis and Musculoskeletal and Skin 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
  - EPSCoR Established Program to Stimulate Competitive Research
- 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
  - NIFA National Institute for Food and Agriculture
    - SARE Sustainable Agriculture Research and Education Program
  - NRCS Natural Resources Conservation Service
  - OCE Office of the Chief Economist

RESEARCH

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