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## Poster Details – Alphabetical by first name

### Aaron Linnell

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 167

Poster title: Assessing How Developers Detect Defects in UML Class Diagrams

Advisor: Bonita Sharif

### Abbey Dyer

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 84

Poster title: Project View: Visual Impairments Education in Writing

Advisor: Michael Hebert

### AD Banse

Research group: Digital Legal Research Lab

Poster location: 66

Poster title: Legal Strategies Used by Black Male Litigants during the Antebellum Era

Advisor: Katrina Jagodinsky

### Addie Wright

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 89

Poster title: Tick collection in Western Nebraska for Identification of Breed and Density

Advisor: Roberto Cortinas

### Aidan Larsen

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR), Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 134

Poster title: Synthesis of Organic Electroactive Polymers for Energy Applications

Advisor: Siamek Nejati

### Aidan Power

Research group: Bioenergy Systems

Poster location: 124

Poster title: Effects of nitrogen fertilizer on the sugar and ethanol production of C. Sativa

Advisor: Mark Wilkins

### Aiden Atkins

Research group: Biomedical Engineering

Poster location: 173

Poster title: PEGylation of SWNT Sensors for Enhanced Quantification of Extracellular NO Concentration

Advisor: Nicole Iverson

### Alayna Schneider

Research group: Lasers and Optics

Poster location: 165

Poster title: Producing Entangled Photons with Spontaneous Parametric Down-Conversion (SPDC)

Advisor: Matthias Fuchs

## **Alberto Blasini**

Research group: Health Equity

Poster location: 96

Poster title: Opioid Agonist Treatment, Incarceration, and Mental Health in People Who Inject Drugs in Rural Puerto Rico

Advisor: Patrick Habecker

## **Alessandra Arnoldi**

Research group: Beneficial Insects

Poster location: 8

Poster title: Plant Feeding Mosquitoes from Pollinator Gardens on East Campus (Lincoln NE)

Advisor: Troy Anderson

## **Alexa Nolan**

Research group: Applied Phenotyping Technology

Poster location: 5

Poster title: Developmental Responses of Gene Edited Sorghum to Nitrogen Deficit Stress

Advisor: James Schnable

## **Alexander Belashchenko**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 106

Poster title: D-alanine Transaminase Activity in Mycobacterium smegmatis Peptidoglycan Biosynthesis

Advisor: Raul Barletta

## **Alexander Sandquist**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 32

Poster title: Surface Modification of Mechanically Tuned Synthetic Vascular Grafts with Anticoagulants for Improved Antithrombotic Properties

Advisor: Stephen Morin

## **Alison Regina**

Research group: Chemistry

Poster location: 50

Poster title: Finding N20 Aptamers to Monitor Neuropeptide Y

Advisor: Rebecca Lai

## **Alondra Asencio Tejeda**

Research group: Health Equity

Poster location: 93

Poster title: Acculturation and Internalizing vs Externalizing Symptom Presentations Among Latinx Youth

Advisor: Arthur R. Andrews III

## Alora Schneider

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 28

Poster title: Prey Preference of Green Lacewing (*Chrysopa* sp.) Mediated by Phytochemicals Produced by Host Plants of their Aphid Prey

Advisor: Brigitte Tenhumberg

## Amber Gadeken

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 19

Poster title: Characterization of Iron-Sulfur Biosynthesis Proteins in Mycobacteria Tuberculosis

Advisor: Limei Zhang

## Amir Tarkian

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 154

Poster title: Strain-Induced Magnetic Properties of Amorphous Iron-Germanium Films

Advisor: Robert Streubel

## Amy Mattern

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 84

Poster title: Project View: Visual Impairments Education in Writing

Advisor: Michael Herbert

## Andy Vo

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 65

Poster title: makeFACT

Advisor: Jeffrey L. Day

## Anna Dho

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 127

Poster title: Effects of zebrafish personality on reversal learning in 2 choice task

Advisor: Ryan Wong

## Anna Miles

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 62

Poster title: Mapping STRATCOM

Advisor: David Karle

## Anna Xu

Research group: Applied Unmanned Systems

Poster location: 191

Poster title: VirusReader: An interactive and dynamic web application to display virology data

Advisor: Quiming Yao

## **Annabella Pizzi**

Research group: Digital Legal Research Lab

Poster location: 71

Poster title: Habeas Corpus and Federal Indian Boarding Schools, 1879- 1924

Advisor: Katrina Jagodinsky

## **Anya Campbell**

Research group: Virology

Poster location: 103

Poster title: Optimizing Protist Visualization Techniques for Future Chlorovirus Feeding Trials

Advisor: David Dunigan

## **Arden Hatch**

Research group: Chemistry

Poster location: 47

Poster title: Determining Pharmaceutical Binding with Humic acid by High Performance Affinity Chromatography

Advisor: David Hage

## **Arnav Soni**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 139

Poster title: The Mechanics of Superconducting Quantum Interference Device

Advisor: Xiaoshan Xu

## **Austin Lord**

Research group: Sustainability of Civil Infrastructures

Poster location: 196

Poster title: Effects of future climate change on groundwater nitrate concentration

Advisor: Yusong Li

## **Autumn Green**

Research group: Digital Legal Research Lab

Poster location: 68

Poster title: Independent Living Claims in Freedom Suits

Advisor: William Thomas III, Katrina Jagodinsky

## **Benjamin Hammons**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 128

Poster title: Wire Bonding to Thin Films for Ferromagnetic Resonance & Optically Detected Magnetic Resonance Measurements

Advisor: Abdelghani Laraoui

## **Benjamin Janssen**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 91

Poster title: Floral survey of the boundary between Central Nebraska Loess Hills and Central Loess Plains in Hamilton County, Nebraska

Advisor: John Guretzky

### **Benjamin Moritz**

Research group: Chemistry

Poster location: 49

Poster title: A Rubric for Characterizing Student Analysis of Conflicting Data

Advisor: Alena Moon

### **Benjamin Niyodusenga**

Research group: Building Ecological Skillsets for Transitions to Sustainability in Agriculture and Food Systems (BEST) REEU Fellowship

Poster location: 27

Poster title: Effects of animal integration and nitrogen fertilization on greenhouse gas emissions

Advisor: Martha Mamo

### **Benjamin Vyzourek**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 24

Poster title: Development of an mRNA Vaccine against Human H3 Influenza A Virus

Advisor: Eric Weaver

### **Betty Dessie**

Research group: McNair, Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 80

Poster title: Investigating the Age-Dependent Role of DAF-16-Mediated Immunity During *S. maltophilia* Infection

Advisor: Michael Herman

### **Brianna Ryan**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 183

Poster title: Controlled Electropolymerized Organic Coatings for Ion Separations

Advisor: Siamak Nejati

### **Brooke Bouwens**

Research group: Applied Phenotyping Technology

Poster location: 2

Poster title: Using Hyperspectral Reflectance from Maize Hybrids and their Inbred Parents to Investigate Hybrid Vigor for Leaf Traits

Advisor: James Schnable

### **Bryce Herrington**

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 133

Poster title: Ferromagnetic Resonances in Yttrium Iron Garnet Films Prepared by Metal-organic Decomposition Epitaxy



Advisor: Robert Streubel

## Caleb Jacobs

Research group: Chemistry

Poster location: 53

Poster title: MXene-Wrapped Carbon Nanotubes Coupled with Porphyrin for Photo-Oxidation of Thioanisole

Advisor: Alexander Sinitskii

## Camden Olds

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 143

Poster title: Magnetic Properties of Polycrystalline NiCo<sub>2</sub>O<sub>4</sub> from Solid State Reaction

Advisor: Xiaoshan Xu

## Camilo Colon

Research group: Applied Phenotyping Technology

Poster location: 3

Poster title: Developing High-Throughput Phenotyping Methods to Evaluate Wheat Stem Solidness

Advisor: Katherine Frels

## Chad Alexander

Research group: John Woollam Scholars

Poster location: 152

Poster title: Peridynamic Simulations of Viscous Flow: Applications to Turbulence

Advisor: Florin Bobaru

## Chanasei Ziemann

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 25

Poster title: Knockout of PS-IRF9 Gene

Advisor: Luwen Zhang

## Clara Perez

Research group: McNair, Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 82

Poster title: How Spatial Perception Affects Pilots' Performance in Landing Tasks

Advisor: Brittany Duncan

## Clarice Ann Santos

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 77

Poster title: Trust in Institutions and Likelihood of reporting Crimes by Latinx Immigrants

Advisor: Trey Andrews

## Clayton Christensen

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 26

Poster title: Investigating Temporal Delay Between Nicotine Self-Administration and Sucrose Reward Between Biological Sex

Advisor: Scott Barrett

## Cole Blasing

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 30

Poster title: Profiling signaling pathways of Aplysia Allatotropin-related peptide (ATRP) Receptor

Advisor: James Checco

## Corbin Park

Research group: Applied Unmanned Systems

Poster location: 189

Poster title: Evaluation of GPS Emulation for Indoor Drone Flight via the Azimuth System

Advisor: Justin Bradley

## Dalton Dencklau

Research group: Virology

Poster location: 108

Poster title: Canine Influenza Hemagglutinin Mosaic Vaccine Design

Advisor: Eric A. Weaver

## Daniel Calco

Research group: Applied Unmanned Systems

Poster location: 184

Poster title: Real-Time Foliage Navigation using LiDAR Detection on an Unmanned Aircraft Vehicle

Advisor: Brittany Duncan

## Daniel Kumm

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 131

Poster title: Fabrication of Polyvinyl Alcohol/Polyaniline/Magnetite Standalone Composite Films

Advisor: Rebecca Lai

## Darian Draft

Research group: McNair

Poster location: 81

Poster title: Sexual Abuse History, Internalizing Symptoms, and Social Problems in Youth

Advisor: David Hansen

## Darryl York III

Research group: Applied Unmanned Systems

Poster location: 190

Poster title: Autonomous UAV Landing via Real-Time Object Detection

Advisor: Dung Hoang Tran

## Deuris Pena

Research group: Crop-To-Food Innovation

Poster location: 40

Poster title: Soybean Genome-editing to Modify Seeds Protein

Advisor: Tom Clemente

## Devin Hendrix

Research group: Bioenergy Systems

Poster location: 121

Poster title: Genotyping and Phenotyping Transgenic High-Energy Sorghum

Advisor: Edgar Cahoon

## Diana Centeno

Research group: Applied Unmanned Systems

Poster location: 185

Poster title: Analyzing Human's Ability to Interpret Drone Gestures

Advisor: Brittany Duncan

## Diana Than

Research group: Health Equity

Poster location: 102

Poster title: Rates and Correlates of Homophobic Bullying and Anti-LGBTQ+ Violence Perpetrated by Heterosexual, Cisgender College Students: A Multi-Campus Study

Advisor: Katie Edwards

## Dulcie Archuleta

Research group: Crop-To-Food Innovation

Poster location: 36

Poster title: Dietary sorghum provides protection against chemically induced colitis in human microbiota associated mice

Advisor: Amanda Ramer-Tait

## Eason Cheung

Research group: Chemistry

Poster location: 44

Poster title: Synthesis and Characterization of Tetraethyl-Acetoxy Nitroxide Radical Precursor

Advisor: Andrzej Rajca

## Eddie Pham

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 31

Poster title: Influence on Peroxide structure on Reactivity toward C-O bond Formation

Advisor: Patrick Dussault

## Elena Garcia

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 60

Poster title: Exploring Sandpit Lake Typologies

Advisor: David Karle

## Eli Smart

Research group: Beneficial Insects

Poster location: 11

Poster title: A Novel Method of Pesticide Application on Honeybee (*Apis mellifera*) Wax

Advisor: Judy Wu-Smart

## Elias Kemna

Research group: Bioenergy Systems

Poster location: 122

Poster title: An investigation into the *Chlamydomonas reinhardtii* carbon concentrating mechanism using CRISPR-Cas9 technology

Advisor: Heriberto Cerutti

## Elijah McClymonds

Research group: Sustainability of Civil Infrastructures

Poster location: 197

Poster title: Study of Electric Vehicle Crashworthiness & Crash Characteristics/Trends

Advisor: Mojdeh Pajouh

## Eliza Munns

Research group: Biomedical Engineering

Poster location: 175

Poster title: Investigating Sex Differences in Dorsal Root Ganglia by Analyzing Nerve Growth and Pain Related Receptors

Advisor: Rebecca Wachs

## Ellyzabeth Morales-Ledesma

Research group: Digital Legal Research Lab

Poster location: 70

Poster title: In The Waiting: The Role of the Slave Bastille in Antebellum D.C.

Advisor: Will Thomas

## Emily Hogg

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 20

Poster title: Investigating the Role of HMCV UL6 Gene During Viral Infection

Advisor: Lindsey B. Crawford

## Emily Roys

Research group: Applied Phenotyping Technology

Poster location: 6

Poster title: An Investigation of Diurnal Pattern of Crop NDVI, and its Relationship with Chlorophyll Content and Leaf Area Index

Advisor: Yufeng Ge

## **Erica Kim**

Research group: Redox Biology

Poster location: 109

Poster title: Identification of Lysine Acetylation in Matrin3

Advisor: Xinghui Sun

## **Evan Anderson**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 106

Poster title: D-alanine Transaminase Activity in Mycobacterium smegmatis Peptidoglycan Biosynthesis

Advisor: Raul Barletta

## **Evie Barnett**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 180

Poster title: Quantification of Dorsal Root Ganglion Phenotypic Changes Resulting from Mechanically Induced Disc Degeneration

Advisor: Rebecca Wachs

## **Filipe Guimaraes Goulart**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 35

Poster title: Generating A New Muscle-Specific Mouse Model For Studying MicroRNAs

Advisor: Ivan Vechetti Jr.

## **Gabriel Lewis**

Research group: Nanotechnology Coordinated Infrastructure

Poster location: 147

Poster title: A Study of Thickness Dependence on Magnetic Anisotropy

Advisor: Shireen Adenwalla

## **Gannon Cole**

Research group: Crop-To-Food Innovation

Poster location: 37

Poster title: Synthetic Biology of EPA and Ketocarotenoids Production in Soybean to Provide Sustainable Aquacultural Feedstocks

Advisor: Edgar Cahoon

## **Gannon Ziviello**

Research group: Lasers and Optics

Poster location: 172

Poster title: Augmented Reality in the Laser Laboratory: Immersive Visualization of Ultra Short Laser Pulses

Advisor: Kees Uiterwaal

## **Garrett Wilcox**

Research group: Beneficial Insects

Poster location: 13

Poster title: Testing Novel Methods for Assessing Hygienic Performance in Honey Bee Colonies

Advisor: Judy Wu-Smart

## Giovanna Sagastegui

Research group: Sorghum-Insect Interaction

Poster location: 7

Poster title: Impacts of sorghum tolerance on sugarcane aphid feeding behavior

Advisor: Joe Louis

## Gloria Chang

Research group: Health Equity

Poster location: 98

Poster title: Social and Structural Correlates of Instrumental and Emotional Support Following a Natural Disaster

Advisor: Arthur R. Andrews

## Grace Carey

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 15

Poster title: Spatial and Temporal Nutrient Patterns in Sandhills Lakes

Advisor: Jessica Corman

## Grace Van Cott

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 23

Poster title:

Advisor:

## Hailey Anderson

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 171

Poster title: Using Piezoresponse Force Microscopy for Probing 2D Ferroelectricity in van der Waals CuInP2S6

Advisor: Xia Hong

## Haley Fleetwood

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 33

Poster title: Diptera Color Preference at Decomposition Scenes

Advisor: Larry Barksdale

## Hannah Tang

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 142

Poster title: Optimizing CRISPR-Cas9 effectiveness in Arabidopsis thaliana leaves

Advisor: Marc Libault

## Heidi Martin

Research group: Digital Legal Research Lab

Poster location: 69

Poster title: A Home Shielded By Laws: Freedom Suits and Enslaved Mothers

Advisor: Katrina Jagodinsky

## Hibiki Mitsuboshi

Research group: Nanotechnology Coordinated Infrastructure

Poster location: 148

Poster title: Pyrolysis of two-photon polymerized foam structures

Advisor: Yongfeng Lu

## Hikari Inaoka

Research group: Applied Unmanned Systems

Poster location: 188

Poster title: Designing a Leaf Cutter-UAV System Capable of Collecting Forest Canopy Samples

Advisor: Carrick Detweiler

## Hugo Salazar

Research group: Health Equity

Poster location: 101

Poster title: TAPP Para Familias Latinas: A Qualitative Study on the Effects of CBC Training on Latinx Cultural Values

Advisor: Lorey Wheeler

## Hunter Madison

Research group: Redox Biology

Poster location: 111

Poster title: Investigating the structural mechanism of TetX5: a flavin-dependent monooxygenase conferring tetracycline resistance

Advisor: Limei Zhang

## Iliana Gonzalez

Research group: Sustainability of Civil Infrastructures

Poster location: 195

Poster title: Improving Rural Bridge Sustainability Through Data Driven Health Assessment

Advisor: Daniel Linzell

## India Rose Carter-Bolick

Research group: Health Equity

Poster location: 97

Poster title: The Personal Impact of Photovoice for Formerly Incarcerated Lakota Women

Advisor: Katie Edwards

## Isis Burks

Research group: McNair

Poster location: 78

Poster title: Persistence During an Unmonitored Task: Associations with Elementary School Students' Self-Regulation and Academic Skills

Advisor: Jenna Finch

## Jack Leoni

Research group: Biomedical Engineering

Poster location: 174

Poster title: Tuning Mechanical Properties in Collagen-Based Hydrogels for Physiologically Relevant Nerve Culture Platform to Screen Therapeutics

Advisor: Rebecca Wachs

## Jack Rankin

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 34

Poster title: Knot Topology

Advisor: Alexander Zupan

## Jackalyn Wyrobek

Research group: Sustainability of Civil Infrastructures

Poster location: 201

Poster title: Using Treefall Analysis to Assess Relationships Between Tornado Damage and Terrain

Advisor: Richard Wood

## Jackson Savage

Research group: Quantum Materials

Poster location: 116

Poster title: Characterization of DCMBI Thin Films

Advisor: Xiaoshan Xu

## Jackson Taylor

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 159

Poster title: Effects of Varying Propane Mass Flow Rate on Temperature Fields for Flame Weeding

Advisor: George Gogos

## Jacob Lacy

Research group: Centers of Research Excellence in Science and Technology (CREST)

Poster location: 157

Poster title: Quantifying Traction Stresses of Keratinocytes to Model Pemphigus Vulgaris Using Traction Force Microscopy

Advisor: Ruiguo Yang

## James Aubreii

Research group: Health Equity

Poster location: 94

Poster title: Does Identification with Heterosexist Scripts in Pornography Influence Differences in the Sexual Wellbeing of Queer and Cisgender Heterosexual Women?

Advisor: Tierney K. Lorenz

## Janana Khattak

Research group: Undergraduate Creative Activities and Research Activities (UCARE)



Poster location: 75

Poster title: Habeas Corpus as a Means for Economic Freedom In the Early 20th Century

Advisor: Katrina Jagodinsky

## Jared Zollinger

Research group: Biomedical Engineering

Poster location: 179

Poster title: Design and Development of a System to Assess the Safety of Emergency Sonography Devices by Characterizing 3D Ultrasound Fields

Advisor: Greg Bashford

## Jason Eissayou

Research group: Applied Unmanned Systems

Poster location: 186

Poster title: Autonomous UAV Control Using Real Time Object Detection

Advisor: Dung Hoang Tran

## Jessie Reed

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 76

Poster title: Examining the Role of 4-H Youth Development in Developing Young Peoples' Spirituality

Advisor: Michelle Krehbiel

## John Kunkee

Research group: Quantum Materials

Poster location: 119

Poster title: Determination of hexagonal boron nitride thickness

Advisor: Abdelghani Laraoui

## Johnathan Kelly

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 17

Poster title: Nitrate, Phosphate, and Ammonia: Their Spatial and Temporal Impacts on Nebraskan Stream Ecosystems in Agricultural Landscapes

Advisor: Steven Thomas

## Jordyn Bass

Research group: Lasers and Optics

Poster location: 161

Poster title: Measuring Twist in D-Glucose Using a Michelson Interferometer

Advisor: Timothy Gay

## Joselyn Andreasen

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 58

Poster title: Working With Professional Artists

Advisor: Eddie Dominguez

## Joseph Oboamah

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 168

Poster title: Low-Cost Camera System for Recognition of Flow Meter Readings at Irrigation Wells

Advisor: Xin Qiao

## Joshua Chansa

Research group: Lasers and Optics

Poster location: 162

Poster title: Mechanical Positioning for Quantum Electron Beams

Advisor: Herman Batelaan

## Joshua Trimm

Research group: Sustainability of Civil Infrastructures

Poster location: 200

Poster title: Flexural Strength of Partially Composite Off System Bridges for Disaster Resilience

Advisor: Joshua Steelman

## Juan Silva

Research group: McNair

Poster location: 83

Poster title: It Takes Two to Tango: Searching for Di-Higgs Boson Production at the LHC

Advisor: Peisi Huang

## Julia Steffensmeier

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 140

Poster title:

Advisor: Investigation of Nanoscopic Materials Via Atomic Force Microscopy

## Kanika Chopra

Research group: Chemistry

Poster location: 46

Poster title: Histidine and Gemcitabine Treatment Demonstrates Synergistic Effects in Pancreatic Cancer

Advisor: Robert Powers

## Kasey Moomau

Research group: John Woollam Scholars

Poster location: 153

Poster title: Electromigration Behavior in Liquid Metal Elastomer Composites

Advisor: Eric Markvicka

## Kasey Moomau

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 153

Poster title: Electromigration Behavior in Liquid Metal Elastomer Composites

Advisor: Eric Markvicka

## **Kashish Poore**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 114

Poster title: Single-Walled Carbon Nanotubes as Biosensors for Protein Recognition

Advisor: James Checco

## **Kayla Osen**

Research group: Sustainability of Civil Infrastructures

Poster location: 198

Poster title: Differences Among University Engineering Instructors' Adaptability

Advisor: Grace Panther

## **Kiana Sargent**

Research group: Bioenergy Systems

Poster location: 125

Poster title: The Effect of a Convergent Evolutionary Switch of the Pathway for Mitochondrial Cytochrome c Maturation in *Arabidopsis thaliana*

Advisor: Jeff Mower

## **Kiara Pavlik**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 113

Poster title: Testing for Persistence of Newly Isolated *Lactobacillus* Strains in a Mouse Model of Obesity

Advisor: Amanda Ramer-Tait

## **Kiersten Reeser**

Research group: Biomedical Engineering

Poster location: 176

Poster title: Wearable Transcranial Doppler Ultrasound Device for Stroke Prevention

Advisor: Greg Bashford

## **Kinga Aletto**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 57

Poster title: Documenting the Building of a Public Art Monument

Advisor: Eddie Dominguez

## **Kobe Hansen**

Research group: Nanotechnology Coordinated Infrastructure

Poster location: 146

Poster title: 2D Inorganic Lead Halide Perovskite: Synthesis and Thickness Determination

Advisor: Yanan Wang

## **Lali Regassa**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location:

Poster title: 138

Advisor: Controlled Synthesis and Characterization of Colloidal Gold Nanoparticles

## Lara Steen

Research group: Bioenergy Systems

Poster location: 126

Poster title: Lipotoxicity and Resistance in a *Saccharomyces Cerevisiae* Strain Lacking Storage Lipid Synthesis

Advisor: Wayne Riekhof

## La'Rae Pickens-Bonebright

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 84

Poster title: Project View: Visual Impairment Education in Writing

Advisor: Michael Hebert

## Laura Kirshenbaum

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 135

Poster title: Identifying Novel Archaeal Species From Anaerobic Digester Isolates

Advisor: Nicole Buan

## Lauryn Tecca

Research group: Digital Legal Research Lab

Poster location: 73

Poster title: Beyond the Pacific: Chinese Women and Habeas Corpus at the 1898 Omaha World's Fair

Advisor: Katrina Jagodinsky

## Liz Ashing

Research group: Chemistry

Poster location: 42

Poster title: Developing Covalent Allosteric Modulators for Caspase-6

Advisor: James Checco

## Lucas Givens

Research group: Applied Unmanned Systems

Poster location: 187

Poster title: Azimuth: A Software Tool for Simulating GPS Data From Indoor Motion Capture via NMEA Protocol for Robotic Vehicles

Advisor: Justin Bradley

## Lucy DePooter

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 34

Poster title: Knot Topology

Advisor: Alexander Zupan

## Lydia Regier

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 1

Poster title: Detecting the Invasion of Old World Bluestem (*Bothriochloa* spp.) in Kansas Grasslands via PlanetScope and Sentinel-2 Satellite Imagery

Advisor: Brian Wardlow

## Lys-Julienne Clarke

Research group: Sustainability of Civil Infrastructures

Poster location: 193

Poster title: Detecting the Presence of Microplastics in Agricultural Streams

Advisor: Shannon Bartelt-Hunt

## Madeleine Brown

Research group: Chemistry

Poster location: 43

Poster title: A Spectroscopic Study of Photoinduced Halide Segregation and Remixing Kinetics in Mixed Halide Perovskites

Advisor: Yinsheng Guo

## Madeline Johnston

Research group: Beneficial Insects

Poster location: 9

Poster title: Soybean Gall Midge: Impact of Moisture on Adult Emergence

Advisor: Justin McMechan

## Madisyn Reichert

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 182

Poster title: Synthesis of Nanoparticles as a Drug-Delivery System for Traumatic Brain Injury Patients

Advisor: Forrest Kievit

## Makayla Gallegos

Research group: Sustainability of Civil Infrastructures

Poster location: 194

Poster title: Multi-day Skill Assessment for LSTM-based Streamflow Forecasts

Advisor: Tirthankar Roy

## Ma'Kiya Carter

Research group: McNair

Poster location: 79

Poster title: An Analysis of Popular Music and the Societal Implications It Has on Its Audience

Advisor: Cody Hollist

## Mariam Daoud

Research group: Digital Legal Research Lab

Poster location: 67

Poster title: Habeas Corpus and the Separation of Chinese Immigrant Minors in Washington

Advisor: Katrina Jagodinsky

## Mary Helms

Research group: Virology

Poster location: 107

Poster title: Cloning of HCMV US18 to Investigate its Role in Viral Infection

Advisor: Lindsey Crawford

## MaryGrace Thompson

Research group: Beneficial Insects

Poster location: 12

Poster title: The buzz around town: Plant-wild bee interactions in an urban botanical garden

Advisor: Autumn Smart

## Matthew Dohmen

Research group: John Woollam Scholars, Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 132

Poster title: Triboelectric Energy Harvesting

Advisor: Eric Markvicka

## Matthew Klein

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 16

Poster title: Investigation of chemosensory and visual stimuli triggers in Bullsnake (*Pituophis catenifer*) predation events

Advisor: Dennis Ferraro

## Maxwell Chin

Research group: Chemistry

Poster location: 45

Poster title: Analysis of *Caenorhabditis elegans* MePCE

Advisor: Catherine Eichhorn

## Merjen Palvanova

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 155

Poster title: Anisotropic conductive Fe/eGaIn/PDMS films for flexible PCBs

Advisor: Eric Markvicka

## Micaylon Moore

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 52

Poster title: Linoleic Acid Affects Mitochondrial Function in *Saccharomyces Cerevisiae*

Advisor: Wayne Riekhof

## Michelle Ebrahim

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 88

Poster title: COVID-Related Stress: Impacts on Parenting and Child Outcomes

Advisor: Rebecca Brock

## **Mikhail Gansvind**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 106

Poster title: D-alanine Transaminase Activity in Mycobacterium smegmatis Peptidoglycan Biosynthesis

Advisor: Raul Barletta

## **Misael Oros-Lopez**

Research group: Centers of Research Excellence in Science and Technology (CREST)

Poster location: 158

Poster title: Analyzing Piezoelectric Properties in Polymers with an Impedance Analyzer

Advisor: Stephen Ducharme

## **Morgan Graham**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 87

Poster title: An Assessment of the Efficacy of Sex Offender Legislation

Advisor: Amy Anderson

## **Morgan Laden**

Research group: Health Equity

Poster location: 100

Poster title: Efficacy of Teachers and Parents as Partners: The Role of Adversity among Latinx Families

Advisor: Lorey Wheeler

## **Morgan Madsen**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 55

Poster title: Geophysical Mapping of Large-scale Submarine Landslides at the Southern Cascadia Margin

Advisor: Irina Filina

## **Natalie Johnston**

Research group: Beneficial Insects

Poster location: 10

Poster title: Developing an Insecticide Bioassay for Soybean Gall Midge

Advisor: Ana Maria Velez Arango

## **Natalie Peulen**

Research group: Lasers and Optics

Poster location: 163

Poster title: Ordered Multiple-Choice Items to Assess Chemistry Students' Understanding of Wave-Particle Duality

Advisor: Alena Moon

## **Natalie Rogers**

Research group: Lasers and Optics

Poster location: 164

Poster title: Energy Spread Reduction of Ultrafast Electron Pulses

Advisor: Martin Centurion

## **Natalie Swampillai**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 141

Poster title: The Effects of Group Size on Stress-related Behaviors in Zebrafish

Advisor:

## **Natalie Thompson**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 149

Poster title: Fabrication of Two-Dimensional Material Transistors

Advisor: Xia Hong

## **Nathan Ottenbacher**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 18

Poster title: Protocol Development for Chromatin Immunoprecipitation in Mycobacterium Smegmatis

Advisor: Karin van Dijk

## **Nathlita Karnley**

Research group: Crop-To-Food Innovation

Poster location: 39

Poster title: The Validation of CAZyme Gene Enrichment predicted in Microbial Communities.

Advisor: Jennifer Auchtung

## **Noah Longoria**

Research group: Redox Biology

Poster location: 110

Poster title: Using X-ray Crystallography to Understand Isocyanide Hydratase Catalysis

Advisor: Mark A. Wilson

## **Olivia Vinnes**

Research group: Bioenergy Systems

Poster location: 202

Poster title: Characterization of an isolate capable of fermentative iron reduction obtained from the rhizosphere

Advisor: Karrie Weber

## **Paige Schiebel**

Research group: Biomedical Engineering

Poster location: 177

Poster title: Oxidative Stress-Mediated Blood-Brain Barrier Permeability

Advisor: Forrest Kievit



## **Patrick Osborn**

Research group: Quantum Materials

Poster location: 120

Poster title: Programming of Ferromagnetic Resonance Spectroscopy

Advisor: Abdelghani Laraoui

## **Paul Tetreault**

Research group: Sustainability of Civil Infrastructures

Poster location: 199

Poster title: Electric Vehicles: The Limits and Potential of Adopting in Rural Nebraska

Advisor: Jason Hawkins

## **Peri Burton**

Research group: Sustainability of Civil Infrastructures

Poster location: 192

Poster title: Analyzing Temperature's Effect on the Production of Medium Chain Carboxylic Acids From Manure

Advisor: Xu Li

## **Peter Kempf**

Research group: John Woollam Scholars

Poster location: 151

Poster title: Fabry-Pérot Interferometry

Advisor: Mohammad Ghashami

## **Peyton Alder**

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 104

Poster title: Selfish Genes: Meiotic Drivers and Suppressors in Drosophila

Advisor: Colin Meiklejohn

## **Rachel Laws**

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 137

Poster title: Analysis of Ferroelectric Capacitors and their Role in Non-Volatile Memory

Advisor: Stephen Ducharme

## **Raymond Smith**

Research group: Lasers and Optics

Poster location: 166

Poster title: Ion Energy Distributions in Broad Beam Kaufman Ion Sources and Simulation of Ion-Matter Interactions

Advisor: Eva Schubert

## **Rebecca Yox**

Research group: Beneficial Insects

Poster location: 14

Poster title: Microarthropod Diversity Assessment in Milkweed Flowers

Advisor: Tom Weissling

## Reese Lofgren

Research group: Bioenergy Systems

Poster location: 123

Poster title: The Relationship of Pathogenicity, Behavioral Phenotype, and PilA Structure in *Acinetobacter*

Advisor: Kurt Piepenbrink

## Rhiannon Strazdas

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 63

Poster title: Steven Holl Architectural Guidebook

Advisor: Peter Olshavsky IV

## Ricardo Canovas

Research group: Centers of Research Excellence in Science and Technology (CREST)

Poster location: 156

Poster title: Convolutional Neural Networks in Facial Recognition with Hardware

Advisor: Arman Roohi

## Rohan Tatineni

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 22

Poster title: Investigation into Key Residues Critical for Substrate Binding in LaPhzM

Advisor: Limei Zhang

## Ruthi Zielinski

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 145

Poster title: Electronic Transport Properties of Boron Carbide

Advisor: Robert Streubel

## Saloni Gupta

Research group: Bioenergy Systems

Poster location: 118

Poster title: Ion Leakage and Thin Layer Chromatography as a Means to Determine How Kinases Regulate Oil Production in *Arabidopsis thaliana*

Advisor: Rebecca Roston

## Sam Ho

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 51

Poster title: Cell-free synthesis of the enzymatic component of C2C: A novel expression of recombinant proteins sans host

Advisor: Paul Blum

## Sam Koebernick

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 130

Poster title: "Boron Treated Aluminum Covetics"

Advisor:

## Sam Yang

Research group: Redox Biology

Poster location: 112

Poster title: Identifying Genes involved in proline metabolism in yeast *Saccharomyces cerevisiae*

Advisor: David Becker

## Samantha Byrd

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 74

Poster title: Habeas Corpus: Breaking Reservation Boundaries

Advisor: Katrina Jagodinsky

## Samantha White

Research group: Nebraska Center for Energy Sciences Research Interns (NCESR)

Poster location: 144

Poster title: Crash Analysis: How Battery Electric Vehicles Compare to Traditional Vehicles

Advisor: Cody Stolle

## Samuel Harvey

Research group: John Woollam Scholars

Poster location: 160

Poster title: Quantifying Case Depth in Railroad Bearing Components Using Ultrasonic Scattering

Advisor: Joseph Turner

## Sarah Graham

Research group: Applied Phenotyping Technology

Poster location: 4

Poster title: Accuracy of A Portable Chlorophyll Meter in Fresh and Dried Leaf Samples of Maize

Advisor: Yeyin Shi

## Sarah Rogoz

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 86

Poster title: The Associations between Race/Ethnicity, Mental Health, Socioeconomic Status, Gender and Substance Use

Advisor: Michelle Hughes

## Savanna Richardson

Research group: Quantum Materials

Poster location: 115

Poster title: Nonvolatile Modulation of ReS<sub>2</sub> Transistor Top-Gated by PbZr<sub>0.2</sub>Ti<sub>0.8</sub>O<sub>3</sub> Membrane

Advisor: Xia Hong

## Sequoia Truong

Research group: Biomedical Engineering

Poster location: 178

Poster title: Design and Development of a Wearable Ultrasound Patch for Measuring Cerebral Blood Flow

Advisor: Eric Markvicka

## Shane Rice

Research group: Crop-To-Food Innovation

Poster location: 41

Poster title: Creating an Abundant and Food Appropriate Oleogel

Advisor: Ozan N. Cifti

## Shelby Baker

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 59

Poster title: Artistic Academic

Advisor: Sandra Williams

## Shivani Bahl

Research group: Health Equity

Poster location: 95

Poster title: Access to Substances Across the State of Nebraska Between Rural and Urban Areas

Advisor: Patrick Habecker

## Skylar Jilg-Brown

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location:

Poster title: 92

Advisor: Anti-Racist Communities Within Classrooms

## Smriti Ganesh

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 153

Poster title: Electromigration Behavior in Liquid Metal Elastomer Composites

Advisor: Eric Markvicka

## Sophia Heinrich

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 129

Poster title: Imaging the Levitation of Styrofoam Balls & A Potential 3D Model of the Double Slit Experiment

Advisor: Herman Batelaan

## Sophia Swanson

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 64

Poster title: Workforce Housing: Temporary Infrastructure with Lasting Repercussions

Advisor: Bud Shenefelt

## Soumyaa Joshi

Research group: Health Equity

Poster location: 99

Poster title: Emotion Regulation Strategies and Youth Mental Health During COVID-19: Examining Longitudinal Associations and the Role of Socioeconomic Status

Advisor: Timothy Nelson

## Summer Wolfe

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 150

Poster title: Piezoelectric Properties of Amorphous Chiral Solids

Advisor: Shireen Adenwalla

## Sydney Houser

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 54

Poster title: Characterizing the reward-enhancing effects of cotinine, the major metabolite of nicotine, alone and its interactions with varenicline

Advisor: Rick Bevins

## Taylor Yakel

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 61

Poster title: Mapping The World's Largest Truck Stop

Advisor: David Karle

## Trevor Laugen

Research group: Chemistry

Poster location: 48

Poster title: Testing zinc doped cerium oxide's antioxidant ability via DPPH

Advisor: Barry Cheung

## Tyler Bartolome

Research group: Bioenergy Systems

Poster location: 136

Poster title: Designing an expression system to optimize bioisoprene production using Methanosarcina

Advisor: Nicole Buan

## Urelys Casiano

Research group: Bioenergy Systems

Poster location: 117

Poster title: The effects of chives-derived exosome-like nanoparticles on obese mice gut microbiome

Advisor: Jennifer Auchtung

## Uyen Nguyen

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 181

Poster title: Effects of Collagen Concentration on Dorsal Root Ganglia in 3D Hydrogel Culture

Advisor: Rebecca Wachs

## Violetta Bakunina

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 105

Poster title: Mito-nuclear incompatibility and temperature-sensitive sterility in male *Drosophila*

Advisor: Colin Meiklejohn

## Vladislav Prapakchuk

Research group: Nebraska Center for Materials and Nanoscience and Young Nebraska Scientists High School Interns

Poster location: 129

Poster title: Imaging the Levitation of Styrofoam Balls & A Potential 3D Model of the Double Slit Experiment

Advisor: Herman Batelaan

## WrayVauze Givens

Research group: Crop-To-Food Innovation

Poster location: 38

Poster title: Dietary Fiber Analysis in Various Lines of Corn

Advisor: Devin Rose

## Zoe Stapleton-Deno

Research group: Digital Legal Research Lab

Poster location: 72

Poster title: Conditional Motherhood: Rhetorical Functions of Childhood Innocence in 19th Century Habeas Corpus

Advisor: Katrina Jagodinsky

## Zoe Tomas

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 29

Poster title: Mealworms Ability to Digest Polystyrene

Advisor: Louise Lynch O'Brien

## Zoey Armstead

Research group: Undergraduate Creative Activities and Research Activities (UCARE)

Poster location: 18

Poster title: Protocol Development for Chromatin Immunoprecipitation in *Mycobacterium Smegmatis*

Advisor: Karin Van Dijk