

GRAND CHALLENGES YEAR TWO UPDATE



Through bold, high-impact projects, University of Nebraska-Lincoln researchers are addressing some of society's most pressing problems. These efforts are supported with a four-year, \$40 million commitment by the Office of the Chancellor and the Office of Research and Economic Development to strategically invest funds earmarked for research. The Grand Challenges initiative is leveraging Nebraska's expertise for the greater good.

Year Two Progress

\$10M

Investments made in 2023

\$20M

Total investments so far in the four-year initiative

11

Funded projects in 2023:
3 catalyst awards
8 planning grants

32

Total proposals submitted

~130

Faculty, staff and students involved in funded projects during year two

\$128,112

Average amount of a planning grant in 2023

\$2,992,096

Average amount of a catalyst award in 2023

2023 Catalyst awards

Christian Binek, Charles Bessey Professor of physics and director of the Nebraska Center for Materials and Nanoscience, and **Susan Hermiller**, Willa Cather Professor of mathematics, “Quantum Approaches Addressing Global Threats,” \$4,172,883.

Lisa Knoche, co-director of the Nebraska Center for Research on Children, Youth, Families and Schools and research associate professor, “Inspiring Outcomes for Children through Equitable Early Childhood Education Experiences (E4),” \$3,441,572.

Yusong Li, professor of civil and environmental engineering and associate dean for faculty and inclusion in the College of Engineering, “Release of Micro- and Nanoplastics from Plastic Food Containers – Characterization, Risk Assessment, Socioeconomic and Health Impacts,” \$1,361,833.



Full project team lists are available at research.unl.edu/grandchallenges/2023-catalyst-award-teams/

“The Grand Challenges are an opportunity to elevate high-priority research areas for the benefit of society and especially our communities, which is our responsibility as a land-grant institution.”

Chancellor Rodney Bennett 

2023 Planning Grant awards

Mohammad Ghashami, assistant professor of mechanical and materials engineering, “Quantum Solutions for Energy Challenges: A Collaborative Leap towards Sustainability.”

Mohammad Hasan, assistant professor of electrical and computer engineering, “Building Community Connections for Improved Climate Resilience and Food Security: A Tribal Non-Tribal Partnership Investigating the Role of Artificial Intelligence in Affecting Behavior Change.”

Michelle Hughes, professor of special education and communication disorders, “Improving Healthcare Access for Underserved Populations.”

Clint Rowe, professor of Earth and atmospheric sciences, “Community Climate Resilience on the Great Plains.”

Julie Tippens, associate professor of child, youth and family studies, “Developing an Interdisciplinary Global Forced Migration and Health Collaborative.”

Ashley Votruba, assistant professor of psychology, “Equitable Access to Civil Justice: Uniting an Interdisciplinary Team to Develop an Open-Access Knowledge Hub.”

Bryan Wang, associate professor of advertising, “Media and Information Literacy (MIL) in the Age of Algorithms.”

Qiuming Yao, assistant professor of computing, “TrustGenViz: An Initiative to Advance Trust and Visualization for Generative Language Models of Biological Sequences.”



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Learn more about each thematic area: research.unl.edu/grandchallenges/framework/