

## 2018-2019 (FY19) Active Awards

### Undergraduate:

**Robert and Karla Baltzell Student Innovation Award:** Megan Homolka, advised by **Rick Koelsch**, Professor, and **Galen Erickson**, Professor, UNL Animal Science, for the project: *Predicting Nitrogen and Phosphorous Flows in Beef Open Lots*

**Platte Basin Timelapse Project:** **Mikaela Deptula, Hannah Gavle, Carlee Koehler, Erin McCready, and Sidney Parks, Production Interns**, advised by **Michael Farrell**, Assistant Professor of Practice, UNL Agricultural Leadership, Education & Communication, and **Michael Forsberg**, Assistant Professor of Practice, UNL Agricultural Leadership, Education & Communication.

### Round Five (first awarded in 2018)

- **Cody Creech**, Assistant Professor, UNL Agronomy & Horticulture, for the project: *Wheat Residue Management to Enhance Soil Water Conservation*  
Student: **Luana Machado Simão**, for a M.S. in Agronomy
- **Bruce Dvorak**, Professor, UNL Civil Engineering & Biological Systems Engineering, for the project: *Framework for assessing microbial reduction and environmental impacts of food systems: Implications on improving water conservation and wastewater quality in U.S. beef processing industry* Student: **Shaobin Li**, for a Ph.D. in Civil Engineering with specialization in Environmental Engineering (expected graduation: August 2019)
- **Roger Elmore**, Professor, UNL Agronomy & Horticulture, for the project: *Isolating Primary Factors for Corn Ear Formation Issues* Student: **Osler Antonio Ortiz-Amador**, for a Ph.D. in Agronomy
- **Derek Heeren**, Assistant Professor, UNL Biological Systems Engineering, for the project: *Sensor-Based Irrigation Management for Maize and Soybean in the Great Plains* Student: to begin Jan. 2019
- **Deepak Keshwani**, Associate Professor, UNL Biological Systems Engineering, for the project: *Integrated modeling and analysis of the Corn-Water-Ethanol-Beef System* Student: **Luke Monhollon**, for a M.S. in Biological Systems Engineering
- **Tiffany Messer**, Assistant Professor, UNL Biological Systems Engineering, for the project: *Understanding Floating Treatment Wetland Potential for Toxic Algal Bloom Prevention in Recreational Lakes* Student: **Mary Keilhauer**, for a M.S. in Hydrological Sciences, Minor in Biosystems Engineering (expected graduation: May 2019)
- **Siamak Nejati**, Assistant Professor, UNL Chemical & Biomolecular Engineering, for the project: *Synthesis and Development of the Task-specific Nitrate Adsorbents*  
Student: **Elham Tavakoli**, for a Ph.D. in Chemical & Biomolecular Engineering
- **Amy Millmier Schmidt**, Assistant Professor, UNL Biological Systems Engineering & Animal Science, for the project: *Transforming Manure and Cedar Mulch from “Waste” to “Worth”* Student: **Agustin José Olivo**, for a M.S. in Biological Systems Engineering

- **Bing Wang**, Assistant Professor, UNL Food Science & Technology, for the project: *Treatments for Water Used at Pre-harvest Stage to Mitigate Human Exposure to Microbial Hazards through Consumption of Frozen and Fresh Raspberry in Chile* M.S. student to begin January 2019

### Round Four (first awarded in 2017)

- **P. Stephen Baenziger**, Professor, UNL Agronomy & Horticulture, for the project: *Genetic Architecture of Male Traits for Hybrid Wheat Seed Production*  
Student: **Nicholas Garst**, for a Ph.D. in Agronomy (Plant Breeding and Genetics Emphasis)
- **Yufeng Ge**, Assistant Professor, UNL Biological Systems Engineering, for the project: *Integrated crop and soil water sensor network to assist UAS and soil water simulation modeling in variable rate irrigation* Student: **Jasreman Singh**, for a Ph.D. in Biological Systems Engineering (Soil and Water Resources Engineering Emphasis)
- **Jesse Korus**, Assistant Professor, UNL School of Natural Resources, for the project: *Improving Groundwater Characterization and Management through Integration of Airborne Electromagnetics (AEM) and Borehole Data* Student: **Jaqueline Polashek**, for a M.S. in Natural Resource Sciences
- **Taro Mieno**, Assistant Professor, UNL Agricultural Economics, for the project: *The Impacts of Crop Insurance on Irrigation Behavior* Student: **Paloch Suchato**, for a M.S. in Agricultural Economics
- **Xu Li**, Associate Professor, UNL Civil Engineering, for the project: *Determination of Setback Distance Requirements for Reducing Contaminants in Agricultural Runoff Following the Land Application of Swine Manure Slurry* Student: **Cici Hall**, for a M.S. in Environmental Engineering
- **Yusong Li**, Associate Professor, UNL Civil Engineering, for the project: *Influence of Climate and Agricultural Clustering on Groundwater Contamination by Trace Organics*  
Student: **Chuyang Liu**, for a Ph.D. in Civil Engineering
- **Adam Liska**, Associate Professor, UNL Biological Systems Engineering and Agronomy & Horticulture, for the project: *Livestock and Thermodynamic Limits to Food Security*  
Student: **Calvin Harman**, for a Ph.D. in the School of Natural Resources
- **James C. Schnable**, Assistant Professor, UNL Agronomy & Horticulture, for the project: *Optimizing the water use efficiency of C4 grain crops using comparative phenomics and crop models to guide breeding targets* Student: **Daniel Santana de Carvalho**, for a Ph.D. in Agronomy & Horticulture
- **Karina Schoengold**, Associate Professor, UNL Agricultural Economics, for the project: *The Effects of Groundwater Policies and Economic Factors on Well Drilling Decisions*  
Student: **Qianyu Zhang**, for a M.S. in Agricultural Economics
- **Karrie Weber**, Associate Professor, UNL School of Biological Sciences, for the project: *Mobilization of Naturally Occurring Uranium into Groundwater*  
Student: **Jeffrey Westrop**, for a Ph.D. in Geology

Graduate research matching support was awarded to Aaron Mittelstet, who was awarded funding from the Nebraska Department of Natural Resources Water Sustainability Fund, which requires 40% match.

- **Aaron Mittelstet**, Assistant Professor, UNL Biological Systems Engineering, for the project: *UNL Quantifying the Impact of Eastern Redcedar Encroachment on Recharge in the Nebraska Sandhills*  
Student: **Nawaraj Shrestha**, for a Ph.D. in Natural Resource Sciences

### Round Three (first awarded in 2016)

- **Yulie Meneses**, Research Assistant Professor, and **Jayne Stratton**, Research Associate Professor, UNL Food Science & Technology, for the project: *Reconditioning and reuse of processing wastewater. An application for the grain wet milling industry.*  
Student: **Xinjuan Hu**, for a Ph.D. in Food Science & Technology
- **Trenton Franz**, Assistant Professor of Hydrogeophysics, UNL School of Natural Resources, for the project: *Assessing the long-term water savings of reduced irrigation pumping in Western Nebraska*  
Student: **Justin Gibson**, for a Ph.D. in Natural Resource Sciences (specializing in Bio-Atmospheric Interactions)
- **Christopher Gustafson**, Assistant Professor, UNL Agricultural Economics, for the project: *Behaviors to Mitigate the Risk of Waterborne Illness: An Analysis of Pastoralist Households in Rural Tanzania*  
Student: **Mazbahul Ahamad**, for a Ph.D. in Natural Resource Sciences
- **Derek Heeren**, Assistant Professor of Irrigation Engineering, UNL Biological Systems Engineering, for the project: *Field Testing Variable Rate Irrigation (VRI) for Managing Spatial Variability in Soils and Evapotranspiration* Student: **Sandeep Bhatti**, for a M.S. in Biological Systems Engineering
- **Daran Rudnick**, Assistant Professor, UNL Biological Systems Engineering, for the project: *Sustaining Agriculture through Adaptive Management Resilient to a Declining Ogallala Aquifer and Changing Climate* Student: **Tsz Him (Himmy) Lo**, for a Ph.D. in Biological Systems Engineering

### Round Two (first awarded in 2015)

**Junke Guo**, Associate Professor, UNL Civil Engineering, for the project: *Determinaton of River Ecological Discharge from Navier-Stokes-Forchheimer Equation.*  
Student: **Narendra Kumar Patel**, for a Ph.D. in Civil Engineering (specializing in Hydraulics and Water Resources)

### Round One (first awarded in 2014)

**Francisco Munoz-Arriola**, Assistant Professor in Hydroinformatics and Integrated Hydrology, UNL Biological Systems Engineering and School of Natural Resources, for the project: *Software Development for Water- and Agriculture-resources Data and Information Access: the case of the Water for Food Interoperability System (WaFIS)*