2019-2020 (FY20) Active Awards

Undergraduate:

Robert and Karla Baltzell Student Innovation Award: Katie Bathke, advised by Christian Elowsky, Assistant Professor of Practice, UNL Agronomy & Horticulture, and Gary Yuen, Professor, UNL Plant Pathology, for the project: The Development of Bacillus subtilis as a Biological Control Agent for Bacterial Leaf Streak

Platte Basin Timelapse Project: 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.

Graduate Students Round Six (first awarded in 2019):

– Jesse Bell, Professor, UNMC College of Public Health, for the project: Improving the Knowledge of Drought and Health in the United States
  Student: Jagadeesh Puvvula, for a Ph.D. in Environmental Health
– Carrick Detweiler, Assistant Professor, UNL Computer Science and Engineering, for the project: Advancing long-term persistent monitoring of crop and water systems with UASs
  Student: Daniel Anthony Rico, for a M.S. in Computer Science and Engineering with a specialization in Computer Engineering (expected graduation: December 2020)
– Troy Gilmore, Assistant Professor of Groundwater Hydrology, UNL School of Natural Resources, for the project: Influence of recharge patterns on the sustenance of groundwater-fed streams
  Student: Caner Zeyrek, for a Ph.D. in Natural Resource Sciences
– Jesse Korus, Assistant Professor, UNL School of Natural Resources, for the project: Integrating Hydrologic Modeling and Geophysical Characterization to Improve Water Management Tools
  Student: has been recruited, start date January 2020
– Joe Luck, Associate Professor, UNL Biological Systems Engineering, for the project: SENSE Nitrogen Management 2.0: Promoting Adoption of Sensor-based Nitrogen Fertilization of Corn through the NE On-Farm Research Network
  Student: Jackson Stansell, for a M.S. in Agricultural & Biological Systems Engineering
– Tiffany Messer, Assistant Professor, UNL Biological Systems Engineering, for the project: Treating Non-Point Source Cocktails: Pesticide Removal Utilizing In-stream Best Management Practices
  Student: Josephus Borsuah, for a Ph.D. in Natural Resource Sciences in the UNL School of Natural Resources
– Francisco Munoz-Arriola, Associate Professor in Hydroinformatics and Integrated Hydrology, UNL Biological Systems Engineering and School of Natural Resources, for the project: Geospatial attribution for drought-resilient cross-scale agriculture in India and the US using geospatial clustering
  Student: Manas Khan, for a Ph.D. in Biological Systems Engineering (expected graduation: Dec 2020)
- **Eleanor Rogan**, Professor, UNMC College of Public Health Department of Environmental, Agricultural & Occupational Health, for the project: *Possible Effects of Nitrate Contaminants in Nebraska Waterways on Human Health*  
  Student: **Balkissa Ouattara**, for a Ph.D. in Public Health

- **Mehmet C. Vuran**, Professor, UNL Computer Science and Engineering, for the project: *UG-LoRaWAN: Long Range Underground Wide Area Networks for Rural Connectivity in Agricultural Fields*  
  Student: **Baofeng Zhou**, for a Ph.D. in Computer Engineering

- **Harkamal Walia**, Associate Professor, UNL Agronomy & Horticulture, for the project: *Phenomic and genomic analysis of drought-responsive traits in wheat*  
  Student: **Henry Doku**, for a Ph.D. in Agronomy & Horticulture, Specialization: Plant Breeding & Genetics

- **Wayne Woldt**, Associate Professor, UNL Biological Systems Engineering, for the project: *Near Earth Sensing of Crop Canopy at Production Field Scale Enabled by Unmanned Aircraft*  
  Student: **Suresh Pradhyun Kashyap**, for a M.S. in Biological Systems Engineering

- **Vitaly Zlotnik**, Professor, UNL Earth & Atmospheric Sciences, for the project: *Analysis of Optimality of Augmentation Projects in the Republican River Watershed Using Data and Modeling*  
  Student: to be recruited (student initially recruited not able to attend UNL)

**Graduate Students 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: December 2019)

- **Roger Elmore**, Professor, UNL Agronomy & Horticulture, for the project: *Isolating Primary Factors for Corn Ear Formation Issues*  
  Student: **Osler Antonio Ortez-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: **Sandeep Bhatti**, for a Ph.D. in Biological Systems Engineering (expected graduation: Fall 2021)

- **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

- **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

- **John Kalu Osiri**, Associate Professor of Practice, UNL Department of Management, College of Business, and **Michael Hayes**, Professor, UNL School of Natural Resources, for the project: *Exploring Opportunities to Incorporate Climate Information into Stakeholder Decision Making in Sub-Saharan Africa*  
  Student: **Azariah Ovie Lawal**, for a M.S. in Natural Resource Sciences, Applied Climate & Spatial Science Specialization, also Graduate Assistant within the UNL International Business Program
STUDENT SUPPORT

- 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 Student: Constanza Avello, for a M.S. in Food Science

Graduate Students 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, Associate 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)
- 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
- 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
- James C. Schnable, Associate 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 (graduated: August 2019)
- 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 Students Round Three (first awarded in 2016):
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, Yaser Kishawi