

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 Simáo**, 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

- **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**