

2016-2017 (FY17) Active Awards

Round Three (first awarded in 2016)

Eleven awards were given to support graduate student research. The Faculty Fellows secured additional funds on their own to support the students, matching the Water for Food Institute funds one-to-one.

WFI Faculty Fellows were invited to submit applications for student support up to \$16,500, with additional student funding secured by the Faculty Fellow. Student support was awarded to:

- **P. Stephen Baenziger**, Professor, UNL Agronomy and Horticulture, for the project: *Agronomic and Genomic Evaluation of Winter Wheat for Hybrid Seed Breeding*
PhD Student: **Amanda Easterly**, for a PhD in Agronomy (Plant Breeding and Genetics Emphasis)
- **Guillermo Baigorria**, Assistant Professor, UNL School of Natural Resources and Agronomy and Horticulture, for the project: *Climate change impacts assessment on water requirements and yields on corn, soybean and wheat in the USA*; PhD Student: **Amit Timilsina**, for a PhD in Natural Resource Sciences (specializing in Climate Assessment and Impacts)
- **Yulie Meneses**, Post-doctoral Research Associate, and **Jayne Stratton**, Research Associate Professor, UNL Food Science and Technology, for the project: *Reconditioning and reuse of processing wastewater. An application for the grain wet milling industry.*
PhD Student: **Xinjuan Hu**, for a PhD in Food Science and Technology
- **Cory Forbes**, Associate Professor, UNL School of Natural Resources, and Coordinator, Science Literacy Initiative, for the project: *Fostering Undergraduate Students' Disciplinary Learning and Water Literacy*
Masters Student: **Destini Petitt**, for a M.S. in Natural Resource Sciences
- **Trenton Franz**, Assistant Professor of Hydrogeophysics, UNL School of Natural Resources, for the project: *Observed and modeled quantification of reduced pumping volumes using advanced irrigation technologies in Western Nebraska*
PhD Student: **Justin Gibson**, for a PhD in Natural Resource Sciences (specializing in Bio-Atmospheric Interactions)
- **Troy Gilmore**, Assistant Professor of Groundwater Hydrology, UNL School of Natural Resources, for the project: *Streambed water flux dynamics at coupled groundwater-surface water monitoring stations*
Masters Student: **Mason Johnson**, for an M.S. in Natural Resource Sciences and **Martin Wells**, for an M.S. in Biological Systems Engineering
- **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*
PhD Student: **Mazbahul Ahamad**, for a PhD 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* Masters Student: **Sandeep Bhatti**, for a M.S. in Biological Systems Engineering
- **Alan Kolok**, Interim Director, Center for Environmental Health and Toxicology, UNMC College of Public Health, and Professor, UNO Biology, for a project to study the pressure that agrichemicals exert on water resources; PhD Student: **Jonathan Ali**, for a PhD from the UNMC College of Public Health
- **Aaron Mittelstet**, Assistant Professor, UNL Biological Systems Engineering, for a project to improve and test the irrigation routines for both field and watershed-scale hydrological models

- **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*
PhD student: **Tsz Him (Himmy) Lo**, for a PhD in Biological Systems Engineering

Round Two (first awarded in 2015)

Seven awards were given to support graduate student research. The Faculty Fellows secured additional funds on their own to support the students, matching the Water for Food Institute funds one-to-one.

Daugherty Graduate Research Awards – MS and PhD positions

WFI Faculty Fellows were invited to submit applications for student support up to \$16,000, with additional student funding secured by the Faculty Fellow. Seven assistantships were awarded to:

- **Shannon Bartelt-Hunt**, Associate Professor, UNL Civil Engineering, for a project to evaluate the direct effects of climate and the indirect effects of climate-induced animal agriculture clustering on the fate of trace organic compounds originating from production agriculture
PhD Student: **Renys Barrios**, for a PhD in Environmental Engineering
- **Junke Guo**, Associate Professor, UNL Civil Engineering, for the project: *Determinaton of River Ecological Discharge from Navier-Stokes-Forchheimer Equation*
PhD Student: **Narendra Kumar Patel**, for a PhD in Civil Engineering (specializing in Hydraulics and Water Resources)
- **Adam Liska**, Associate Professor, George Dempster Smith Chair of Industrial Ecology, UNL Biological Systems Engineering and Agronomy & Horticulture, for the project: *Climate Change Feedbacks via Insurance*
Masters Student: **Eric Holley**, for an M.S. in Natural Resource Sciences (Human Dimensions Emphasis) from UNL School of Natural Resources
- **Patrice McMahon**, Associate Professor, UNL Political Science, for the project: *Transnational Actors and Water Security*
PhD Student: **Maria Benes**, for a PhD in Political Science (specializing in Comparative Politics and International Relations)
- **Mehmet C. Vuran**, Associate Professor, UNL Computer Science and Engineering, for the project: *Taking Soil to the Cloud: Advanced Wireless Underground Sensor Networks for Real-time Precision Agriculture*
PhD Student: **Abdul Salam**, for a PhD in Computer Engineering
- **Wayne Woldt**, Associate Professor, UNL Biological Systems Engineering, for the project: *Improving Variable Rate Irrigation Efficiency using a Real-time Soil Moisture Adaptive Control Model Informed by Sensors Deployed on Unmanned Aircraft*
Masters Student: **Mitch Maguire**, for an M.S. in Biological Systems Engineering
- **Haishun Yang**, Associate Professor and Crop Simulation Modeler, UNL Agronomy and Horticulture, for the project: *Determination of field sensor density for real-time crop management*
Masters Student: **Babak Jafarisamani**, for an M.S. from UNL Computer Science & Engineering

Round One (first awarded in 2014)

WFI Postdoctoral and Student Support Programs were initiated. Two postdoctoral and five graduate positions were funded, along with three projects involving undergraduate students.

Daugherty Fellows – Postdoctoral Positions

WFI Faculty Fellows were invited to submit applications for Daugherty Fellows support. Daugherty Fellows positions were awarded to:

- **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)*
- **Robert Oglesby**, Professor in Climate Modeling, Climate Change and Variability, UNL Earth & Atmospheric Sciences, for the project: *Leveraging DWHI Resources to Address Water for Agriculture in Latin America Under a Changing Climate*; Postdoctoral Fellow: **Rachindra Mawalagedara**

Daugherty Graduate Research Assistantships – MS and PhD positions

WFI Faculty Fellows and WFI Faculty Affiliates were invited to submit applications for assistantship support. Five assistantships were awarded to:

- **Carrick Detweiler**, Assistant Professor, UNL Computer Science and Engineering, for the project: *Enabling Sub-Surface Aerial Water Sampling for Water Management and Quality Analysis*
Masters Student: **James Higgins**, for an M.S. in Mechanical and Materials Engineering (MME) with a minor in Computer Science
- **Trenton Franz**, Assistant Professor of Hydrogeophysics, UNL School of Natural Resources, for the project: *Improving soil moisture monitoring in agricultural systems using hydrogeophysics*
Masters Student: **William Avery**, for an M.S. from UNL School of Natural Resources
- **Patricio Grassini**, Assistant Professor, UNL Agronomy & Horticulture, for the project: *Revealing the links between crop production, irrigation and inter-annual changes in groundwater levels in Nebraska*
Masters Student: **Kate Boone**, UNL Agronomy & Horticulture
- **Harkamal Walia**, Assistant Professor, UNL Agronomy & Horticulture, for the project: *Improving drought tolerance of wheat through more adaptive roots*; PhD Student: **Sarah Blecha**, UNL Agronomy & Horticulture

Daugherty Undergraduate Scholars

DWHI Faculty Fellows and DWHI Faculty Affiliates were invited to submit applications for undergraduate research assistantship support. Support for several students was awarded to:

- **Vijendra Boken**, Associate Professor, UNK Geography and Earth Science, for a project to studying the link between the soil moisture estimates and global warming for Nebraska using satellite data
- **Michael Farrell**, Assistant Professor of Practice, UNL Agricultural Leadership, Education and Communication, for the Platte Basin Timelapse Project