

2015-2016 (FY16) Active Awards

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

DWFI 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**, to obtain PhD in Environmental Engineering
- **Junke Guo**, Associate Professor, UNL Civil Engineering, for the project: Determination of River Ecological Discharge from Navier-Stokes-Forchheimer Equation
PhD Student: **Narendra Kumar Patel**, to obtain 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**, to obtain 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**, to obtain 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**, to obtain 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: **Isaiah Krutak**, to obtain M.S. in Biological Systems Engineering (specializing in Water Resources Planning and Management)
- **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**, to obtain M.S. from UNL Computer Science & Engineering

Round One (first awarded in 2014)

DWFI Postdoctoral and Student Support Programs were initiated in 2014. Two postdoctoral and five graduate positions were funded, along with three projects involving nine undergraduate students.

Daugherty Fellows – Postdoctoral Positions

DWFI 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 DWFI 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

DWFI Faculty Fellows and DWFI 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**, to obtain 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**, to obtain 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
- **Alan Kolok**, Interim Director, Center for Environmental Health and Toxicology, UNMC College of Public Health, and Professor, UNO Biology, for the project to study the pressure that agrichemicals exert on water resources PhD Student: **Jonathan Ali**, to obtain a PhD from the UNMC College of Public Health
- **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 and Horticulture

Daugherty Undergraduate Scholars

DWFI Faculty Fellows and DWFI Faculty Affiliates were invited to submit applications for undergraduate research assistantship support. Support for six students (to be hired) was awarded to:

- **Vijendra Boken**, Associate Professor, UNK Geography and Earth Science, for the project: *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
- **Julie Shaffer**, Professor, UNK Biology, to characterize abiotic and biotic components of lakes in the Willow Creek drainage of Brown County, Nebraska