



NRT program seeking applicants in resilience of agro-ecosystems

UNL's National Research Traineeship (NRT) program funded by the National Science Foundation is seeking master's and Ph.D. students for interdisciplinary training and study focused on understanding the resilience of agro-ecosystems, particularly the Platte River Basin. The basin, which drains through Nebraska, is one of the world's most productive and efficient agricultural systems, not only supporting agriculture but also meeting the needs of industry and wildlife and for recreation and drinking water. Around the world, such competing demands on water resources, and external threats such as climate change and competition for land, make it increasingly critical to have the best and clearest scientific information to resolve complex food, energy, water and ecosystem services problems. UNL's NRT program is training the next generation of natural and social scientists, computer and biological systems engineers, managers and policymakers by increasing understanding and designing infrastructure that leads to a knowledge of how resilience is generated in complex systems of people and nature. The program provides cross-disciplinary academic and experiential training for a diverse group of graduate students in natural, social and computational sciences. Students will receive their degree from their home departments—likely the School of Natural Resources, the Biological Systems Engineering Department, the Department of Agronomy and Horticulture, the Department of Computer Science and Engineering, or the Department of Political Science—and meet in the NRT laboratory for special trainings and interdisciplinary collaboration.



Students will also participate in externships and workshops, engaging with partners from the agricultural industry, state and federal government and private organizations interested in maintaining the resilience of healthy agro-ecosystems. Students will use resilience and panarchy theory, adaptive management, data science, novel sensing technologies and modeling, and policy interventions. They will help develop innovative tools for collecting, synthesizing and analyzing data needed to make management and policy decisions. Students will benefit from collaboration with other NRT programs and from an international experience comparing the agro-ecosystem of the Platte River Basin to those in western Europe through the Delft Institute for Water Education in the Netherlands.

This program is a change from past academic cultures in that students and faculty members from various disciplines meet, collaborate and coalesce around one goal: responsibly managing agro-ecosystems. Knowledge gained from work with the Platte River Basin is expected to be used in managing agro-ecosystems elsewhere in the world and by students to meet career demands of the future. Annual stipends are \$34,000 for master's students (two-year maximum) and \$36,000 for Ph.D. students (three-year maximum), along with health insurance and remission of tuition and selected university fees. Indigenous Peoples and those from other minority and underrepresented groups are especially encouraged to apply.

For more information about UNL's NRT program, see <http://snr.unl.edu/NRT-INFEWS/>. To apply or seek further information, please contact Ronica Stromberg at rstromberg3@unl.edu.

Deadline for applications: March 30, 2018

Start date: August 2018