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USDA United States Department Of Agriculture
Agricultural Research Service

Regional Approaches to Climate Change in Pacific Northwest Agriculture (REACCH PNA) PhD Assistantships Announcement

REACCH PNA faculty members are seeking motivated, highly qualified graduate students to apply for a number of PhD assistantships beginning summer or fall 2012. The REACCH program includes over 20 faculty members from a variety of disciplines working towards the development of more sustainable cereal production systems under ongoing and projected climate change. The broad interdisciplinary team of faculty organized to achieve this goal includes climate change scientists, economists, agronomists, soil scientists, entomologists, plant pathologists, weed scientists and teacher educators at three land-grant universities (University of Idaho, Washington State University and Oregon State University) as well as the USDA-ARS. Participating students, therefore, will have the opportunity to interact and collaborate with diverse faculty and students from three different institutions as part of their PhD experience. These highly competitive assistantships provide 12-month salary support (half-time during the academic year and full-time during the summer at (\$21-24k/yr) plus health insurance, tuition, and fees. For general information regarding the REACCH project please contact Dr. Sanford Eigenbrode (sanforde@uidaho.edu) or visit the REACCH project website at: <http://reacchpna.uidaho.edu/reacchpna>.

Current openings:

PhD Assistantship in Soil Ecology (1). Seeking a highly motivated and qualified student to pursue the study of soil macrofauna population density and diversity across a climatic gradient. Research will focus on 1) determining changes in the density and composition of earthworm populations across a climatic gradient, 2) examining how these populations may change given current predictions of climate change within the region of interest, 3) determining how soil moisture and temperature interact to determine earthworm reproduction and survival in agroecosystems and 4) determining how management designed to mitigate climate change may influence key soil organisms. The student will be expected to work collaboratively with team members studying weeds, insect pests and plant diseases to contribute to the development of extension and/or K-12 education materials. For more information contact Dr. Jodi Johnson-Maynard (jmaynard@uidaho.edu).

PhD Assistantship in Entomology (1). Seeking a highly motivated and qualified student to pursue the study of insect pests of wheat in the Pacific Northwest, with an emphasis on responses of these insects to climatic variation and long-term climate change. Research will include 1) determining pest responses to adaptation strategies including reduced tillage, altered rotations and amendments, 2) modeling pest distributions in response to projected downscaled climate scenarios, 3) testing hypotheses and parameterizing these models using controlled environment studies, 4) contributing to outreach efforts. The student will be expected to work collaboratively with team members studying weeds, other insect pests, plant diseases and soil ecology and to contribute to the development of extension and/or K-12 education materials. Interaction with other REACCH students and scientists working on diverse aspects of this broadly collaborative project is encouraged. For more information contact Dr. Sanford Eigenbrode (sanforde@uidaho.edu).

PhD Assistantship in Plant Pathology (1). Seeking a highly motivated and qualified student to pursue the study of pathogens (fungi and nematodes) of wheat and other rotation crops across the inland dryland/rainfed cropping zones of eastern Washington and northern Idaho, with an emphasis on the distributions of these pathogens and potential responses to climatic variation and long-term climate change. Research will include 1) monitoring baseline distributions of pathogens across agroclimatic zones, 2) monitoring pathogen populations at field sites with replicated plot studies examining the effects of different cropping practices (tillage, N application, crop rotation) on greenhouse gas emissions, 3) determining the responses of pathogens to environmental conditions under growth chamber or lab conditions, 4) examining relationships among pathogen distributions and agroclimatic variables, and 5) modeling future pathogen distributions based on climate change models. The student will be expected to work collaboratively with team members studying weeds, insect pests and soil ecology to contribute to the development of extension and/or K-12 education materials. For more information contact Dr. Timothy Paulitz (paulitz@wsu.edu).

PhD Assistantships in Applied Agricultural Climatology (2). Seeking highly motivated and qualified students to pursue the study of characterizing projected climate change and its impact on agriculture across the inland Pacific Northwest. Research will include 1) analyzing the suitability of global climate models within the Inland Pacific Northwest, 2) utilizing statistical methods to downscale regional and global climate model across the steep climatic gradient covering inland dryland/rainfed cropping zones of eastern Washington and northern Idaho, and 3) evaluating projected changes in agroclimatic zones and irrigation demands under future climate scenarios. Students will interact with other students and scientists working on diverse aspects of this broadly collaborative project on climate change and agriculture. Prospective students should have a background in quantitative geography or ecology, atmospheric science, or a related earth sciences field. Priority will be given to candidates that have experience with computer programming. For more information contact Dr. John Abatzoglou (jabatzoglou@uidaho.edu) and Dr. Von Walden (vonw@uidaho.edu).

PhD assistantships in Cropping Systems (2). Two assistantships are available to join a collaborative research project working on aspects of agricultural mitigation/adaptation and climate change in the Inland Pacific Northwest. Students will work with mentors to address potential impacts of cropping systems (residue, fertilizer and amendment and rotational intensification/diversification,) management and climate change on C and N cycling and fluxes, water and N use efficiencies across a set of experiments representing a gradation of climates, soils and wheat-based cropping systems. Desired qualifications include a strong background/interest in soil science or agronomy, desire to conduct field research and gain outreach experience as part of our large interdisciplinary climate change team. For further information contact Dr. William Pan (wlp@wsu.edu) and Dr. David Huggins (dhuggins@wsu.edu).

PhD assistantship Agricultural Education (1). The Department of Agricultural Education & 4-H Youth Development is pleased to offer one graduate research assistantship at either the PhD or MS level (PhD preferred). The degree program for the PhD will be through the Department of Curriculum & Instruction in the College of Education directed by faculty in the Department of Agricultural Education & 4-H Youth Development. The MS program will be offered through the Department of Agricultural Education & 4-H Youth Development. The focus of the assistantship will be on Agricultural Education, Agricultural Literacy, and Climate Change Education in K-12 schools. The selected individual will be involved in research projects in K-12 schools, curriculum development, and teacher professional development workshops. For more information, contact Dr. Kattlyn J. Wolf (kwolf@uidaho.edu) or visit www.uidaho.edu/cals/ae4hyd.



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