David L Nieland

Join the new PhD program in Informatics and Computing Program (ICP) at Northern Arizona University! The Ogle Lab at Northern Arizona University
(NAU) has openings for one or more PhD positions in the general area of "ecological synthesis," with specific research foci related to: (1) synthesizing long-term data from field experiments in the context of process-based models of soil CO_2 production and transport to quantify factors governing soil carbon dynamics in semi-arid ecosystems, especially as related to depth- and time-varying contributions of plants and microbes (this work is in collaboration with Elise Pendall at Western Sydney University), (2) integrating individual-based models of tree growth with large literature, forest inventory, and tree-ring databases to quantify variation in tree functional traits across 300+ tree species, and to evaluate the importance of within and among species variation in functional traits for tree growth and mortality (in collaboration with Jarrett Barber in the Department of Mathematics & Statistics at NAU), (3) synthesizing diverse data sources on plant and soil water dynamics to understand the antecedent environmental and ecological factors controlling plant-soil-water relations in arid and semi-arid ecosystems, and to identify the time-scales over which antecedent conditions influence such processes, or (4) synthesizing nitrogen and carbon isotope tracer data to determine rates of nitrogen transformations in hot springs, taxon-specific microbial element transformations using quantitative stable isotope probing, and activities of the central metabolic network in soil communities, including new approaches to determining microbial carbon use efficiency (in collaboration with Bruce Hungate and Paul Dijkstra in the Center for Ecosystem Science and Society at NAU). Dr. Ogle is an Associate Professor in ICP at NAU, with an affiliation in the Department of Biology and the Center for Ecosystem Science & Society.
Students interested in pursuing a PhD with Dr. Ogle should have basic training in mathematics (e.g., at least 2 semesters of calculus) and statistics (e.g., at least one introductory statistics course), and possess good programming skills (e.g., R, Matlab, etc.). As part of their PhD program, students should be interested in strengthening these skills and becoming proficient in Bayesian statistical methods. Interested students should contact Dr. Ogle by email (Kiona.Ogle@nau.edu). Apply as soon as possible. ICP will begin reviewing applications mid/late March for Fall 2016 entry. To apply, go to:
http://www.nau.edu/CEFNS/Informatics-Computing/Academics/