Postdoctoral position: "Quantifying Rangeland Carbon Balance" – Alberta, Canada

There is an immediate opening for a postdoctoral position in photosynthetic carbon flux modeling as part of a study of factors affecting rangeland (prairie grassland) productivity. This position requires interdisciplinary skills involving the use of satellite (MODIS), eddy covariance and field data to model ecosystem processes, notably photosynthetic activity, & productivity. This 12-month position is renewable pending additional funds, and may eventually be combined with other thematically related projects involving other ecosystems in North America.

Primary Location: Edmonton Alberta (Gamon Lab, University of Alberta), Mattheis Ranch, and other field sites primarily in Alberta. Some travel is required to conduct fieldwork, attend meetings and to work with collaborators. Later project stages may include additional (boreal or arctic) locations.

Project Goal: The initial project objective, funded in part by the Rangeland Research Institute (University of Alberta), is to evaluate the influence of weather, cattle, soil type, hydrology, biodiversity, and other factors on prairie carbon uptake and storage. A primary approach will be to apply the light-use efficiency (LUE) model, using satellite and field optical data, with eddy covariance and field harvest data as validation. This model will undergo extensive testing and validation, and will be used to assess the effects of climate variability, weather events, soil, hydrology, and cattle grazing on ecosystem carbon exchange, primary productivity, and carbon sequestration. Depending upon funding opportunities, additional locations or ecosystem types may be included in future stages of the research, with the goal of comparing model parameterizations across ecosystems having different constraints on gas exchange.

Qualifications:
- Ph.D. degree
- Demonstrated experience in the analysis of MODIS, eddy covariance, and/or ground-based optical data.
- Good knowledge of software and programming languages (e.g. ArcGIS, R, Matlab, Python, C/C++, and/or SQL).
- Familiarity with model sensitivity analysis and statistical methods.
- Track record of producing high-quality, peer-reviewed scientific publications.
- Willingness to travel and conduct fieldwork at field research facilities.
- Ability to work and travel in Canada (and possibly US).
- Possession of a valid US or Canadian driver's license (Class 5 or better), and ability to pass the required University of Alberta driving tests.

To apply: For further information, contact John Gamon (jgamon@gmail.com) or complete a preliminary application (http://gamonlab.org). To apply, applicants should include a cover letter describing background and interests, CV, and names and contacts for 3 references.

Application review to begin Nov 15, 2015 and to continue until the position is filled.

The University of Alberta offers appointments on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities and Aboriginal persons.