Postdoctoral regional Earth system modelers

Earth System Science Interdisciplinary Center
University of Maryland College Park

We are seeking two highly motivated postdoctoral researchers to support model system development and forecast applications for the [DAWN project](), an interdisciplinary project focused on making climate research accessible to support agricultural decision-makers in the United States. Thes roles will focus on operating and evaluating coupled regional Earth system models, including climate, hydrology, and agroecosystem processes. Additionally, the postdocs will work with an interdisciplinary group to support the transfer of the resulting forecasts to our existing online decision support infrastructure. Salary is commensurate with experience and University benefits will be included.

The key responsibilities of the postdocs will be to: conduct operational runs with a regional downscaling climate model, using data from operational NOAA seasonal forecasts; 2) conduct operational simulations for county-level crop forecasts using the DSSAT crop model; 3) run scenario analyses, perform sensitivity experiments, and optimize model performance; 4) evaluate model performance, predictive skill, and uncertainty; 5) monitor system and detect/solve abnormal conditions; 6) visualize results and package data for integration into the online decision support system; 7) communicate with interdisciplinary team about the data and results, including explaining to non-experts; 8) develop technical notes, user manuals, and peer-reviewed journal articles.

Applicants should have a recent Ph.D. (within 5 years) in agricultural, hydrologic, atmospheric or climate sciences, and a strong background in model development and application. They must have experience and skill in programming (particularly Fortran), as well as analytical abilities in model evaluation and climate-hydrology-crop interactions. Applicants should also have an interest and willingness to cooperate and communicate with an interdisciplinary team, and contribute to the develop of unique solutions to support moving research to operations.

This is a one-year appointment renewable depending on performance and funding availability.

To apply:

Interested applicants should submit a cover letter, CV, and contact information for three references to Professor Xin-Zhong Liang at xliang@umd.edu. This position is available immediately, and applications will be reviewed on a rolling basis until the position is filled.