



## Postdoctoral Opportunity at UIUC-Princeton: Assimilating Hyper-Resolution Satellite Data into Hydrological Models

One Postdoctoral Researcher Position in the Department of Natural Resources and Environmental Sciences (NRES) at the **University of Illinois at Urbana-Champaign (UIUC)**, full-time, 100% (1-year duration, with possibility of extension, contingent upon performance and funding). This position is funded by an ongoing collaborative project between **UIUC** and **Princeton University**.

**Summary:** The successful candidate will contribute to assimilating novel and **hyper-resolution (10m-1km)** satellite observations of hydrological variables into land surface models to improve field- to regional-scale water resource management in agroecosystems of the US Corn Belt.

Specific responsibilities include: developing and implementing data assimilation algorithms to integrate multi-source remote sensing observations into land surface models; developing/building new modules for the land surface model; conducting regional simulations and seasonal predictions; preparing peer-reviewed publications and education materials; and communicating research at professional meetings.

The successful applicant will be working with **Dr. Kaiyu Guan** ([kaiyug@illinois.edu](mailto:kaiyug@illinois.edu), <http://faculty.nres.illinois.edu/~kaiyuguan/>), **Dr. Ming Pan** ([mpan@princeton.edu](mailto:mpan@princeton.edu), <http://hydrology.princeton.edu/~mpan/>), and a team with strong expertise in satellite remote sensing, ecohydrology, earth system modeling, and high-performance computing. The applicant will be routinely working on various high-performance computing systems, including Blue Waters Supercomputer (<https://bluewaters.ncsa.illinois.edu/blue-waters>), the most powerful supercomputer in the U.S. universities.

**Qualifications:** Applicants should have a Ph.D. in earth and atmospheric science, meteorology, hydrology, environmental engineering, or a closely related field. Research background in earth system modeling (e.g. CLM), data assimilation, remote sensing, and boundary layer meteorology is highly preferred. Strong programming skills (e.g., Python, Fortran, or C in the Linux environment) and prior experience in supercomputing or big data analytical systems is **required**, as the applicant will be working routinely in the high-performance computing environment. Candidates will be considered if graduation with a Ph.D. is expected by the targeted starting date. Proficiency in spoken/written English is mandatory. The appointment is two years (renewed annually) and may be extended, contingent upon the performance. Salary is competitive and commensurate with experience in relevant research.

**Starting Date:** Ideal starting time is **Oct 1, 2018, but can be flexible too**. The position is open till filled.

**Application Process:** To ensure full consideration, qualified candidates must send a cover letter, CV, and contact information of three references via e-mail to **both** Dr. Kaiyu Guan ([kaiyug@illinois.edu](mailto:kaiyug@illinois.edu)) and Dr. Min Pan ([mpan@princeton.edu](mailto:mpan@princeton.edu)). All requested information must be submitted in order for your application to be considered. Incomplete application will not be reviewed. Applicants will be immediately reviewed upon receiving the application while the search may continue until the position is filled. For further information, please contact: Dr. Kaiyu Guan ([kaiyug@illinois.edu](mailto:kaiyug@illinois.edu)), or visit <http://faculty.nres.illinois.edu/~kaiyuguan/> for more information.

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