

**Job Title: Scientist - Satellite Data Assimilation for Hydrology**

**Location: Pasadena, CA**

How much fresh water do we have on Earth? How can we use the unusual vantage point of orbiting satellites to better understand how Earth’s fresh water stores and fluxes are evolving? Your mission—your opportunity—is to bring us closer to answering these questions. If you’re driven to discover, invent, and inspire future generations, you’re ready for JPL.

Located in Pasadena, California, JPL has a campus-like environment situated on 177 acres in the foothills of the San Gabriel Mountains and offers a work environment unlike any other: we inspire passion, foster innovation, build collaboration, and reward excellence.

You can learn more about Earth Science programs at JPL at the following site: <https://science.jpl.nasa.gov/EarthScience>.

You will work as a full-time scientist responsible for combining satellite observations of Earth’s water with state-of-the-art computer models of terrestrial hydrology using data assimilation, machine learning, or other model-data fusion techniques to provide the best possible estimates of water amount and associated changes on Earth’s continents with the goal of better understanding interrelated processes and constraining coupled problems in the water cycle.

You will collaborate closely with science teams at JPL to better harness existing remote sensing datasets from instruments such as [GRACE-FO](https://gracefo.jpl.nasa.gov/), [SMAP](https://smap.jpl.nasa.gov/), [SWOT](https://swot.jpl.nasa.gov/), and [ASO](https://aso.jpl.nasa.gov/) and enhance their observations. You will also contribute to formulation studies of new mission concepts through Observing System Simulation Experiments (OSSE) and help develop next-generation hydrologic models. You will work in a dynamic team environment addressing ground breaking challenges in water quantity and related disasters (e.g. floods, droughts) across multiple spatial and temporal scales. You will be expected to seek research funding, mentor junior researchers, and publish scientific findings in top-tiered peer-reviewed scientific journals as well as presenting results in the related science team meetings, workshops and conferences.

**Qualifications:**

* PhD in hydrology or a related technical discipline.
* Proven experience with the assimilation of remotely-sensed data into hydrologic models of the land surface and/or river networks.
* Advanced knowledge of computer programming for hydrology.
* Excellent oral (including public speaking) and written communication skills.
* Experience working in a team environment.
* Strong interpersonal skills.
* Peer-reviewed publications that demonstrate the areas of required experience mentioned above are necessary.

**Preferred Qualifications:**

* Advanced knowledge of uncertainty quantification.
* Prior experience with running hydrologic models used at NASA, including but not limited to land surface models (e.g. VIC, Noah, CLM) and river models (e.g. RAPID), and with NASA's Land Information System (LIS).
* Ability to perform multi-variable data assimilation using multiple satellites.
* Strong interest in the formulation of new satellite missions.

Please visit https://jpl.jobs/ (**Job ID 2019-10916**) for a full description. Complete applications will include a 1-page cover letter describing the applicant’s vision for their role at JPL in the general field of Earth Science with focus on Terrestrial Hydrology and outlining an interest in satellite mission formulation, a curriculum vita including a bibliography of refereed publications and other research experience, a 2-page statement on research experience and research objectives, and contact information for three professional references.

**Applications received by September 16, 2019 will receive full consideration.**