

Hydrology Post-Doctoral Position
Available at the Center for Western Weather and Water Extremes (CW3E)
Part of UC San Diego's Scripps Institution of Oceanography

Location: La Jolla, CA.

To apply: Please send CV, cover letter and 3 references to Luca Delle Monache (ldellemonache@ucsd.edu)

Deadline: Position is available immediately. Preference will be given to applications received by 6 September 2019, but applicants will be considered until the position is filled.

The Center for Western Weather and Water Extremes, (CW3E; cw3e.ucsd.edu) is a research and applications center established in 2014 at Scripps Institution of Oceanography by its Director, Dr. F. Martin Ralph. CW3E focuses on the physical understanding, observations, weather predictions of extreme weather and water events to support effective policies and practices to improve resilience in the Western U.S. CW3E carries out its goals with a diverse network of research and operational partners at more than ten other institutions across the U.S. Individuals will be joining a group of several existing Postdoctoral scholars and graduate students, and a number of experienced faculty, researchers and staff at Scripps who are involved with CW3E.

CW3E seeks a Postdoctoral researcher to design and contribute to efforts that lead toward improved operational application of distributed hydrologic and hydrometeorological sciences. The position would modify hydrological models to experiment with new methods to improve model response to extreme precipitation events. The candidate should have experience with WRF-Hydro and/or GSSHA (Gridded Surface/Subsurface Hydrologic Analysis) or other similar models, hydrological model development, calibration, application, and verification. Anticipated methodologies include data assimilation (DA) techniques that leverage in-situ soil moisture observations and remotely sensed observations, improving hydrologic model parameterization, calibration and determining the most appropriate unbiased atmospheric forcings for hydrologic model applications from NWP output. Experience in developing observed datasets for forcing hydrologic models and operating hydrologic and hydraulic models in a forecasting mode using NWPs or other sources is desired. Experience and familiarity with water management engineering applications including reservoir management systems is also desired. The position would work with collaborators and continually develop relationships between CW3E and U.S. Army Engineer Research and Development Center (ERDC) as well as NOAA's National Water Center and the California-Nevada River Forecast Center. .

Applicants should have 0-2 years of Postdoctoral experience or be nearing completion of their Ph.D. (estimated within 3 months) and be self-motivated and hard-working. Good written and verbal communication skills, including the ability to produce scientific publications and presentations and meet project milestones are required. Strong

analytical backgrounds with a Ph.D. in hydrology or environmental engineering is preferred. Programming experience working in a Unix environment with experience in scripting languages such as Python, Perl, R and MATLAB is highly desired. Successful applicants should be comfortable independently working with large code libraries and databases, utilizing large meteorological data sources, and producing novel visualizations.

Per normal Postdoctoral appointment policies, all positions are envisioned as being initially for 1-year one year with the possibility of extension to three years. The University of California, San Diego is an AA/EOE.