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

To apply: Please send CV, cover letter and 3 references to Dr. Luca Delle Monache (ldellemonache@ucsd.edu). *If you are attending the AGU Fall Meeting, please email Luca to set up an in-person meeting.*

Deadline: Position is available immediately.

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, and 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. Individuals will be joining a group of about 50 individuals including graduate students, postdoctoral scholars, staff scientists and engineers, and a number of faculty.

CW3E seeks a staff researcher and post-doc 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 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 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.