## Postdoctoral Researcher Position in Integrated Watershed Modeling – UC Riverside

The Department of Environmental Sciences at the University of California Riverside (UCR) invites applications for a two-year postdoctoral researcher position (with potential extension based on performance) to investigate mechanisms controlling groundwater recharge on hillslopes and headwater catchments. The successful candidate will collaborate with scientists from UCR and the USDA ARS Sustainable Agricultural Water Systems (SAWS) research unit in Davis. This position offers outstanding professional development opportunities within a highly collaborative, multidisciplinary environment.

**Roles and Responsibilities:**

- Lead data collection on hillslope road infrastructures (e.g., Sierra Nevada) and quantify runoff captured in roadside channel systems.
- Prepare field sites, install instrumentation, and analyze hydro-meteorological, geologic, and soil data to support pilot managed aquifer recharge experiments.
- Develop and apply numerical models of surface, saturated, and unsaturated flow (e.g., coupled K2HYDMOD-WS, MIKE SHE, FullSWOF) to evaluate flow processes and assess impacts of slope modifications on infiltration, runoff, soil water storage, and connectivity to deeper aquifers.
- Conduct hydrologic flow systems and transit time modeling to compute water balance partitioning.
- Produce high-quality scientific and technical outputs, including journal articles, conference papers, reports, presentations, and graphics.
- Support proposal development to secure external research funding.

**Qualifications:**

- Ph.D. in Hydrology, Civil and Environmental Engineering, or a related field with specialization in physical hydrology or hydrogeology.
- Ph.D. must have been received within the last five years from an accredited institution.

**Skills:**

- Strong programming skills (Fortran, Python, MATLAB, and/or C++).
- Solid understanding of subsurface flow processes and hydrologic modeling. Experience with HYDRUS, KINEROS2, FullSWOF, or MIKE SHE.
- Proficiency in GIS (ArcGIS) and spatial data analysis.
- Experience with high-performance and parallel computing.
- Familiarity with ML/AI applications is a plus.
- Proven record of high-quality publications.
- Experience working in collaborative research environments.

**Application Materials:**

- Cover letter describing research experience and interests.
- Curriculum vitae including education, research experience, publications, and grant involvement.
- Contact information for three academic referees (names, emails, phone numbers).

**Contact:**

Applications or informal inquiries can be sent to Drs. Hoori Ajami (hooria@ucr.edu), and Menberu Meles (Menberu.Meles@usda.gov). The initial appointment is for one year with the possibility of annual renewal based on performance and the availability of funds. Applications will be accepted until the position is filled.