



Postdoctoral Positions in Linking Catchment Scale Geomorphic Processes, Channel Morphology, and Ecohydraulics across California

The University of California, Davis and Utah State University invite applications for two postdoctoral positions with an initial 12-month appointment (with the possibility of a second year extension pending performance) to research linkages between catchment terrains, river archetypes, and ecohydraulics. River corridor patterns and features such as channel bed and width undulations influence hydro-geomorphic dynamics and dependent river ecosystem functions. Prediction of these channel elements and their relationships with larger geospatial controls across a range of scales is an important scientific problem with societal ramifications.

The multi-institution project team is working with natural resource managers in the State of California to design environmental flows that support ecological processes across the diversity of hydro-geomorphic settings and river ecosystems in the region. For a region of this size, it is essential to ascertain ways of using information from data rich locations and spatial scales to inform those that are data poor using targeted data collection and appropriate modeling techniques. We have already collected reach-scale geomorphic information at nearly 1000 field sites across nine water management regions in California. In addition, California has growing airborne LiDAR coverage of river corridors for "riverscape" investigations at both high resolution and large area. The postdoctoral candidate(s) will use a range of numerical and statistical techniques (e.g. hydrodynamic modeling, LiDAR data processing, coding, and data-science modeling) to extract geomorphic and ecohydraulic insights that can guide development of environmental flows. The successful candidate will interact directly with diverse researchers, stakeholders, and natural resources managers.

Candidates must have a PhD in Geomorphology, Hydrology, Civil Engineering, Applied Mathematics, Statistics, Physical Geography, or related fields. Extensive knowledge in fluvial geomorphology, geospatial and statistical analysis, and computer programming are highly preferred. Proven experience with open-source computing resources as well as excellent data management skills and a journal publication track record are also desired. Rank and salary will be commensurate with experience. USU is a highly collaborative community and a true research hub for water science <water.usu.edu>. Great facilities, equipment, and a wealth of expertise are available. Set in Northern Utah, outstanding outdoor recreational opportunities abound in the nearby mountains and proximate region.

To apply, please **send cover letter, CV, and contact information for three references to Prof. Samuel Sandoval** by e-mail at samsandoval@ucdavis.edu.