

Junior Specialist – Time series data researcher

Search Plan & Position Description

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POSITION DESCRIPTION

We are seeking a highly motivated and enthusiastic individual to assist on multidisciplinary and innovative research at UC Davis Water Management Lab (<http://watermanagement.ucdavis.edu/>).

Under the direction and advisement of the Dr. Samuel Sandoval Solis (Principal Investigator) and Dr. Herve Guillon the candidate will:

Research (90%)

The Junior Specialist will work with Dr. Sandoval and Dr. Guillon to develop research related to natural flow regime and time series data analysis, data filtering and identification of key streamflow metrics and seasonal components to design environmental flows for sustaining river ecosystems throughout the State of California. This effort will include the following activities:

1. Develop research in time series streamflow data throughout the state of California. This research will require knowledge on typical statistical analysis and innovative statistical tests, filters and tools to identify different flow components of natural streamflow data. Experience in time series data filtering techniques and best practices for data management and documentation are highly encouraged.
2. Critically read scientific literature to inform cutting-edge and best practice research protocols.
3. Participate in the development of scientific products for dissemination (e.g., reports and peer-reviewed journal articles).
4. Develop and calibrate statistical tools to filter, single out, compile and summarize key flow events beneficial for river ecosystems
5. Assist in the statistical analysis designed by the Dr. Sandoval, Dr. Guillon and collaborators.
6. Independently perform programming tasks and statistical analysis, develop communication methods for working collaboratively with collaborators at a distance
7. Implement best practices for data management, track changes for computational programs, documentation of computational process and statistical calculations, quality assurance and quality control
8. Contribute to the development of the functional flows calculator (FFC), an free and open source tool for estimating functional flow metrics from unimpaired reference streamflow data
9. Assist towards the development of determining flow criteria for the state of California

Professional Competence (5%)

The Junior Specialist will participate in the development of scientific products for dissemination. This includes contributions to conference posters (e.g. American Geophysics Union), attendance at local conferences and meetings (such as those hosted by the California State Water Resources Control Board), and publication of peer reviewed journal articles (e.g. those in hydrology and computational sciences).

University and Public Service (5%)

Provide mentorship for undergraduate students and scientists working in the Water Management Lab and collaborators laboratories on the research, statistical analysis and tools develop. Participate in the development of written reports and oral presentations to the California State Water Resources Control Board.

BASIC QUALIFICATIONS:

- Bachelor degree in computer science, hydrology, ecology, economic, or any other related field with a minimum of 2 years' experience computer programming
- Experience in time series data analysis and data filtering for identification of time-dependent events
- Demonstrated experience with technical field methodologies or instruments for time series data analysis, computer and website programming
- Experience in programming in Python and/or R, provide examples of code in Python with OOP approach to eliminate duplicated code and improve maintenance capability.
- Experience developing and documenting computer programming and websites
- Excellent problem-solving and skills to overcome technical challenges

PREFERRED QUALIFICATIONS:

- Backend developing experiences working with Node, Express, Sequelize, Postgres and GIS. (edited)
- Frontend developer with experiences to work with D3, Mapbox and Leaflet to dynamically render GIS data.
- Experience in best practices for documentation of programming codes and statistical analysis
- Experience in website development

SALARY RANGE: Step II - \$19.48 hourly

POSITION AVAILABLE/CLOSING DATE: For full consideration, apply by April 20, 2018 (subject to change depending on date of approval on Search plan). Applications received after this date will only be considered if the position has not yet been filled.

TERM OF APPOINTMENT: 75% for 2 years (starting latest May 1st, 2018) with the potential for increase to 100% time upon satisfactory progress.

TO APPLY: To apply, please go to the following link: <https://recruit.ucdavis.edu/apply>. Applicants should submit **cover letter** indicating how you meet the minimum and desirable qualifications, their **most recent CV** and **contact information for 2-3 recent references**. All letters of recommendation will be treated as confidential per University of California policy and California state law. Documents/materials must be submitted as PDF files.

QUESTIONS: Please direct questions to Anna Lee via email to metroexec@ucdavis.edu

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy see: <http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>.

Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986. Certain UCSC positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available <http://www.uscis.gov/e-verify>.

UC Davis is a smoke & tobacco-free campus (<http://breathefree.ucdavis.edu/>). If you need accommodation due to a disability, please contact the recruiting department.