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Postdoctoral Scholar Position on Computational Fluid Dynamics Modeling of Wildfires'

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Job #JPF07119

- Civil and Environmental Engineering / Henry Samueli School of Engineering / UC Irvine

APPLICATION WINDOW

Open date: August 26th, 2021**Next review date:** Saturday, Sep 25, 2021 at 11:59pm (Pacific Time)

Apply by this date to ensure full consideration by the committee.

Final date: Saturday, Sep 25, 2021 at 11:59pm (Pacific Time)

Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled.

POSITION DESCRIPTION

The Department of Civil and Environmental Engineering at the University of California, Irvine invites applications for a Postdoctoral Scholar position beginning Fall 2021.

We are looking for a motivated postdoctoral researcher interested in a research project studying wildland fires from a computational fluid dynamics (CFD) perspective, especially focusing on modeling prescribed fire behavior. The project will involve collecting field experimental data using a variety of techniques such as unmanned aerial vehicles (UAVs) and ground-based sensors to design and validate prescribed fire treatments. Additionally, multi-fidelity models such as large-eddy simulations (LES) incorporating fire-atmosphere interactions will be used to quantify fuel treatment effectiveness, ignition scenarios, and air quality impacts under a range of meteorological conditions. The modeling activities will help develop fast-running decision support tools for safe prescribed fire operations. The work will also be extended to develop efficient and accurate wildland fire behavior models in general.

The candidate should have a strong publication record, strong analytical skills and a background in turbulent fluid mechanics/hydrology/weather and climate models/atmospheric dynamics and computer programming skills in Fortran/Python/MATLAB. Experience in high-performance computing, remote sensing, and handling large data sets is preferable. Responsibilities will include designing and running numerical experiments, collecting field data during experimental campaigns, analyzing data from past events and measurement campaigns, developing process-level understanding, and leading peer-reviewed publications. Minimum qualifications include a Ph.D., in civil engineering,

atmospheric science, fluid dynamics or a related field from an accredited university.

The postdoctoral scholar will primarily work with Professor Tirtha Banerjee at the Department of Civil and Environmental Engineering, UC Irvine. There will be opportunities to collaborate widely across other research groups at UC Irvine, other Universities, the US Department of Energy National Labs and the US Forest service.

Initial appointment will be for 12 months and will be renewable for up to two years, subject to performance and availability of funding. Salary will commensurate with qualifications and experience.

Applicants should submit a cover letter, curriculum vitae, publications, and contact information for three references. Apply by submitting your application to our online RECRUIT system at: <https://recruit.ap.uci.edu/JPF07119> (<https://recruit.ap.uci.edu/JPF07119>)

Screening of applicants will begin immediately and will continue until the position is filled.

Department: <http://engineering.uci.edu/dept/cee> (<http://engineering.uci.edu/dept/cee>)

QUALIFICATIONS

Basic qualifications (required at time of application)

This position requires a Ph.D. degree in civil engineering, atmospheric science, fluid dynamics or a related field from an accredited university.

APPLICATION REQUIREMENTS

Document requirements

- Curriculum Vitae - Your most recently updated C.V.
- Publications - Publications or link to publications
- Cover Letter (Optional)

Reference requirements

- 3 required (contact information only)

Apply link: <https://recruit.ap.uci.edu/JPF07119> (<https://recruit.ap.uci.edu/JPF07119>)

CAMPUS INFORMATION

The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer advancing inclusive excellence. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status, or other protected categories covered by the UC nondiscrimination policy.

JOB LOCATION

Irvine, CA

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The University of California, Irvine is committed to providing reasonable accommodations to applicants with disabilities (</accessibility>).

See our Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act Annual Security Reports (<http://www.ucop.edu/ethics-compliance-audit-services/compliance/clery-act/clery-act-details.html>)

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