



**UNIVERSITY OF CALIFORNIA OBSERVATORIES  
POSTDOCTORAL RESEARCHER  
LABORATORY FOR ADAPTIVE OPTICS**

The [University of California Observatories](#) seeks a postdoctoral researcher in the area of adaptive optics instrumentation. The candidate will work with a team of astronomers, AO scientists, engineers, and student researchers developing the next generation of AO systems for astronomy, including components such as real-time control, deformable mirrors, wavefront sensors, and guide-star lasers, and overall system design, analysis, and science operation planning.

The Laboratory for Adaptive Optics (LAO) is a research group at the University of California Santa Cruz and is a component of the University of California Observatories. Researchers at UC Observatories can apply for observing time on the W. M. Keck Observatory's telescopes, and on those at Lick Observatory where the Shane 3-meter telescope is outfitted with the new "ShaneAO" laser guide star adaptive optics system. This AO system is actively used for astronomy and is also a research facility for AO development. On campus the Laboratory for Adaptive Optics consists of a large (2200 sq ft) research facility which has experimental testbeds for AO systems and state-of-the-art equipment for characterizing optics, electro-optic components of AO systems, and lasers.

Current research directions at the Laboratory for Adaptive Optics include developing technology for the next generation of laser tomography AO systems on large telescopes. Goals include moving toward the ability to image at the diffraction limit at visible wavelengths. The LAO is interested developing high actuator count wavefront correctors for such systems. The LAO performs simulations and testbed experiments to develop and evaluate system designs and establish wavefront error models. There is particular interest in developing algorithms for real-time control, for accurate system modeling, for operations scenarios, and for post-processing, PSF reconstruction, and data pipelines for AO corrected images and spectra. The LAO is engaging in developing next-generation fiber lasers for AO, including development of fiber for high-power amplification for sodium guide stars, the transport of laser light via fiber, the modulation of pulses to optimize sodium guide star return, and the supporting sodium atomic physics modeling and simulation. The LAO is in the final stages of preparing a fiber laser for installation at Lick Observatory next year, where on-sky model validation experiments will be performed.

UCSC strives to embrace diversity in all its forms, and to be an inclusive community that fosters an open, enlightened & productive environment.

**RANK:** Postdoctoral Scholar - Employee

**BASIC QUALIFICATIONS:** A Ph.D. or equivalent foreign degree in astronomy, physics, or engineering.

**PREFERRED QUALIFICATIONS:** A track record of publications and/or Ph.D. research that involve instrumentation. Skills in: optics design, laboratory experimentation, electronics, computer languages and tools, real-time control systems, lasers, data analysis and data pipelines. Ability to innovate and take ideas to practice. Clear understanding of the global state of AO research. A successful candidate will have strong interpersonal skills and the ability to work effectively with a team.

**POSITION AVAILABLE:** As soon as possible after closing date. Ph.D. in hand at time of appointment.

**SALARY:** Commensurate with qualifications and experience.

**TERM OF APPOINTMENT:** Initial appointment is for one year, with possibility of extension to three years; annual reappointment contingent upon positive performance review and availability of funding. For appointments within the University of California, a total duration of an individual's postdoctoral service may not exceed five years, including postdoctoral service at other institutions.

**TO APPLY:** Applications are accepted via the UCSC Academic Recruit online system, and must include: 1) An application letter containing a statement of interest and qualifications, including discussion of how the candidate fits the above-described requirements for this position; 2) A current CV; 3) a list of publications; and 4) three letters of reference. \*Documents must be submitted as PDF files.

Apply at <https://recruit.ucsc.edu/apply/JPF00339>

Refer to Position #**JPF00339-16T** in all correspondence.

\*All letters will be treated as confidential per University of California policy and California state law. For any reference letter provided via a third party (i.e., dossier service, career center), please read UCSC's confidentiality statement at <http://apo.ucsc.edu/confstm.htm>.

**REVISED CLOSING DATE:** Review of applications will begin on **January 11, 2017**. For full consideration, applications should be completed by this date. Position will remain open until filled, but no later than 6/30/17

---

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. UC Santa Cruz is committed to excellence through diversity and strives to establish a climate that welcomes, celebrates, and promotes respect for the contributions of all students and employees. Inquiries regarding the University's equal employment opportunity policies may be directed to: Office for Diversity, Equity, and Inclusion at the University of California, Santa Cruz, CA 95064; (831) 459-2686.

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 [here](#) or from the Academic Personnel Office (APO) at (831) 459-4300.

UCSC is a [smoke & tobacco-free campus](#).

If you need accommodation due to a disability, please contact the Academic Personnel Office at [apo@ucsc.edu](mailto:apo@ucsc.edu) (831) 459-4300.