Postdoc & Ph.D. position in Atmospheric Sciences at the University of Hawai‘i at Mānoa

The Atmospheric Sciences Department within the School of Ocean and Earth Science and Technology at the University of Hawai‘i at Mānoa invites applications for (1) Graduate Student and (1) Postdoctoral Research Scientist to conduct research in the fields of atmospheric and climate data science. The successful candidates would join a project funded by NSF, whose broad goals are aimed at integrating climate and data science to improve situational awareness in Hawai‘i through climate data products and models, and to integrate technology to deliver actionable science to stakeholders.

The project team consists of Dr. Giuseppe Torri, Dr. Alison Nugent, a graduate student and a postdoctoral scientist along with support from University of Hawai‘i’s Information Technology Services and computer scientists. This exciting project will use numerical model simulations to improve understanding of the climate of the Hawaiian Islands and its coupling with the land surface. Research objectives include determining how variations in atmospheric and land surface conditions influence weather processes affecting clouds and rainfall in the Hawaiian Islands, and researching potential changes in cloud water interception and shifts in rainfall patterns across climate change projections.

The successful candidates will work with the Weather Research and Forecasting (WRF) model to assess the sensitivity of cloud base height to changes in land use, identify the primary drivers for climate-change driven shifts in rainfall patterns, and optimize rainwater quantification using machine learning to assess the accuracy of numerical models for simulating the timing and amount of rainfall on small temporal and spatial scales. The team members will work together to achieve these goals and will contribute to the creation of a strong research enterprise that will help Hawai‘i meet the existential threats posed by climate change.

Key Responsibilities:

- Conduct independent research
- Publish in peer-reviewed journals
- Present results at national and international conferences
- Contribute to the diverse and collaborative environment of the Atmospheric Sciences department

Ph.D. Student Applicant

The Graduate Research assistantship is for a maximum of 5 years, dependent initially on acceptance into the Atmospheric Sciences program at the University of Hawai‘i at Mānoa, and afterward dependent on continued progress.

Required Qualifications:

- A bachelor degree in a STEM discipline (e.g., atmospheric sciences, mathematics, physics, computer science, or a related discipline)
- Interest in atmospheric science, cloud processes, and climate change
- Strong oral and written communication skills, including speaking, reading, and writing English fluently

Preferred Qualifications:

- Excellent communication and interpersonal skills
- Strong background in numerical methods and coding
- Ability to work effectively under pressure, in settings of social and intellectual diversity, and across disciplinary boundaries in a collaborative environment

To apply: Please fill out this Google Form where you will be asked to upload: (1) cover letter, (2) curriculum vitae, (3) undergraduate transcript, (4) a writing sample, and (5) names and contact information for three references all combined into a single pdf.

Starting date: Aligning with the academic calendar, starting in Fall 2022, Spring 2023 or at the latest Fall 2023.

Postdoctoral Applicant

The Postdoctoral position will extend for a maximum of 3 years, with each year dependent on continued progress.

Required Qualifications

- A Ph.D. in a geoscience field, including atmospheric sciences, geophysics, environmental science, civil and environmental engineering, or a related discipline
- Demonstrated experience with atmospheric modeling
- Strong scientific computing skills (e.g., data analysis, and data visualization)
- Experience publishing peer-reviewed publications
- Strong oral and written communication skills, including speaking, reading, and writing English fluently

Preferred Qualifications:

- Experience working with climate change scenarios
- Experience using machine learning algorithms to describe physical processes
- Experience using high-performance computing environments and advanced computational skills (e.g., scientific Python packages, machine learning, algorithm development, fluency in Fortran/C)
- Ability to work effectively under pressure, in settings of social and intellectual diversity, and across disciplinary boundaries in a collaborative environment
- Familiarity/experience with regional numerical models, such as the Weather and Research Forecasting (WRF) model

To apply: Please fill out this google form where you will be asked to upload: (1) cover letter, (2) curriculum vitae including a list of publications, (3) an example publication, and (4) names and contact information for three references all combined into a single pdf.

Starting date: as soon as possible, preferably by August 15, 2022.

Application Deadline: Initial review of applications will begin upon receipt and will continue until the positions are filled.

For questions, contact Giuseppe Torri (gtorri@hawaii.edu) and Alison Nugent (anugent@hawaii.edu). If you are not able to fill out a Google Form, please email your application materials instead.

We value diversity and inclusion, and encourage applications from members of underrepresented minority groups. The University of Hawai'i is an equal opportunity/affirmative action institution and is committed to a policy of nondiscrimination on the basis of race, sex, gender identity and expression, age, religion, color, national origin, ancestry, citizenship, disability, genetic information, marital status, breastfeeding, income assignment for child support, arrest and court record (except as permissible under State law), sexual orientation, domestic or sexual violence victim status, national guard absence, or status as a covered veteran. Individuals with disabilities who need a reasonable accommodation for the application or hiring process are encouraged to contact the EEO/AA coordinator(s) for the respective campus. Employment is contingent on satisfying employment eligibility verification requirements of the Immigration Reform and Control Act of 1986; reference checks of previous employers; and for certain positions, criminal history record checks. In accordance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, annual campus crime statistics for the University of Hawaii may be viewed at: http://ope.ed.gov/security/, or a paper copy may be obtained upon request from the respective UH Campus Security or Administrative Services Office.