

Postdoc Position at the University of Hawai'i

The Torri Research Group at the University of Hawai'i at Mānoa is a dedicated team of researchers and students focused on atmospheric convective dynamics and extreme weather events. We are excited to announce a postdoctoral position within our group to study wildfires and pyrocumulus clouds. This position is a unique opportunity to advance scientific knowledge and contribute to societal understanding and managing wildfires.

Working with us, you will have the opportunity to collaborate with various multidisciplinary teams across the University of Hawai'i and engage with a wide range of stakeholders, providing you with great opportunities for your professional growth and networking. In addition, you will find a collaborative and inclusive environment where all contributions are valued and innovative ideas thrive. We are as committed to research excellence as we are to the growth and well-being of each team member.

Position Description

The successful candidate will use a combination of high-resolution numerical simulations and Lagrangian diagnostics to study processes that shape the dynamical features of pyrocumulus and pyrocumulonimbus clouds, such as updrafts, downdrafts, and surface outflows. The simulations will be performed in idealized settings and for some case studies, such as the Lahaina fires on Maui in August 2023.

The main goal of the research is to improve our understanding of the physical processes that affect the formation and life cycle of pyrocumulus clouds in different environments and potentially help to improve forecasting capabilities. In addition, this research also aims to provide a better understanding of the dynamics of wildfires in the Hawaiian Islands.

The position is for an initial period of two years, with the possibility of a third-year extension based on the candidate's performance and funding availability.

Minimum Qualifications

- PhD from an accredited college or university in Atmospheric Sciences or related field
- One to three (1-3) years of experience in:
 - conducting research running numerical models, such as WRF;
 - analyzing numerical simulations and observational data, especially meteorological data;
 - writing technical reports and publishing manuscripts in peer-reviewed journals;
 - presenting scientific research results to scientific audiences and general audiences.
- Strong knowledge of at least one high-level programming language (e.g., Fortran, C, C++).
- Good knowledge of climate dynamics and atmospheric convection. Knowledge of wildfire processes.

- Excellent oral and written communication skills.

Desirable Qualifications

- Prior research experience related to wildfire science or extreme weather events. Extensive and documented experience with high-performance computing (HPC) environments and large datasets.
- Documented experience with Lagrangian particle models and diagnostic techniques.
- Demonstrated ability to work independently and as part of a collaborative research team.
- Creative problem-solving skills and a solid motivation to tackle challenging research questions.

Application Instructions

To apply for this position, go to www.rcuh.com, click "Job Posting", and look for the "ATMO Postdoctoral Researcher – 224161" job. Once you find the position, please upload 1) a cover letter, 2) a resume/CV, 3) a list of professional references, and 4) a copy of your degrees/transcripts/certificates. Review of applications will begin on 04/10/24 and continue until the position is filled. The anticipated start date is 06/01/24, but there is flexibility for the right candidate. The University of Hawai'i is an equal opportunity employer and encourages applications from women, minorities, persons with disabilities, and veterans.

For more information about our research group or this position, please visit the [group's website](#) or contact its director, Prof. Giuseppe Torri, directly at gtorri@hawaii.edu.