



HAMPTON UNIVERSITY HAMPTON, VA

TITLE OF POSITION: Postdoctoral Research Associate

Job description: The Center for Atmospheric Sciences at Hampton University (HU) seeks candidates for a postdoctoral research associate position studying the fluid dynamics and predictability of extreme weather through utilization of data assimilation and artificial intelligence techniques. The candidate will work as part of the HU Severe Weather Research Center (SWRC), which houses several remote sensing instruments including a dual-polarized, Doppler phased array radar at X-band, scanning Doppler lidars in collaboration with NASA Langley and a direct broadcast antenna for receiving real-time satellite data. These unique instruments provide information on atmospheric state variables at the scales of large turbulent eddies in the boundary layer and associated with convection. The candidate will be responsible for utilizing the data from these instruments to understand their value in predicting turbulence associated with extreme weather.

The candidate will work with Professor Stephen Guimond and members of the SWRC and Geophysical Fluid Dynamics Group (GFDG). The GFDG studies the dynamics of extreme weather using all available tools: theory, numerical simulations, and observations. Special attention is paid to using numerical models and remote sensing data to study the underlying mechanics of extreme weather systems.

The position is listed for two years at a competitive salary with a full benefits package subject to a formal review each year. Career growth into research professor positions is possible for motivated candidates.

Job Duties: Utilize data assimilation and/or artificial intelligence techniques to study the predictability of extreme weather systems on the scales of turbulence. Publish new research findings in high-quality journals, present at national conferences and develop proposals to various agencies.

Qualifications: Ph.D. in Atmospheric Science, Applied Mathematics, Mechanical Engineering, Physics, or a related field. A record of high-quality, peer-reviewed publications is essential. Candidates with experience utilizing the Joint Effort for Data assimilation Integration (JEDI) system is highly desired.

Requirements: The candidate must be fully proficient in at least one low-level programming language (preferably Fortran), one high-level programming language (e.g., Python or Matlab) and Unix. The candidate must have excellent oral and written communication skills and be able to interface between applied mathematics, computer science and atmospheric physics.

To Apply:

Please submit a cover letter, curriculum vitae, and a completed [application for faculty employment](#) to:

Dr. Stephen Guimond at stephen.guimond@hamptonu.edu. Interested candidates are highly encouraged to reach out to Dr. Guimond before submitting a full application. Positions can start as soon as possible. A formal review of applications will begin on April 20, 2026.