



Ocean Dynamics and Prediction

High Performance Computing

The Naval Research Laboratory has openings for post-doctorate and Ph.D. researchers oriented to solving complex computational problems in high performance computing platforms. Computing the global ocean circulation at small scales to represent mesoscale eddies, tides, fronts, surface layer properties, and a wide range of additional ocean features requires efficient computational implementation. These are difficult problems that must run efficiently on thousands to tens of thousands of processors at a time within MPI and OpenMP frameworks. Coupling numerical models of different dynamical systems such as the ocean, surface waves, ice, atmospheric, and land processes requires an extensive layer of interactions between the models. Solving these problems requires careful implementation to represent the physics and achieve high efficiency in computations. We have several ongoing research efforts in these areas that need new research advancements. This work is long term, and the end goal is to develop cutting edge technology systems that transition to US Navy operational forecast centers.

Candidates are encouraged to apply with expertise in one or more areas of oceanography, ocean modeling, wave modeling, ice modeling, coastal modeling, computational fluid dynamics, ensemble systems, HPC, MPI, applied mathematics, meteorology, physics, data analysis, numerical analysis, data assimilation, meteorology, and satellite and in situ data processing.

This is an excellent opportunity to work with some of the best modelers and data analysts in the ocean community. The Naval Research Laboratory has access to the major supercomputer sites in addition to excellent local computer resources. The laboratory at Stennis Space Center is collocated with the Naval Oceanographic Office and Fleet Numerical Meteorology and Oceanography Center, which are the largest national operational forecast center for oceanography.

For a quick overview of some of the research publications within the NRL Ocean Dynamics and Prediction Branch at Stennis Space Center and systems transitioned to operations, visit the web site: <https://scholar.google.com/citations?user=atCqUG8AAAAJ>

Annual postdoctoral salary is \$79,363. Applicants must be a US citizen or US permanent residents at time of application. NRL is an equal opportunity employer. Send resume and references to:

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MINIMUM REQUIREMENTS

Security clearance is not required, but applicants must be eligible for a DoD Security Clearance.

JOB BENEFITS

The post doctorate programs at NRL offer benefits including health and life insurance.

NRL is an Equal Opportunity Employer

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