

Postdoctoral Researcher

Regional coupled modeling for multi-year prediction on the Northeast U.S. Continental Shelf

NOAA's Northeast Fisheries Science Center (NEFSC), in collaboration with Woods Hole Oceanographic Institution (WHOI) and NOAA's Earth System Research Laboratories (ESRL), seeks an energetic and creative postdoctoral researcher to work on a NOAA-funded project to investigate multi-year predictability of physical ocean conditions on the Northeast U.S. Continental Shelf (NES) using a new regional coupled model. The successful candidate will join an interdisciplinary team of scientists, including Young-Oh Kwon, Hyodae Seo, and Ke Chen (WHOI), Paula Fratantoni and Vince Saba (NEFSC/GFDL), and Michael Alexander (ESRL).

The NES Large Marine Ecosystem supports some of the most commercially valuable fisheries in the world and has experienced dramatic ecosystem change in response to fishing pressure, climate variability, and climate change, the combined effects of which create a significant challenge for fisheries management in this region. Improved understanding of the processes affecting the predictability of the physical environment on the NES and better regional modeling capabilities are critical components of climate-ready fisheries management in the region. This project will investigate the 1-5 year predictability of physical ocean conditions on the NES using a new state-of-the-art, coupled ocean-atmosphere regional model in combination with statistical analyses of global climate model simulations and observational datasets. Specifically, we aim to investigate the physical processes linking large-scale climate phenomena, such as the Pacific Decadal Oscillation, North Atlantic Oscillation, Atlantic meridional overturning circulation, and Gulf Stream variability, with physical conditions on the NES and to determine their implications for multi-year predictability in the region.

DESIRED CANDIDATE:

- PhD degree (or nearly-completed) in Physical Oceanography, Atmospheric Science, Climate Science, or other relevant disciplines.
- Prior experience in regional (or global) ocean and/or atmosphere modeling, preferably using the ROMS (Regional Ocean Modeling System) and/or WRF (Weather Research and Forecast model).
- Understanding of coastal circulation and its relationship to large-scale climate variability in the Northwest Atlantic.
- Experience with statistical analyses of large observational datasets and numerical model simulations.
- Strong written and oral communication skills, as evidenced preferably through publications in peer-reviewed scientific literature and presentations to a variety of audiences.

The postdoctoral researcher (PR) will be hired through the National Research Council Research Associateship Program (NRC RAP; <https://sites.nationalacademies.org/PGA/RAP/>) to work at the NEFSC. In addition, the PR will be appointed as a WHOI Postdoctoral Fellow to work at WHOI.

The PR will be located in Woods Hole, MA with access to both the NEFSC and WHOI. The position has an annual salary of \$56,000 and is eligible for the benefits described on the NRC RAP webpage. This position is full-time for one year with annual renewal possible up to three years. Renewal of the appointment is conditional on the PR making satisfactory progress during the prior year(s) and continuation of funding from NOAA. The start date is flexible, and the successful candidate could begin as early as March 1, 2021.

Qualified applicants should contact the PIs before applying to the NRC RAP by sending a cover letter, CV, up to three relevant publications, and contact information for at least three professional references to Young-Oh Kwon (yokwon@whoi.edu). Review of applications will begin as soon as they are received, and will continue until the position is filled. Priority will be given to the applications received before September 1, 2020.

For further information please contact Young-Oh Kwon (yokwon@whoi.edu).