Center for Ocean–Atmospheric Prediction Studies
The Florida State University

Summary

The Center for Ocean-Atmospheric Prediction Studies at Florida State University seeks a highly motivated Postdoctoral Researcher interested in solving Oceanography problems with state-of-the-art Scientific Machine Learning methods. This researcher will conduct novel research in an environment that fosters multi-disciplinary, collaborative research.

The appointment is nominally for two years, with the third year implicit, but based on mutual satisfaction and continuing availability of funds. Salary for Postdoctoral positions depends on years of experience post-degree.

Salary

$48,000 - $58,000

Requirements

- Ph.D. in Computational Science, Oceanography, Computer Science, Applied Mathematics, or related area.
- Experience in building and training Deep Learning models.
- Demonstrably effective communication and interpersonal skills.
- Ability to work productively both independently and as part of an interdisciplinary team, balancing objectives involving research and code development.

Desired:

- Experience working with numerical ocean models.
- Strong background in scientific machine learning and data analysis with Python and/or Julia.
- Experience with Bayesian ML, GANs, GNNs, and/or other DL methods.
- Experience with Physics-informed neural networks (PINNs).

Documents

- **CV showing relevant experience**. Your resume must include information about your education, paid and nonpaid work experience related to this position, including job title, duration of employment (mm/yy-mm/yy), duties, and accomplishments.
- **Summary of the doctoral dissertation and/or past research experience.**
- **Statement of research interest.**
- **Contact information of three references.**

Duties

As a Postdoctoral Researcher in Machine Learning/Computational Science, you will perform the following duties:

- Perform high-quality research in machine learning methods applied to oceanography.
- Publish the obtained results in refereed journals.
- Present new findings at national and international conferences.
- Prepare and submit proposals to government agencies like the Office of Naval Research, the National Science Foundation, the National Oceanic and Atmospheric Association, and the National Aeronautics and Space Administration to obtain external funding.

Specific research objectives from which this position is receiving funding and are currently being investigated in our group are:

- Improve data assimilation in ocean models with machine learning.
- Use machine learning for accurate and efficient representation of submesoscales ocean processes, including frontogenesis in the surface layer, topographic wakes, and instabilities of mesoscale eddies and meanders.
- Improve existing short-to-medium and long-range operational forecasts of the Gulf of Mexico dynamics through enhanced modeling techniques, assimilation of near-real-time data, and machine learning-based prediction tools to increase safety in offshore energy industry operations, support fisheries research and inform stock assessment, and advance hurricane forecasting capabilities

Location

Florida State University. Tallahassee, Florida, United States.

One of the nation's elite research universities, Florida State University preserves, expands, and disseminates knowledge in the sciences, technology, arts, humanities, and professions while embracing a philosophy of learning rooted in the traditions of the liberal arts and critical thinking. Founded in 1851, Florida State University is the oldest continuous site of higher education in Florida. FSU is a tradition-based community that fosters research, encourages creativity, and embraces diversity. At FSU, there’s the excitement of being part of a vibrant academic and professional community, surrounded by people whose ideas are shaping tomorrow’s news!

COAPS is an equal opportunity/affirmative action employer. All qualified applicants will receive consideration for employment without regard to sex, gender identity, sexual orientation, race, color, religion, national origin, disability, protected veteran status, age, or any other characteristic protected by law.

Relocation expenses reimbursed

No

Appointment type

OPS/temporary job. One-year appointments with the possibility of renewal for up to three years based upon satisfactory job performance.

Work Schedule

Full-time

Benefits

A career with Florida State University provides employees with a comprehensive benefits package.

How to Apply

Applications will be accepted until the position is filled.
Please send your documents to Dr. Olmo Zavala Romero at ozavala@coaps.fsu.edu .