



Job Announcement:
CARICOOS Data Management Coordinator

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Overview

The Caribbean Coastal Ocean Observing System ([CARICOOS](#)) is one of eleven regional associations that together form the [US Integrated Ocean Observing System](#). The mission of CARICOOS is to provide accurate and timely coastal and ocean data and decision support tools to enhance safety on our coasts and ocean, improve the efficiency of maritime operations and support coastal resource management in the US Caribbean Exclusive Economic Zone (Puerto Rico [PR], US Virgin Islands [USVI] and Navassa). At the moment, core CARICOOS observing, and prediction capabilities are divided into an observational subsystem and a modeling and analysis subsystem.

Key components of the observational subsystem include:

1. CARICOOS Data Buoy Network consists of seven oceanographic and wave data buoys.
2. CARICOOS High-Frequency Radar Network consists of five HFR antennas.
3. CARICOOS Mesonet and Windnet is a network of 19 coastal weather stations.
4. CARICOOS Lagrangian Drifter Program and deep-sea gliders are operated in collaboration with NOAA AOML.

The main components of the modeling and analysis subsystem are:

1. CARICOOS Nearshore Wave Model, a high-resolution operational wave model covering Puerto Rico and the US Virgin Islands.
2. CARICOOS-Sea Grant Nearshore Breaker Model.
3. CARICOOS Storm Surge Modeling Program.
4. CARICOOS Operational Wind Model is a set of operational wind models for PR/USVI at 1 and 2 km spatial resolution.
5. CARICOOS Coastal Circulation Model is a high-resolution model implementation of the Finite Volume Coastal Ocean Model.

To enhance our services and meet IOOS requirements, the Data Management and Cyberinfrastructure (DMAC) subsystem synthesizes all available real-time observations, model predictions, and third-party data for easy access by CARICOOS stakeholders and researchers. CARICOOS is a certified Regional Coastal Observing System (RCOS) of the U.S. IOOS program, meaning CARICOOS programs and data assembly centers have been reviewed and meet federal standards.

Position Summary and Responsibilities

CARICOOS provides information for marine operations, coastal safety, and resource management in the US Caribbean coastal waters. Management of sensor data and numerical model output, its transformation into products and their dissemination to users are core DMAC functions requiring unique expertise in numerical analysis and coding. Data Management and Cyberinfrastructure (DMAC) infrastructure is recognized as a critical component of the coastal and ocean observing system.

CARICOOS is seeking an Ocean **Data Management Coordinator** and innovator who is excited to turn ocean data into data products. The Data Management Coordinator will support CARICOOS Data Assembly Center (DAC) by providing database, documentation, quality control, and archival support in an [appropriate dissemination format](#). These practices apply to data standards and quality control on metadata and data, transport and access, archival, and information technology (IT) security. The position includes a number of distinct tasks carried out to acquire, validate, document, archive, secure, process, and maintain a database of coastal ocean observations and forecasts.

Required Experience

- Master's or Ph.D. degree in Oceanography, Marine Science, Computer Science/Engineering, Environmental Science, Geographic Information Sciences (GIS), or another relevant technical field/discipline with an emphasis on ocean observing technology.
- Minimum two (2) years of experience with oceanographic data, data structures, and database management.

Job Qualifications

- Expertise in programming with Fortran, MATLAB, Python, C, MPI, and parallel methods.
- Proficient in programming computer languages such as PHP, Java, THREDDS Data Server, OpenDAP, ERDDAP, and any other for linking together cyberinfrastructure tools and systems.
- Experience with developing and optimizing applications on LINUX-based systems.
- Experience in scientific applications on large-scale computers.
- Good understanding of high-performance computing architectures.
- Experience working with users to ensure their scientific applications execute efficiently and utilize the HPC system to advance their scientific work.
- Experience in providing support for scientific application development and optimization.
- Understanding of key issues in the ocean data space with a strong focus on decision making and how data can lead to better outcomes.
- Ability to work with partners and assess the need of stakeholder groups.
- Fully bilingual (English / Spanish), strong communication (written and oral), and interpersonal skills.

The operational nature of the CARICOOS enterprise will require 24/7 responsiveness. The selected candidate will work in collaboration with senior scientific and technical personnel.

Salary Range: According to experience.

Interested candidates can apply by sending a: (1) resume or curriculum vitae that includes educational background and positions held and (2) the name and contact information of three references to CARICOOS Deputy and Technical Director Dr. Patricia Chardón-Maldonado (patricia.chardon@upr.edu). Applications will be considered until the position is filled. The review of applications will begin on July 15, 2022. The anticipated start date is September 01, 2022.