

Invitation to apply for a job:

12 months job, software engineer

Météo-France, Toulouse

Dead line to apply: 30 April 2008

Subject: support for the Météo France participation in 2 European projects (Marcoast and ECOOP). Improvement of the drift forecast system (Mothy) about its ergonomoy and its interoperability with the Spanish and the Portuguese systems involved in the ECOOP project and the end-users (Cedre, French authorities in marine security). Set-up of a storm surge ensemble prediction with our Spanish partner, MeteoGalicia.

Context: Météo France is involved in the Marcoast project (Invitation To Tender ESA/GMES « RiskEOS 2 ») on a task aiming at setting up an integrated service to detect a marine pollution by oil, to compute the backward drift and to visualize surrounding boats in the area to search possible polluters. Our partners are CLS (coordinator), Boost (detection), Cedre (oil expert) and Mercator (oceanic currents). Météo France is responsible of the oil drill backward drift computation and want to add this functionality in the operational tool Mothy while maintaining the integration with our partners. Besides, Météo France is committed in the European project Ecoop. This project (in the framework of GMES, GEO et GEOSS, funded by EEC) started the 1rst February 2007 and implicates 72 agencies. It is the continuation of the Mersea project for the coastal oceanography. Its main objectives are the consolidation and the development of the European oceanic forecast and observation systems at the regional and coastal scale and to integrate them in a pan-European system providing marine information (EuroMISS = European Marine Information System of Systems) and answering to the stakeholders needs (EuroDeSS = European Decision Support System). Météo France has two tasks in this project:

- 1.to compute the storm surges by the mean of a super-ensemble of models with our partners: Puertos del Estado, RIKZ (national institute for coastal and marine

management, Netherlands), Met.No, POC-CNRS (France), DMI, MeteoGalicia et Marine Institute (Ireland). The objective is to improve the quality, the reliability and the access to the surge forecasts, at a European level, to set up a multi-models surge forecast (several storm surge models whose results are merged by a statistical method), to test the ensemble prediction technique for the storm surges, to validate forecasts and to search errors sources, to develop visualisation and analysis tools.

2. Marine security in the Biscay Bay, along the Iberian Peninsula and in the Western Mediterranean Sea with partners: IST/Maretec (Instituto Superior Tecnico, Lisbon), AZTI (Instituto Tecnológico Pescere y Alimentario de Bilbao) et UPC (Universitat Politècnica de Catalunya, Barcelona). The objective is to improve the inter-operability of the drift forecast services by using the GMES standards and EuroMiss in the French, Spanish and Portuguese services (data format, tools...), to take into account the oceanic currents production from EuroMiss and to participate to common European experiment to test the different systems.

Work to be done by the candidate:

1. Météo France drift model improvement by adding functionalities in the code (Fortran) and in its interfaces (script Unix, PHP): capacity to handle several formats with their main specificities (Google Earth, NetCdf, GPX...), use of different oceanic currents (as forcing) coming from EuroMiss (data feeding to be automatized, data to be made as useful as possible for the model, test the model on these data and do inter-comparison/validation).

2. Setting up of an ensemble prediction system for the storm surges: feeding with meteorological EPS data, production of a storm surges ensemble, synthetic visualisation tool on the web...

3. study with our Ecoop partners to validate the storm surge model on a selection of localisations where tide gauges measurements are available et to search errors sources.

Qualification and know-how: Candidates (citizens from the European Union or having a residence permit in France) should be graduate students in Physics, Mathematics, Engineering or Marine Sciences with background in numerical and computation methods and geophysics. The knowledge on programming languages as Fortran, unix shell, PHP and C will be an important element for the selection.

Proficiency in written and spoken English is required.

Work conditions: The work location will be Météo France at Toulouse, in the offices of the DP/DPrévi/Mar department. The appointment will be ranging from 1900 to 2400 euros per month, depending on the professional experience. The job is foreseen to start the 1 July 2008. Duration 12 months. Could be extended once (2 (remaining budget) + 4 months more in the framework of the MyOcean project (GMES) to be negotiated with the EC).

Recruitment procedure: The candidatures (with a comprehensive curriculum vitae, a copy of the national Identity card, a copy of the National Health Service card, an individual registry office form, a statement of interest, a copy of the diploma, referees) will be received by electronic mail, before 30 April 2008, by:

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