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Job Opportunities at IC3

Barcelona, 27 August 2014

## Post Doctoral position. Ocean modeler at the Climate Forecasting Unit (CFU).

### LOCATION

IC3 Headquarters in Barcelona, Catalonia, Spain

### GENERAL DESCRIPTION AND WORK ENVIRONMENT

The Institut Català de Ciències del Clima (IC3) is a climate research institute created in 2008 by the Government of Catalonia and the University of Barcelona, aiming at understanding climate variability and change both global and regional scales to improve both predictions and projections, the dynamics and theory underlying those changes and the impact on society. Linked to these goals, IC3 works on understanding and simulating how global change modulates variability and change in society ecosystems to provide better climate services.

IC3's mandate is to become a leading international centre for climate research in Europe, with a regional focus on the Mediterranean area. IC3 aims to perform quality research on basic and applied climate sciences, while informing society and stakeholders on future climate risks.

Working languages are English, Catalan and Spanish.

In tune with IC3's objectives, a growing interest in the implications of climate variability and change from a season to a few decades ahead is occurring. Reliable climate information is critical to ensure that adaptation measures to climate variability and change are efficient. The Climate Forecasting Unit (CFU), led by the ICREA research professor F.J. Doblas-Reyes, undertakes research on the development and assessment of dynamical and statistical methods for the prediction of global and regional climate on time scales ranging from one month to one decade.

More information about the CFU activities is available from the following links: [www.ic3.cat](http://www.ic3.cat) and [http://ic3.cat/wikicfu/index.php/Main\\_Page](http://ic3.cat/wikicfu/index.php/Main_Page)

## MAIN DUTIES

The successful applicant will work on the generation of ocean initial conditions for seasonal-to-decadal ensemble climate predictions with the dynamical global climate model used by the CFU, EC-Earth, using data from a comprehensive set of high-resolution global reanalysis. The generation of more balanced initial states that reduce or even prevent the initial shock will be an important aspect of the work. The impact of the initial conditions will be assessed with the tools already developed by the CFU members and by implementing new ocean diagnostics to be included in these tools. Process-based analyses of the main sources of predictability related to the ocean component as well as new ways to infer information on model deficiencies across time scales are part of the tasks. The applicant will be involved in collaborative work with other partners within the EC-Earth consortium. Outstanding opportunities exist for establishing links with other international climate research institutions and, if interested, to participate in the tutoring and monitoring of early-career scientists.

## DESIRED SKILLS / QUALIFICATIONS

Applicants must have a PhD in physical oceanography, applied mathematics or in a related discipline. Ideal candidates will have several of the following attributes:

- A demonstrated ability to develop experimental set ups that address specific climate modeling problems and in manipulating either ocean or climate model codes.
- Extended knowledge of Fortran and bash, while experience with R, cdo, nco and Python will be highly valued.
- Experience in handling large databases, and a minimum knowledge of NetCDF encoding.
- Proven ability to prepare and submit manuscripts to high-impact, peer-review journals.
- Interest and capacity in participating in the writing in and, when possible, leading the preparation of research and computing proposals.
- Fluency in spoken and written English, while fluency in other European languages will be also valued.

This position implies becoming part of dynamic, multi-national research group that performs cutting-edge, highly-demanding climate prediction experiments. The candidate should be able to work as an active and collaborative team member to help in the delivery of shared objectives and to efficiently communicate results. Hence, the ability to work as part of a large, strongly-coordinated team and to continuously share both knowledge and tools is an essential aspect required.

## CONDITIONS AND APPLICATION PROCEDURES

The position is opened for 12 months with an extension for one more year depending on performance. The position will start preferably in October 2014 or as soon as possible after that date. The salary will be commensurate with experience.

To apply, please send an email to [jobs@ic3.cat](mailto:jobs@ic3.cat) with your CV and the following subject "Ocean modeler at the CFU".