#### **Job Title**

Co-leader of the Climate Prediction Group

**About the host institute - BSC**

BSC-CNS (Barcelona Supercomputing Center – Centro Nacional de Supercomputación) combines unique high performance computing facilities and in-house research departments on computer, life, and Earth sciences, and computational applications, counting more than 400 researchers and students from more than 40 different countries. BSC-CNS has been accredited as one of the first eight Severo Ochoa Centers of Excellence. This award is given by the Spanish Government as recognition for leading research centers in Spain that are internationally well known institutions in their respective areas. BSC-CNS is the National Supercomputing Facility in Spain and manages MareNostrum, one of the most powerful supercomputers in Europe. The mission of BSC-CNS is to investigate, develop and manage information technology in order to facilitate scientific progress. To get an idea of what it is like to work at the BSC take a look at this video:<https://www.youtube.com/watch?v=VRkEii7OzRE>

**Context**

Within the Earth Sciences Department of Barcelona Supercomputing Center (BSC-ES), led by Prof Francisco Doblas-Reyes, the climate prediction group, led by Virginie Guemas, aims at developing climate prediction capability for time scales ranging from a few weeks to a few decades into the future and from regional to global scales. This objective relies on expanding our understanding of the climate processes responsible for the predictable part of the climate variability through a deep analysis of the strengths and weaknesses of state-of-the-art climate forecast systems in comparison with the most up-to-date observational datasets, and on exploiting these detailed analyses to refine the representation of these climate processes in our climate forecast systems and their correct initialization. We use the EC-Earth European global climate model ([http://www.ec-earth.org](https://gateway.bsc.es/%2CDanaInfo%3Dwww.ec-earth.org%2B)) for our developments and collaborate closely with all the members from the EC-Earth consortium. Positioned at the cutting-edge of climate prediction research, we also have access to large multi-model databases from international projects (CMIP, SPECS, NMME …) for process analysis. Achieving our objectives rely on the combination of a large variety of expertise on climate processes within our group from the stratosphere down to the deep ocean and from tropical to polar latitudes, together with expertise on climate modeling and data assimilation.

**Key duties and opportunities**

This position requires animating scientifically the group activities through the organization of topical meetings and individual discussions with each of the 16 members of the group, as well as ensuring the sustainability of the group. Most of the resources coming from competitive sources, writing a number of proposals to obtain funding or computing hours is essential, as well as organizing their implementation once funded.

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#### **Requirements**

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

* Proven ability to prepare and submit research proposals for funding or computing resources,
* Experience as (co-) Principal Investigator or Work Package leader of national or international projects,
* Experience in mentoring / advising post-doctoral researchers and/or PhD students,
* Knowledge in climate, oceanography or atmospheric sciences,
* Experience in ocean/atmosphere modeling or environmental modeling,
* Proven ability for independent and innovative thinking,
* Fluency in spoken and written English, while fluency in other European languages will be also valued.

The following aspects will also be considered:

* High level of programming skill (preferably Fortran and bash),
* Knowledge of version control systems (git, svn, cvs…),
* Experience in handling large databases, and a minimum knowledge of NetCDF encoding,
* Good knowledge of R, cdo, nco and Python,
* Experience in the use of HPC and parallel computing (multi-threaded applications), preferably with climate models.

This position implies co-leading a dynamic, multi-national research group that performs cutting-edge, highly-demanding climate prediction experiments and participates in a number of international initiatives.

**Conditions**

The applicant will work at the BSC (Barcelona, Spain) within the Earth Sciences Department. The position will start on 1st March 2017 or as soon as possible after that date. The contract will be for three years initially, with the possibility of renewal depending on performance. The salary will be commensurate with experience.

#### **Application procedure**

All applications must be uploaded before 15th November 2016 to [http://www.bsc.es/about-bsc/employment/vacancies/](https://gateway.bsc.es/about-bsc/employment/vacancies/%2CDanaInfo%3Dwww.bsc.es%2Bscientistocpred)cpgleader including:

1. A motivation letter.

2. A full CV including contact details.

3. Two reference contacts.