



## VACANCY NOTICE

Date of issue: July, 1st, 2010

### Senior Position in Land Surface Modelling at IC3 (Barcelona).

**LOCATION:** IC3 headquarters in Barcelona, Catalonia, Spain

**GENERAL DESCRIPTION & ENVIRONMENT:** If you're looking for an exciting career in the climate sciences, IC3 is one of your primary opportunities. IC3 is a newly established climate institution settled by the Government of Catalonia and the University of Barcelona, aiming at understanding of current and future climate at both global and regional scales, while aiming at improve and further develop technical capabilities and tools to simulate unprecedented changes in climate impacts on societies and economies. IC3 is expected to grow to a total staff around 200 people, with about 125-150 scientists. Working languages of IC3 are English, Catalan and Spanish. For details, see [www.ic3.cat](http://www.ic3.cat).

The Unit for Climate Dynamics and Impacts of IC3 is now looking for a highly motivated scientist to fill a senior tenure position in the area of land-surface processes and soil moisture modelling. The selected candidate will be in charge of setting up a new research line on soil moisture and land-surface modelling, devoted to improve the quality of future biogeochemistry modules in a new generation of Earth System Models. This group of scientists led by the candidate will conduct research on soil moisture and crop water modelling, canopy temperature and the simulation of energy balance using field and modelling approaches.

IC3 is an equal opportunity employer, working in progress to be compliant with the “EU Charter for the Researcher”.

The conditions for enrolment are detailed below.

**DETAILED DESCRIPTION:** Among the current top research gaps in climate research, there is the need for a better understanding of land surface feed-backs at the scales relevant for climate processes. Together with better focused monitoring, a much improved capacity to accurately simulate interactions between land and the atmosphere at relevant scales is needed. IC3, as an institution that wants to conduct leading research in the field, sets up a new research line on soil moisture and land processes. IC3 in collaboration with a private foundation, initiates in the interval 2010-2013 a network of new high-resolution long-term climate research sites spanning the Iberian Peninsula and adjacent islands to monitor climate change impacts on critical ecosystems. In this sense, the research group



led by the selected candidate will strongly interact with this project to maximize the quality of the information yielded by this large-impact unprecedented initiative.

#### **MAIN DUTIES OF THE POSITION:**

- Guiding a group of motivated scientists and technicians.
- Responsibility for the fusion of atmospheric remote sensing data and earth system models.
- The detection of trends in important climate variables, and the testing and improvement of climate prediction models towards this aim.
- Responsible for satellite remote sensing and theoretical investigations to develop physical understandings of radiant energy processes involving clouds, the atmosphere and the surface.
- Analyse satellite remote sensing data to study land surface processes (soil moisture and microscale structure of water vapour in the Earth's atmosphere) and their role in the Earth climate systems.

#### **REQUIREMENTS:**

This position requires a Ph.D Degree in the physical or natural sciences, or engineering that includes proven expertise in hydrology, the physical sciences, geophysics, chemistry, engineering science, mathematics or atmospheric science. Extended expertise will be valued in any of the following areas, hydrology; terrestrial carbon cycle and ecosystems modelling; Earth systems modelling science; remote sensing and modelling related to atmospheric dynamics, atmospheric composition, atmospheric aerosols, clouds, and precipitation; knowledge of instrument science for various technologies such as lidar, radar, passive microwave, and other active and passive remote sensing instruments;

Demonstrated capacity to work towards developing Earth science applications; and ability to develop algorithms for data analysis, visualization, and validation is advisable.

The work of the candidate will serve to define new or modifying existing sensing instrumentation used in obtaining data on the characteristics and phenomena of the Earth's atmosphere, and biosphere; in developing algorithms to retrieve geophysical quantities needed to model and predict the Earth's System behaviour; and in developing systems and tools to generate, validate, and visualize information from satellite products and Earth Science models.

Capacity to obtain funds from competitive calls (public & private) will be also valued.



**REMUNERATION:** Salary conditions will be commensurate to the value of the candidate and will undergo individual negotiation.

**LENGTH OF CONTRACT:** This position is initially offered for three years, with the possibility of becoming permanent thereafter on the basis of an evaluation by the Scientific Advisory Board of the Institute.

**STARTING DATE:** Incorporation date will be flexible within the year 2011

**APPLICATIONS:** The application form and aptitude test should be downloaded from IC3's website [www.ic3.cat](http://www.ic3.cat). Applicants should fill in the application form and the aptitude test and email both to [jobs@ic3.cat](mailto:jobs@ic3.cat), indicating the reference "IC3-UDIC-2010-06" on the "Subject".

Selected final candidates should ask for three letters of recommendation from scientists from places other than their current workplace.

**CLOSING DATE:** Position is open until August 15 and a first selection of eligible candidates will be invited for an interview by a SAB commission by mid-September 2010.