

Company Description

BC3 (Basque Centre for Climate Change) is a research centre on the causes and consequences of climate change. Led by one of the most recognized scientists in the Climate Change field -Prof. Maria José Sanz, we produce multidisciplinary knowledge to support decision making towards sustainable development at the international level. With a multidisciplinary team, connected to the main scientific institutions, networks and socio-economic agents, for a decade, our contribution to research of climate change and to the science-policy interface puts us in a unique position to offer knowledge, tools, new methodologies and cross-cutting proposals, that we lead towards action in a collaborative framework with stakeholders, to design and help implement policies aimed at sustainable development.

Information

 **Deadline:** 2019-09-15
 **Category:** Academia
 **Province:** Araba / Alava

 **Country:** Basque Country
 **City:** Leioa

Company

BC3 Basque Centre for Climate Change



Main functions, requisites & benefits

Main functions

Ecosystem services modeler A research position in ecoinformatics and modelling of coupled human-environmental systems using a combination of techniques, including agent-based modelling, machine learning and earth observation. The candidate should have a strong background in simulation modelling (process-based and/or agent-based). Experience with machine learning is an asset. We are looking for an individual who can support strategic activities related to integrated data science and collaborative, integrated modeling on the semantic web (semantic meta-modelling). The selected candidates will contribute to the ARIES (Artificial Intelligence for Ecosystem Services) project powered by the k.LAB software stack, a semantic web infrastructure that uses artificial intelligence to build computational solutions to environmental, policy and sustainability problems. The open source k.LAB software includes client and server components that connect data and models from distributed repositories, guided by machine reasoning over a set of shared ontologies. This technology, based on machine reasoning, machine learning, distributed computing and high-performance, multi-disciplinary and multi-paradigm system modeling, is the flagship product of the Integrated Modelling (IM) Partnership (<http://www.integratedmodelling.org>) which is expected to serve a growing number of worldwide users (from academia, governments, NGOs and industry) in the years to come. Key responsibilities: Collaborate in building, evaluating and delivering integrated models within the ARIES platform. The OBServ project focuses on pollination as a central piece for the modelling and simulation of agri-systems and biodiversity, but the position will entail multi-disciplinary applications; Collaborate in building, evaluating and delivering complexity-oriented models of coupled human-environmental systems; Integrate such models and their results within a holistic, integrated trade-off assessment framework for decision- and policy-making

Requisites

Main requirements: The applicant must have a degree in computer science, ecology, geography, engineering, or other fields of relevance to ecoinformatics. A very strong background in computational modelling is required, along with programming skills (any language and in particular Python, Java, R and Julia). Familiarity with any of the following methods is an asset: agent-based modelling, network analysis, Bayesian network modelling, system dynamics. Being initiated to ontologies, artificial intelligence, and machine reasoning is desirable. Familiarity with any of the following technologies is an asset: Git, GeoServer, Linux, RESTful web services, openCPU, JSON. The applicant must have excellent interpersonal and communication skills. Excellent written and oral command of English is required. An ability to work in teams and experience in the use of collaborative software platforms and distributed version control systems are necessary. Applications including previous modelling works and their documentation in an online repository will be given priority.

Benefits

30 vacation days