POSTDOC IN SEMANTICS AND ENVIRONMENTAL MODELING

Bizkaia talent

Company Description

BC3 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: 2022-01-20
- Category: Academia
- Province: Bizkaia
- Country: Basque Country
- City: Leioa

Company

BC3 Basque Centre for Climate Change

bc³ BASQUE CENTRE FOR CLIMATE CHANGE Klima Aldaketa Ikergai

Main functions, requisites & benefits

Main functions

The Basque Centre for Climate Change (BC3) offers a full-time postdoctoral scientist position in order to support the research activities of Research Line (RL) 5 on Integrated Modelling of Coupled Human-Natural Systems. The RL generates multidisciplinary scientific knowledge from human-nature interdependence to address complex sustainability problems through artificial intelligence (AI). The goal of the RL is to provide environmental data, models and understanding by retrieving, evaluating and integrating the existing information in order to support an effective policy-making where nature counts. Besides Ecosystem Services, the RL also tackles Natural Capital Accounting, Food Security, Marine Spatial Planning, and Renewable Energy. Job description: During the past decade, the RL has envisioned and built the ARtificial Intelligence for Environment and Sustainability platform, a technology that integrates network-available data and model components through semantics and machine reasoning. Its underlying open-source software (k.LAB) handles the full end-to-end process of data and model integration to predict complex change. It also supports selection of the most appropriate data and models using cloud technology and following an open data paradigm: the resulting insight remains open and available to society at large, and becomes a base for further computations, contributing to an ever-increasing knowledge base. For the first time, it is possible to develop a way to consistently characterize and publish data and models for their integration in predictive models, building and field-testing languages and technologies that have eluded researchers to date. Experience/skills required: We are looking for an individual who can support strategic activities related to integrated data science and collaborative, integrated modelling on the semantic web (semantic meta-modelling). The selected candidate will: Contribute to the ARIES (ARtificial Intelligence for Environment and Sustainability) platform, a semantic web infrastructure that uses artificial intelligence (AI) to build computational solutions to environmental, policy and sustainability problems. This technology, based on machine reasoning, machine learning, distributed computing and high-performance, multi-disciplinary and multi-paradigm system modelling, is the flagship product of the Integrated Modelling Partnership (IMP) which is expected to serve a growing number of worldwide users (from academia, governments, NGOs and industry) in the years to come. In particular this is a postdoctoral research position dedicated to the use of semantics for solving complex sustainability problems. We are looking for an individual who can coordinate the work to establish the most comprehensive knowledge base to implement a Semantic Web for Sustainability. The goal of the Semantic Web is to make Internet data machine-readable. To enable the encoding of semantics with the data, technologies such as Resource Description Framework (RDF) and Web Ontology Language (OWL) are used. These technologies are used to formally represent metadata. For example, ontology can describe concepts, relationships between entities, and categories of things. These embedded semantics offer significant advantages such as reasoning over data and operating with heterogeneous data source

Requisites

The selected candidate should have: A PhD in Computer Science, ICT, Computational Linguistics, Philosophy of Information or any field related to the Semantic Web Strong analytical skills and an ability to learn quickly and to think outside the box. Our work is very