

Research Fellowship on Satellite Data for Climate Research

Director of Earth Observation Programmes

ECSAT, Harwell, United Kingdom

ESA/RF-ECSAT(2016)001, Rev.2

Overview of the Division's mission

The overall goal of the ESA Climate Office is to expand awareness, use and scientific impact of Earth Observation (EO) data records, principally from ESA missions, working with the international climate research and modelling communities.

This is achieved through the following lines of activities:

- Implementation of the Climate Change Initiative programme (CCI)(cci.esa.int) , that aims to develop a lasting and structured dialogue with climate research and modelling communities worldwide, analysing their needs for long-term satellite-based observations of the climate system, as expressed via the Global Climate Observing System (GCOS), and assessing their feedback on available EO data records;
- Translating these needs into technical performance specifications for Fundamental Climate Data Records (FCDR) and Essential Climate Variables (ECV) based on the complete ESA EO mission archives, taking due care to account for the nature of different satellites;
- Initiating and managing a suite of scientific analyses, data exploitation and system development activities to enhance ESA's capability to generate these records for climate research, modelling, attribution, projection, prediction, trend assessment, and data assimilation, as well as validation of the data sets with the corresponding scientific users.
- Exploiting the records generated through CCI and planned in the CCI Extension to improve understanding of key science questions e.g. those identified by IPCC.

Overview of the field of research proposed

In the framework of the above the selected candidate could choose to be involved in various activities depending on their previous research experience. In order of preference, the suggested topics for potential research fellows are:

- Participating in activities related to the use of ECV products such as climate research, geophysical data analysis, data validation/intercomparison, data visualisation or data assimilation.
- Developing activities common to a subset of climate projects, climate domains (Atmospheric, Land and Ocean) and their interfaces.

- Working to support cross cutting activities such as data harmonisation, product consistency assessment, uncertainty characterisation.

We encourage a wide range of proposals and can be reasonably flexible in what subjects can be covered. However preference will be given to work involving those projects managed directly by the ESA Climate Office.

Who can apply

The programme is open to suitably qualified women and men. Preference will be given to applications submitted by candidates within five years of receiving their PhD.

The Research Fellow Programme is open to nationals of the following states: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the UK, Slovenia as an Associate Member or Canada as a Cooperating State, Bulgaria, Cyprus, Latvia, Lithuania, Slovakia as European Cooperating States (ECS).

Required qualifications

Applicants should be early career researchers and must have completed their PhD in a subject relevant to the work done by the ESA Climate Office, i.e. climatology/meteorology/hydrology or environmental sciences. An educational background in physics, engineering or computer science is an asset.

Familiarity with and/or experience in one or more of the following subjects is preferable:

- data harmonisation, visualisation, model intercomparison or data assimilation
- climate science in relation to satellite-based Earth Observation,
- handling large data volumes preferably those derived from satellite sensors.

Applicants should have good analytical and communication skills and should be able to work in a multi-cultural environment in an autonomous manner.

Applicants must be fluent in English and/or French, the working languages of the Agency. A good proficiency in English is required. Familiarity with other European languages is an asset.

How to Apply

Please fill in the [online](#) application form attaching to it, **in one document only**, your CV, your motivation letter and your research proposal.

Candidates must also arrange for up to **three letters of reference** to be sent by e-mail, before the deadline, to **temp.htr@esa.int**. The letters must be sent by the referees themselves. The candidate's name must be mentioned in the subject of the email.

Applications satisfying the general conditions for eligibility, to be submitted **by 25 April 2017**, will be evaluated and successful applicants will be invited for an interview.

Interested candidates are highly encouraged to visit the ESA website: www.esa.int.