

## Traineeship Opportunity for “Young Graduate Trainees”

Reference	Field of specialisation	Duty Station	Closing Date
<b>ESA/YG-ECSAT(2015)002</b>	<b>Earth Observation Exploitation for Climate</b>	<b>ECSAT</b>	<b>15 December 2015</b>

### Overview of the Division’s mission

The division stimulates exploitation of Earth Observation data by the research community, public sector, and industry. It maintains close contact with research teams worldwide, who exploit data from ESA and third party Earth Observation (EO) missions, including Sentinels, Earth Explorers and ERS, ENVISAT archives. The team liaises with public sector users in Europe, with international scientific programmes, and supports European and Canadian EO value-adding industry to develop innovative EO-based services.

Activities in the coming year will focus on preparing the scientific exploitation of the forthcoming Sentinel missions, and the generation of Essential Climate Variables for the Global Climate Observing System.

### Overview of the field of activity proposed

The successful candidate will:

- Contribute to Earth Observation research and applications development in Terrestrial, Oceanographic, Atmospheric or Cryospheric fields. A broad range of project opportunities exist across all domains (terrestrial, ocean, cryosphere and atmosphere) and their interfaces as well as the use of EO for regional and local applications e.g. glaciers and soil moisture in relation to water management and hydrology, pollution (NO<sub>2</sub>, aerosols), land use and forestry (management, REDD, degradation and deforestation).
- Analyse data from ESA and third-party EO missions.
- Conduct a one-year project focussing on one of the above areas. This will involve 1) project planning and definition, 2) acquiring suitable EO data 3) developing algorithms and software 4) analysing and validating EO data 5) documenting, publishing and presenting results. The candidate may also help organize thematic workshops, prepare training courses, and dialogue with end users.

This traineeship will be developed along the following activities :

- (a) Analyse the quality, consistency, uncertainties, and inter-dependences of Essential Climate Variable global data sets generated by the ESA Climate Change Initiative (<http://www.esa-cci.org>).
- (b) Examine the contribution of existing third party missions (e.g. TerraSAR-X, TanDEM-X, Cosmo-Skymed, Radarsat, Pleiades, SPOT, Rapideye, ALOS) and Earth Explorers (Cryosat-2, SMOS, GOCE, Swarm), in combination with Essential Climate Variable global data sets generated by the ESA CCI, to understanding the role of satellite datasets for assessing climate impacts, mitigation and adaptation.
- (c) Examine the contribution of ESA, other European sensors and non-European sensors for Essential Climate Variables not already covered by the ESA CCI, specifically, long lived greenhouse gases (i.e. not CO<sub>2</sub> or CH<sub>4</sub>), precursors for aerosols and ozone, water vapour, sea state, sea surface salinity, snow cover, high resolution land cover, lakes, biomass and land surface temperature.

### Educational and other requirements

Applicants should have just completed, or be in their final year of a University course at Masters Level (or equivalent) in a relevant discipline: Physics, Electronic Engineering, Computing, Oceanography, Atmospheric Physics, Remote Sensing, Geophysics. Knowledge of Earth Observation systems, data products & algorithms is necessary. Applicants planning to undertake a PhD course are welcome to apply.

Applicants should have good interpersonal and communication skills and should be able to work in a multi-cultural environment, both independently and as part of a team.

Applicants must be fluent in English and/or French, the working languages of the Agency. A good proficiency in English is required.

**How can I apply?**

Please fill in the [online](#) application form.

Please note that only one application may be submitted for the YGT Scheme.

The YGT Scheme is open to recently qualified young men and women  
who are nationals of one of the following states:

Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy,  
Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the UK,  
or Canada as a Cooperating State, Bulgaria, Latvia, Lithuania, Slovakia and Slovenia as European Cooperating States  
(ECS).