Research Fellowship in the Science Strategy, Coordination and Planning Office of the Science, Applications and Future Technologies Department, Earth Observation Programmes

European Space Agency, ESRIN, Italy

**Overview of the Division’s mission**

This training opportunity is part of the Support to Science Element (STSE), whose main objective is the reinforcement of the scientific component within the ESA Living Planet Programme. STSE represents a pathfinder for science and innovation in Earth Observation providing a flexible mechanism to address the scientific needs and requirements of the Earth System Science Community in terms of novel observations, new algorithms and products and innovative Earth science results. The STSE main pillars are:

- **Exploring novel mission concepts** addressing major observational gaps expressed by the Earth science community;
- **Developing advanced algorithms and innovative products** that may exploit the increasing ESA multi-mission capacity with special attention to the Earth Explorers and ESA EO archives;
- **Promoting new scientific results** by supporting the synergic use of ESA data by the Earth science community with special attention to the next generation of young European scientists;
- **Expanding the use of ESA data within new Earth system science communities** by reinforcing ESA contribution to the major global earth science programmes;

Candidates are welcome to consult the STSE web site at [www.esa.int/stse](http://www.esa.int/stse)

**Overview of the field of research proposed**

The candidate will be involved in tree main activities:

1) Support the scientific and technical supervision of STSE projects, carried out by external teams of experts and scientists, addressing EO and Earth system science.

2) Carry out dedicated research project focusing on the development and validation of novel land-cover classification, change detection and trend analysis techniques capable of taking full advantage of both the large multi-mission EO archived optical and SAR ESA data, as well as data from upcoming ESA missions (e.g., ERS-1, ERS-2 Envisat, Sentinel 1, 2 and 3). In particular, the activity will aim at developing novel multi-mission based classification and change detection methods for monitoring long-term trends and changes in global land cover dynamics to study its links to global change.

3) The third task involves supporting ESA in various activities and projects on Capacity Building in EO. In particular, developing new educational & training tools for the scientific and operational exploitation of Sentinel data (possibly in a synergetic way), the scientific use of the recent Earth Explorers data, as well as the transfer of STSE results into education material/ tutorials.

**Required qualifications**

Applicants must have completed their PhD (or equivalent) studies in Physics, Engineering or Earth Science with research experience and peer-reviewed publications in relevant topics for the fields of research proposed.
Experience with computing programming will be an asset.

Applicants should have good analytical and communication skills and should be able to work in a multicultural 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.

**How to Apply**

Information on the ESA Research Fellowship Programme and the application form are available at: [http://www.esa.int/SPECIALS/Careers_at_ESA/SEMICLRTJRG_0.html](http://www.esa.int/SPECIALS/Careers_at_ESA/SEMICLRTJRG_0.html).

Applicants should send their application as described on the ESA website (CV, motivation letter, description of the research interest, list of publications and the filled-out RF application form) to temp.htr@esa.int. If not possible by email, the reference letters can also be sent via normal mail to: ESTEC HR Division, HFI-HTR, ESA/ESTEC; Keplerlaan 1, PO Box 299, 2200AG Noordwijk ZH, The Netherlands).

Applications satisfying the general conditions for eligibility, to be submitted by 23 February 2014, 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](http://www.esa.int).