National Trainee Scheme Training Opportunity

Reference	Specialist Area	Duty Station
NTS-2012-EOP-SF	**Mission and technology assessments for new EO missions**	**ESTEC**

Overview of the Division missions:

The role of the EOP-SF division is to prepare new Earth observation (EO) missions and technologies. The work includes the preparation of missions (e.g. phase 0 and phase A-B1 studies of new Earth science and application missions) and the coordination of technology activities performed within ESA and the relevant technology requirements derived from the new missions concepts proposed for EO missions.

Overview of the fields of activity proposed:

The Trainee will support the work of the Division in the field of mission and technology assessments by performing analyses and building or integrating simulation models at system level in the areas of (depending on background and interests):
- the 26-GHz data downlink, where in addition to mission analyses, it will be useful to integrate as a whole the relevant sub-systems under consideration (e.g. {de)coding/(de)modulation, on-board and on-ground antennas, propagation models);
- GNSS radio occultation for atmospheric sounding and other high-performance GNSS applications to EO, e.g. GNSS reflectometry;
- Synthetic Aperture Radar (SAR) processing for very high-resolution and/or wide swath concepts or innovative concepts like Wavemill or single-platform single-pass SAR interferometry;
- formation flying technologies and methods for EO
- wide-swath ocean altimetry

The post will offer the possibility of being exposed to the wide range of technology developments in the field of Earth Observation instrumentation and spacecraft technologies (e.g. communication and navigation technologies). The trainee will contribute to the process by using/updating existing analyses, simulation models, databases and performing surveys, as needed.

Required Education:

Applicants should have completed, or be in their final year of a University course at Master level in a technical or scientific discipline. Good skills in using system level simulation tools (e.g. MATLAB or STK mission modeller) is required. Candidates 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 .