

## Training Opportunity for Portuguese Trainees

Reference	Specialist Area	Duty Station
PT-2012-HSO-GD	Software Systems and Mission Control	ESOC

### Overview of the Division missions:

The Mission Data Systems Division (HSO-GD) is responsible for specifying, implementing and maintaining mission dedicated systems and providing support to end users during preparation and operational phases. Mission Data Systems comprise Mission Control Systems, Operational Simulators and Data Centres. Wherever possible, HSO-GD uses infrastructure software supplied by the Infrastructure Data Systems Division (HSO-GI), configures and sets up that software for specific missions or programmes and provides additional software or functionality as required. The Division has supplied mission systems for many Scientific, Earth Observation and Third Party missions and is also providing support to Navigation missions, the Space Situational Awareness Programme and the Integrated Applications Promotion Programme.

### Overview of the field of activity proposed:

Training opportunities can be offered in the following software engineering domains:

- **Mission Control System:** complex software system used for spacecraft monitor & control, i.e. to receive and process spacecraft telemetry and generate and send telecommands. This domain includes Mission Planning Systems as well.
- **Operational Simulator:** complex software system used to simulate the behaviour of the spacecraft and ground equipment for ground segment testing and training purposes
- **Data Centre:** complex software system that orchestrates the collection, processing and management of source data (e.g. optical and radar sensors, space weather sensors) and provides services to the user community.

The details of the work depend on the specific mission/programme and its phase, but it could include any task in the software life-cycle, from requirements definition to validation and verification, to operations support. This provides an excellent opportunity to learn about the management of complex software systems and their underlying software infrastructure (e.g. SCOS-2000, SIMSAT, SOA frameworks, Web technology) as well as their utilisation during real operations. The work will be performed under the supervision of the HSO-GD Data Systems Managers who are responsible for the procurement of the systems involved.

**Required Education:**

Applicants should have just completed, or be in their final year of a University course at Masters level in a technical or scientific discipline. A degree in Software Engineering or Electrical Engineering with major in subjects such as Information Technology or Computer Science would be preferred. Applicants should have a good background in modern information technology and software engineering practices, including Web-based technologies, Object Oriented programming, SOA and database management. Candidates must be fluent in English. They 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.