

CIMR-CRISTAL System Performance Engineer

Job Req ID: 14964

Closing Date: 24 May 2022

Publication: Internal & External

Vacancy Type: Permanent

Date Posted: 26 April 2022

Vacancy in the Directorate of Earth Observation Programmes.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. We therefore welcome applications from all qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

This post is classified A2-A4 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, Netherlands

Description

System and Performance Engineer, shared between the following Copernicus missions, presently in B2 phase:

- CIMR (Copernicus Imaging Microwave Radiometer)
- CRISTAL (Copernicus polaR Ice and Snow Topographic ALtimeter).

If selected for this post, you will report to the CIMR/CRISTAL System Managers for all technical and programmatic matters and will work within the CIMR/CRISTAL Project Teams.

The assignment covers the activities related to Phases B2/C/D/E1 for prototype and recurrent satellite(s), including storage, where applicable.

Duties

You will technically support CIMR/CRISTAL end-to-end system performance activities, consolidating the performance requirements, monitoring their evolution and support their verification and validation until the completion of the in-orbit Cal/Val and Commissioning. The responsibility can vary depending on the project and includes the development of a performance model and budget, proactive monitoring of the system performance and supporting the payload and spacecraft team members with the assessment of the design evolution and the instrument and spacecraft design compliance with the performance allocation. Supporting the System and Payload Managers, you will also analyse and propose updates to the performance allocations, as required.

Your principal tasks and responsibilities will include:

- supporting the consolidation, maintenance and allocation of the system performance requirements;
- liaising, in support of the System Manager, with the Mission Science Division for the maintenance and evolution of mission requirements;
- supporting the consolidation, implementation and maintenance of the end-to-end system performance model and performance budgets;
- liaising with other Project Team sections to ensure consistency of the performance model and budget with the actual System and Payload design;

- supporting the consolidation of the end-to-end system definition with respect to the performance allocation and verification (including level-1 data processing, flight calibration and characterisation, payload science and ancillary data);
- coordinating with other Project Team sections to ensure consistency of flight and ground segment performance and testing levels with system-level needs;
- supporting Cal/Val preparation and in-orbit commissioning activities including analysing the data and supporting level-1 product verification; liaising with the Payload Data Ground Segment (PDGS) and relevant parties; supporting level-2 anomaly investigations with the different partners;
- processing the instrument level-0 data received from industry to check consistency with simulator and support any anomaly investigations; processing and analysing the auxiliary data required for the product generation;
- monitoring the end-to-end data flow from geophysical parameters, through the instrument and satellite subsystems up to the final data products, ensuring availability of all required models and tools;
- supporting the monitoring of industrial and Agency activities associated to the procurement and use of the end-to-end simulator, of the ground processing prototype and ground tools supporting satellite Cal/Val activities; validating the associated deliverables;
- maintaining, updating and controlling the system interfaces to the ground segment elements involved in processing the provided data;
- supporting the system manager as required depending on the mission, for technical interface between the Project and partner organisations (eg EUMETSAT, NASA/JPL);
- providing regular reporting to the System Manager on all aspects of competence, identifying risks and problem areas and proposing mitigation actions, where appropriate;
- supporting the general project reporting tasks (monthly, QSR/QIR) and other Department-level support activities as required.

Technical competencies

Experience in performance budgets definition and consequent performance verification tracking

Experience in Data processing and in the development of Ground Processors

Experience in project environment working on procurement and monitoring of industrial activities

Multidisciplinary knowledge of area of responsibility, in particular of microwave and a radar altimetry systems, Antenna/RF as well as in system modelling and Data post processing of microwave and radar altimetry applications

Experience in performance requirements definition and verification of Radar altimetry and microwave missions

Experience in using performance/system simulator tools and conducting simulations and performance analysis

Knowledge of ESA and Industrial procurement processes and standards for space system development, verification and Product Assurance

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Education

A Master's degree in in a relevant scientific/engineering discipline is required.

Additional requirements

For this position, specific expertise in the antenna and RF domains and/or ground processing systems is an asset.

Other information

For behavioural competencies expected from ESA staff in general, please refer to the [ESA Competency Framework](#).

For further information please visit: [Professionals](#), [What we offer](#) and [FAQ](#)

The working languages of the Agency are English and French. A good knowledge of one of these is required. Knowledge of another Member State language would be an asset.

The Agency may require applicants to undergo selection tests.

At the Agency we value diversity and we welcome people with disabilities. Whenever possible, we seek to accommodate individuals with disabilities by providing the necessary support at the workplace. The Human Resources Department can also provide assistance during the recruitment process. If you would like to discuss this further please contact us email contact.human.resources@esa.int.

Please note that applications are only considered from 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, the United Kingdom and Canada, Latvia, Lithuania and Slovenia.

According to the ESA Convention, the recruitment of staff must take into account an adequate distribution of posts among nationals of the ESA Member States*. When short-listing for an interview, priority will first be given to internal candidates and secondly to external candidates from under-represented or balanced Member States*.

(<https://esamultimedia.esa.int/docs/careers/NationalityTargets.pdf>)

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening before appointment conducted by an external background screening service.

Recruitment will normally be at the first grade in the band (A2); however, if the candidate selected has little or no experience, the position may be filled at A1 level.

*Member States, Associate Members or Cooperating States.

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