

## Job Title: Mechanisms Engineer

Req ID 3041 - Posted 13/03/2018



### EUROPEAN SPACE AGENCY

Vacancy in the Directorate of Technology, Engineering and Quality.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. Applications from women are encouraged.

#### Post Mechanisms Engineer

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

**Location**  
ESTEC, Noordwijk, The Netherlands

**Description**  
Mechanisms Engineer in the Mechanisms Section, Structure and Mechanisms Division, Mechanical Department, Directorate of Technology, Engineering and Quality.

The postholder will report to the Head of the Mechanisms Section.

**Duties**  
The Section's main activities cover the following technical areas: space mechanisms (such as for deployment and pointing or hold-down and release, solar array drives, and reaction wheels), tribology, pyrotechnics, and space mechanical systems for satellites and launchers.

- Duties will include:
- establishing relevant technology development requirements under the Agency's basic and supporting technology programmes;
  - defining, initiating and monitoring appropriate industrial research and development activities;
  - providing support to projects, programmes and general studies;
  - participating in project reviews and procurement package evaluations;
  - identifying critical development problems and assisting in their resolution, as well as assessing mechanisms development and verification test programmes;
  - monitoring applicable technological trends and maintaining state-of-the-art expertise in the relevant domains;
  - pursuing product developments for science and commercial space market applications in the field of space mechanisms;
  - fostering new application areas for multidisciplinary mechanical systems, placing emphasis on innovative concepts, cutting-edge technologies and system architectures that can lead to potential breakthroughs in mission capabilities;
  - defining relevant infrastructure requirements in terms of testing, standards and numerical simulation;
  - contributing to dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

Duties may also include supporting other activities within the postholder's field of competence.

**Technical competencies**  
General background and specific experience in the technical domains covered by the position  
Hands-on hardware experience  
Understanding of related technologies, R&D trends and the industrial landscape  
Project support experience in a relevant domain  
Experience with laboratory or field testing of relevant technical equipment  
Preparation of procurement activities for technology development and innovation (e.g. statements of work, proposal evaluation)  
Experience in the management and monitoring of industrial activities and reviews  
Space Engineering Standards, preparation and implementation

**Behavioural competencies**  
Communication  
Innovation & Creativity  
Teamwork  
Problem Solving  
Continuous Learning

**Education**  
Applicants for this post should have a Master's degree or equivalent qualification in mechanical or aeronautical engineering or a similar field, with several years' experience in the development of mechanisms for space or aeronautical applications.

**Additional requirements**  
Knowledge of space tribology, ball bearings, electrical motors and sensors is required.

- In addition, experience in one or more of the following fields of expertise will be considered a strong asset:
- Design, analysis and test of control laws for open and closed loop mechanisms driven by electric actuators, including prediction of related microvibrations;
  - Verification, through simulation and test, of the pointing performance of mechanisms driven by electric actuators when subjected to spacecraft microvibrations;
  - Multibody/multidisciplinary simulations of complex mechanism systems, their kinematics and non-linear coupling with flexible structures;
  - Electromagnetic device design, modelling and optimisation, with emphasis on electric motors and actuators for space applications.

**Other information**  
For behavioural competencies expected from ESA staff in general, please refer to the ESA Competency Framework.  
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.

**The closing date for applications is 03 April 2018.**

If you require support with your application due to a disability, please email [contact.human.resources@esa.int](mailto: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 and Slovenia.

Priority will first be given to internal candidates and secondly to external candidates from under-represented Member States.

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.