Job Title: Internal Research Fellow (PostDoc) for Field and Analogue Training and Testing

Req ID **5981** - Posted **14/03/2018**

EUROPEAN SPACE AGENCY

Research Fellowship Opportunity in the Directorate of Human & Robotic Exploration Programmes.

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
Internal Research Fellow (PostDoc) for Field and Analogue Training and Testing
This post is classified F2.

Location
EAC, Porz-Wahn, Germany

Our team and mission
The Internal Research Fellow will be based at the European Astronaut Centre (EAC).

The EAC tasks focus on the 'human' component of human spaceflight: astronaut selection, training, medical support and surveillance, as well as support for astronauts and their families in preparation for and during space missions to the International Space Station (ISS).

Two projects developed within the scope of Future Human and Robotics Exploration activities are CAVES (Cooperative Adventure for Valuing and Exercising human behaviour and performance Skills) and PANGAEA (Planetary ANalogue Geological and Astrobiological Exercise for Astronauts).

CAVES is a multidisciplinary and multicultural exploration mission in a cave. The expedition recreates situations that are spaceflight-analogous in terms of perception of risk, crew composition, isolation, confinement, and at the same time provides a real opportunity for spaceflight-like operations, science, equipment testing and exploration, in preparation for future planetary endeavours. During the expeditions, different technologies for cave mapping, navigation, underground communication and documentation have been tested and several scientific experiments focusing on the subsurface environment have been performed.

PANGAEA is a geological field training course that develops observational and decision-making skills in identifying prominent geological features in-field, conducting efficient sampling and reporting correctly to the ground the observations gathered during the field activity. The course involves the use of technological tools for sampling and scientific analysis in-field and also the development of operation concepts for geological field activities. The project is conducted in European geopark planetary analogue environments.

To make the analogue experience of CAVES & PANGAEA combined with the operational experience of the EAC available to other ESA activities too, in particular for the preparation of human and robotic exploration, opportunities for research and testing associated with CAVES/PANGAEA analogue events have been extended to analogue field testing in order to acquire knowledge of how to develop exploration and field geology strategies for planetary missions, with a specific focus on lunar settings and to allow for the demonstration of human and robotic exploration-enabling technologies.

This position is made available by the Italian Space Agency (ASI) as part of the ESA-ASI integrated team.
Candidates are encouraged to visit the ESA website: www.esa.int

Field(s) of activities/research
The Research Fellow will be integrated into the CAVES & PANGAEA project team and the research will be centered on the development of technologies, operational strategies, protocols and instrumentation for surface and subsurface planetary field geology.

The postholder will mentor university students and ensure an appropriate level of research to be compliant with their university requirements.

The postholder will also be working on the following activities:
- coordinating the execution of the scientific programmes of the CAVES & PANGAEA field training and analogue test campaigns
- coordinating the collection of scientific data and publication of reports associated with these projects
- coordinating the development of research projects, development of technologies and operational instrumentation associated with analogue field activities.
- ensuring that the research is coordinated and aligned with ESA and European activities:
  - technology roadmaps
  - human & robotic exploration scenarios
  - relevant on-going R&D activities
  - commercially available technologies and instrumentation
- helping to identify partners in space agencies, industry and academia that are interested in contributing to or participating in CAVES & PANGAEA events
- preparing documents and presentations and participating in meetings, workshops, projects and outreach activities devoted to promoting synergies and dissemination of knowledge
- preparing papers, participating in conferences relevant to the field of research.

Technical competencies
Knowledge relevant to the field of research
Research/publication record
Ability to conduct research autonomously
Breadth of exposure coming from past and/or current research/activities
Interest in space and space research
Ability to gather and share relevant information

Behavioural competencies
Innovation & Creativity
Continuous Learning
Communication
Relationship Management
Self Motivation
Problem Solving
Cross-Cultural Sensitivity

Education
Applicants must have completed their PhD (or equivalent) studies in geology or a related field that is relevant to the above fields of activity. Preference will be given to candidates applying within five years of receiving their PhD.

Additional requirements
Research experience in one or more of the following domains: planetary geology, field geology, geophysics, earth science.
Strong skills geared to achieving results, seeking excellence, working together and teamwork in a multi-cultural environment in an autonomous, self-motivated, cooperative manner.
Proficiency in using MS Office packages with experience of working with software tools and instrumentation relevant to the research field.

The working languages of the Agency are English and French. A good knowledge of English is required for this post. As the position is sponsored by the Italian Space Agency (ASI), Italian language knowledge at C1 level of the Common European Reference Framework for Languages (CERF) is required. Knowledge of other member state languages is considered an asset.

Specificities

Other information

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

The Agency may require applicants to undergo selection tests.

The closing date for applications is 04 April 2018.

In addition to your CV and your motivation letter, please add your proposal of no more than 5 pages outlining your proposed research in the "additional documents" field of the "application information" section. Candidates are asked to arrange for 3 reference letters, to be sent by the referees themselves, before the closing date to temp.htr@esa.int. Please ensure your name is mentioned in the subject of the e-mail.

If you require support with your application due to a disability, please 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 and Slovenia as well as Bulgaria, Cyprus, Latvia, Lithuania, Slovakia as European Cooperating States (ECS).
Priority will first be given to 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