Job Title: Internal Research Fellow (PostDoc) for Training, Learning Tools, & Technology

Req ID **2381** - Posted **10/10/2017**

EUROPEAN SPACE AGENCY

Research Fellowship Opportunity in the Directorate of Human Spaceflight and 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 Training, Learning Tools, & Technology
This post is classified F2 on the Coordinated Organisations' salary scale.

Location
ESOC, Darmstadt, Germany

Description
The Internal Research Fellow will be based at the European Astronaut Centre (EAC), Cologne, Germany.

The European Astronaut Centre's tasks are centered around the "human" component of human spaceflight: astronaut selection, training, medical support and surveillance, as well as support of astronauts.

The Astronaut Training Division plans and implements training for European Astronauts and Ground Support Personnel as well as training to all ISS Astronauts for the European components of the ISS. Training content covers expeditionary skills (e.g., robotics, extravehicular activities) as well as scientific experiments and systems knowledge. To provide the best possible training experience for the highly motivated trainees, we continuously strive to improve our training tools and strategies.

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

Field(s) of activities/research
The Research Fellow will be integrated in the Astronaut Training Division and the reseach shall be centered around the analysis of past training and the development and validation of new training approaches and tools. This is to include a critical evaluation of present ISS training strategy as applied in ESA. For the development and validation, a focus shall be placed on training options for longer term exploration missions to Moon and Mars. Also, the special skills required for crew autonomy, robotics, and Extravehicular Activities shall be included.

Specific duties include:

TRAINING DATA ANALYSIS
Perform analysis and data mining on ISS training data for research purposes and to suggest improvements on the effectiveness, reliability and traceability of spaceflight personnel training

TRAINING FLOW DEVELOPMENT/IMPROVEMENT
Develop strategies for training spaceflight personnel in an exploration scenario, develop and test demonstration and analyse results
Research on the influence of cultural background and learning preferences on training methods and tools
Research the training needs, most suitable methodologies, features according to different audiences

TRAINING METHODS AND TECHNIQUES
Perform analysis of training methods and tools and their potential for exploration missions
Analyse novel learning techniques and their potential for exploration missions, developing the required testing methodologies and performing case studies if needed
Perform research in the area of training cognitive and psychomotor skills in highly critical space critical tasks (operation of ROVs & robotic arms, rendezvous and docking, surface Extra Vehicular Activity, etc.)

DISTANCE LEARNING
Continuously follow developments of e-learning & distance learning technologies in higher education with the aim of improving the effectiveness of spaceflight personnel training
Apply and refine distance learning technologies to be tested in space analogues as well as to be used in spaceflight personnel training for ISS

COLLABORATION AND OUTREACH
Create collaborations with universities and institutes for joint testing of advanced training technologies and tools for personnel involved in human and robotics space exploration projects
Participate to conferences and publish papers on the work conducted during the fellowship
Coordinate the development and delivery of a distance learning pilot course for a selected audience on a suitable subject (course creation and delivery)
Establish at EAC a L(C)MS for the aforementioned pilot course (training management)

COORDINATION
Coordinate the creation of advanced training materials at EAC and provide directions for future developments
Tutor interns and trainees on projects concerned with learning methods and tools, e-learning, instructional technologies topics

Periodically report to the Italian Space Agency about the performed activities

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
Problem Solving
Fostering cooperation & effective team-working
Results Orientation

Education
Applicants should have recently completed, or be close to completion of a PhD in Instructional Technologies, Advanced Training, Adult Education, e-Learning, Distance Learning or equivalent. Preference will be given to applications submitted by candidates within five years of receiving their PhD.

Additional requirements
- A proven and documented working or research knowledge on topics related to adult learning and training technologies
- Proven expertise with or strong knowledge of tools and strategies for distance learning, e-learning, MOOC, or Learning Management Platforms
- A proven research or working knowledge of Instructional System Design, Pedagogy, Learning Psychology or Adult Education
- Co-authorship of peer reviewed papers on subjects related to advanced training methods and/or tools, e-learning, distance education applied in adult education is desired

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.

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   07 November 2017.

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