

Research Fellowship in “Dispersed Media and Light Scattering”

Directorate of Human Spaceflight and Operations

European Space Agency, ESTEC, Noordwijk, The Netherlands

ESA/RF-ESTEC(2015)001

Overview of the Division’s mission

The Science and Applications Division holds responsibility for the organisation of research calls within the European Life and Physical Sciences in Space programme (ELIPS) and the management of the whole research pool of ground- and space-based fundamental science, applied research and industry driven R&D projects.

The Division holds the scientific responsibility for the utilisation implementation within ELIPS, which requires close contact with the scientific community it serves as well as close coordination with other departments at ESA.

Overview of the field of research proposed

Several of the projects endeavoured in the framework of the programme of physical sciences in space address fundamental questions of transitions and self-organisation of matter from nanoscopic to mesoscopic scale.

In particular, the aggregation/crystallisation of colloidal particles, the nucleation of crystals from solutions, the time evolution of complex fluids, the organisation of nanoparticles in liquid films in emulsions and foams and their influence on the coarsening of these complex fluids are currently planned to be studied experimentally by international teams of scientists in the reduced gravity environment that prevails on board the International Space Station.

Several diagnostic techniques relying on light scattering are planned to be used and their implementation in different instruments is the subject of ongoing studies and development by European industry.

The role of the applicant in the Physical Sciences Unit will be to work in close relation with the different science teams and monitor and advise on the instrument specifications, their bread-boarding and related testing and the development of engineering and flight models, analyse data and report/publish the results together with the science teams.

Who can apply

The programme is open to suitably qualified women and men. Preference will be given to applications submitted by candidates within five years of receiving their PhD.

The Research Fellow Programme is open to nationals of the following states: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the UK, or Canada as a Cooperating State, Estonia, Hungary, Latvia and Slovenia as European Cooperating States (ECS).

Required qualifications

Applicants must have recently completed their PhD in physics or engineering with a strong hands-on background in light scattering techniques applied to diverse complex fluids.

Applicants should have good analytical and communication skills and should be able to work in a multi-cultural environment in an autonomous manner.

Applicants must be fluent in English and/or French, the working languages of the Agency. Good proficiency in English is required.

How to Apply

Please fill in the [online](#) application form attaching to it, **in one document only**, your CV, your motivation letter and your research proposal.

Candidates must also arrange for up to **three letters of reference** to be sent by e-mail, before the deadline, to **temp.htr@esa.int**. The letters must be sent by the referees themselves. The candidate's name must be mentioned in the subject of the email.

Applications satisfying the general conditions for eligibility, to be submitted by 13 March 2015, will be evaluated and successful applicants will be invited for an interview.

Interested candidates are highly encouraged to visit the ESA website: www.esa.int.