EUROPEAN SYNCHROTRON RADIATION FACILITY
INSTALLATION EUROPEENNE DE RAYONNEMENT SYNCHROTRON

ESRF

The ESRF is a multinational research institute, situated in Grenoble, France and financed by 21 countries mostly European. It operates a powerful synchrotron X-ray source with some 30 beamlines (instruments) covering a wide range of scientific research in fields such as biology and medicine, chemistry, earth and environmental sciences, materials and surface science, and physics. The ESRF employs about 600 staff and is organized as a French *société civile*.

*Within the Experiments Division, the X-Ray Imaging group is now seeking to recruit a:*

# Post-Doctoral Fellow (m/f)

## for ultrafast X-ray imaging at beamline ID19

## FUNCTION

**You will participate in ongoing in-house research programmes, the running of the beamline, providing support to external users as local contact, and develop your own research programme.**

In particular, you will join in the effort of the group to upgrade the performance of the experimental end-stations and to develop experimental techniques related to ultra-fast X-ray imaging: the flash of X-ray light from a single bunch of electrons in the storage ring lasts only a few hundred picoseconds. It can be exploited to gain access to a new time domain, so-called single-bunch imaging. Using an isolated flash for illumination allows one to take snapshot images of ultrafast processes such as shockwaves, crack propagation or fluid dynamics.

You will also be encouraged to develop your own research projects, which should exploit the unique capabilities of the 150 m-long ID19 beamline in terms of versatility: X-ray imaging can be done covering orders of magnitude in terms of spatial resolution (1 µm to 100 µm), energy (7 keV to 250 keV), and propagation distance (5 mm to 14 m).

## QUALIFICATIONS AND EXPERIENCE

You should hold a Ph.D. degree or equivalent in physics, chemistry, electrical engineering, or closely related science. A strong background in synchrotron-based hard X-ray imaging techniques and/ or short-pulse (laser) techniques is desirable. Aptitudes in X-ray instrumentation and/or data analysis and modeling are desirable. Experience in tomography and know-how in programming will be considered as an asset but are not mandatory. A vision for a research programme combining hard X-ray imaging with picosecond time resolution would be appreciated.

## OUR OFFER

**The working language of the ESRF is English.** Further information on the post can be obtained from Alexander Rack (tel.: +33 (0)4 76 88 17 81, email: rack@esrf.fr). For further information on employment terms and conditions, please refer to http://www.esrf.fr/Jobs/Conditions. The ESRF is an equal opportunity employer and encourages applications from disabled persons.

***Contract of 18 months, renewable for a further 6 to 18 month-period. Only candidates holding a Ph.D. obtained less than 3 years ago are eligible for Post-doctoral positions.***

**If you are interested in this position, please apply on-line at this address: http://www.esrf.fr/Jobs.**

**Ref. PDID19-1- Deadline for returning application forms:**

**11 February 2015**

**ESRF**, The European Synchrotron
Human Resources - Recruitment
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