VACANCY

The Institut Laue-Langevin (ILL) is an international centre for scientific research situated in Grenoble, France. We are Europe's leading neutron science facility. We receive over 2000 visiting scientists per year to carry out world-class research in a wide variety of scientific fields. The Computing for Science (CS) Group in the ILL's Science Division is currently recruiting:

3 Scientific Software Programmers (F/M)

The mission of the CS Group is to deliver and support the critical data treatment software that enables visiting scientists to exploit their scattering data effectively during experiments. In this context, your duties will focus primarily on data reduction for a range of instruments in the Mantid code.
Mantid (www.mantidproject.org) is an open source project providing a framework for high-performance computing and visualization of neutron scattering data developed and maintained by a large international collaboration of neutron sources worldwide, with ILL on-board since 2016 as part of an internal software modernization program.

Duties:

You will be part of the Scientific Computing group at ILL and work under the supervision of the project leader, having the following responsibilities:

- Analyse the scientific requirements and existing software solutions.
- Design and develop data reduction algorithms and workflows in Mantid framework.
- Extend, improve, optimize, and refactor existing algorithms.
- Benchmark the workflows against legacy software.
- Perform scientific validation of the software using known data and pseudo-experiments
- Develop binary data loaders in NeXus format, and data savers in various formats.
- Develop interactive Graphical User Interfaces and data visualisation tools.
- Participate in the continuous improvements and refactors of the framework.
- Provide comprehensive unit and integration tests.
- Write appropriate scientific and technical documentations.
- Communicate actively with the instrument scientists, visiting scientists and other developers to ensure that the software meets the requirements and is delivered in a timely and effective manner.

Qualifications and experience:

- Master's degree in Software Engineering, Computer Science, Physics
- Good knowledge of modern C++ and Python programming languages and standard libraries.
- Good knowledge of OOP, software development process, best practices and tools: version control, build systems, continuous integration, testing, debugging, profiling, etc.
- Fluency in Linux/Unix environments.
- Excellent technical, analytical, problem solving, team playing and communication skills.
- Professional experience as software developer would be highly valued.
- Experience appreciated in some of the following fields = scientific data analysis; software design and architecture; experience with STL, Boost, Qt, and numpy, scipy, qtpy libraries; experience with Git, GitHub, CMake and Jenkins; knowledge of parallel, distributed and generic programming; knowledge of neutron scattering and/or instrumentation.

Language skills:

As an international research centre, we are particularly keen to ensure that we also attract applicants from outside France. You must have a sound knowledge of English and be willing to learn French (a language course will be paid by the ILL). Knowledge of German would be an advantage.

Notes:

36-month fixed-term contracts
For further information, contact Paolo MUTTI, Head of Scientific Computing Department: mutti@ill.fr
(please do not send your application to this address).

Benefits:

Generous company benefits (expatriation allowance), relocation assistance and language courses may be offered (for more information, please consult our employment conditions).

How to apply:

Please submit your application on-line, no later than **15/09/2019,** via our web site: www.ill.eu/careers (vacancy reference: **19/34**). **Interviews will be organized on week 40.**

We are committed to equal opportunity and diversity; we therefore encourage anyone with relevant qualifications to apply.