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VACANCY

The Institut Laue-Langevin (ILL), situated in Grenoble, France, is Europe's leading research facility for fundamental research using neutrons. The ILL operates the brightest neutron source in the world, reliably delivering intense neutron beams to 40 unique scientific instruments. The Institute welcomes over 2000 visits of scientists per year to carry out world-class research in solid-state physics, crystallography, soft matter, biology, chemistry and fundamental physics. Funded primarily by its three founder members: France, Germany and the United Kingdom, the ILL has also signed scientific collaboration agreements with 10 other countries. The Science Division currently has a vacancy:

Post-Doctoral Fellowship in management of Neutron and Synchrotron experimental data – BIG-MAP European Project –

The post-doctoral position is opened in the framework of the groundbreaking 3-years BIG-MAP European H2020 project, which forms part of the Battery 2030+ large-scale European initiative:

<https://battery2030.eu>.

The Battery Interface Genome Materials Accelerated Platform (BIG-MAP) is dedicated to the development of a modular, closed-loop infrastructure and methodology to bridge physical insights and data-driven approaches in order to accelerate the discovery of sustainable battery chemistries and technologies. BIG-MAP will integrate machine learning, computer simulations and AI-orchestrated experiments and syntheses to accelerate battery advances and optimization. The ILL, world leader in Neutron science and technologies, is a partner of the BIG-MAP consortium, which totals 34 participants from 15 countries, spanning renowned academic experts, Large Scale research Facilities (LSF), research laboratories and industry leaders.

Duties:

As a member of our Scientific Computing, you will work closely with other groups within the Science Division at ILL, in particular the Industrial Liaison Unit, the Diffraction and Large Scale Structures group. You will be responsible for:

- performing data analysis to extract main observables from experiments and deliver the analyzed data in a defined format.
- establishing standards and procedures/workflows for data analysis, automatization and protocols.
- taking part in the development of automated (standardized) visualization and pre-treatment software.
- working with a team involved in developing a feedback loop between experiments and computational simulations, including the definition and implementation of demonstrator workflows.

You will evolve in a multidisciplinary, international environment and interact with our BIG-MAP partners; in particular, a team composed of chemists/electrochemists, materials scientists, physicists and beam-line scientists from battery specialists CEA and RS2E, and synchrotron centers ESRF and SOLEIL. The opportunity to participate in experiments under the responsibility of instrument scientists at LSF will be given.

Qualifications and experience:

We are looking for a highly motivated candidate with a strong interest for data analysis and a solid experience in software development with the following qualifications:

- PhD in Computing Science or Physics.
- Solid experience with C++, Python and all the best practices in software development.
- Some familiarity with software tools for single crystal or powder diffraction and/or processing multi-dimensional tomographic imaging data sets would be ideal.
- Knowledge in AI and deep learning techniques will be a bonus.

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 for by the ILL). Knowledge of German would be an advantage.

Notes:

This post is located in GRENoble, France and subject to administrative screening.

Post-doctoral contract of 18 months renewable for a 6 to 18 months period. Only candidates holding a PhD obtained less than 2 years ago are eligible for post-doctoral positions at ILL.

Medical fitness for work under ionising radiation is required.

Further information can be obtained by contacting Duncan ATKINS, Industrial Liaison Unit, phone: +33(0)4.76.20.73.37, e-mail: atkins@ill.eu or Paolo Mutti, Head of the Scientific Computing group, phone: +33(0)4.76.20.72.23, e-mail: mutti@ill.eu (**please do not send your application to these addresses**).

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 with a list of publications and the **names of 3 references, including one from your present work place**, no later than **12.07.2020**, via our website: www.ill.eu/careers (Vacancy reference: **20/28**).