SOFTWARE ENGINEER IN GEOSCIENCES (M/F)

Permanent contract | Fulltime/40h | Belvaux

Your work environment

The Luxembourg Institute of Science and Technology (LIST) is a Research and Technology Organization (RTO) active in the fields of materials, environment and IT. By transforming scientific knowledge into technologies, smart data and tools, LIST empowers citizens in their choices, public authorities in their decisions and businesses in their strategies.

https://www.list.lu/

You will be part of the LIST Environmental Research and Innovation department

As part of a Research and Technology Organization (RTO), the work of the Environmental Research and Innovation (ERIN) Department tackles some of the major environmental challenges our society is facing today (e.g. adaptation to climate change, ecosystem resilience, sustainable energy systems, efficient use of renewable resources, environmental pollution prevention and control).

To this end, the mission of the ERIN department is:

(1) to conduct impact-driven scientific research and development, as well as technological innovation;

(2) to support companies in the implementation of new environmental regulations and advise governments on determining sustainable policies for the future, with the objectives of:

- Analysing, managing and exploiting sustainable resources (water, air, soil, renewable energy, bioresources).
- Reducing the environmental impact of human consumption and production activities.

Within the ERIN department, the 'Environmental Sensing and Modelling' (ENVISION) unit contributes to this mission by carrying out impact-driven research, geared towards monitoring, forecasting and predicting environmental systems in a changing world. An interdisciplinary team of around 50 scientists, engineers, post-docs and PhD candidates is developing new environmental process understanding, alongside new tools and technologies – operating at unprecedented spatial and temporal scales.

With a view to strengthen its activities in global change related research, LIST is offering a permanent position for an **experienced software engineer** that will support the software development activities in the fields of hydrology, meteorology, vegetation, and agricultural systems research.

What you will be doing

The selected candidate will join the 'Remote sensing and natural resources modelling' research group, embedded into the ENVISION unit. The group capitalizes on a blend of remote sensing data obtained from space- and air-borne platforms, as well as *in-situ* measured data, for producing information on the status of natural resources for public and private stakeholders.

Job reference: ERIN-2020-044

Application file:

- A CV (which includes a list of the most relevant developed software)
- A motivation letter
- References names of two or three referees

Apply online:

https://www.list.lu/en/jobs/researchers/job-offer/?tx_listjob_listjobdisplay%5BlistJob%5D=4025&cHash=fbf08f7d9aada396aaccda62cff7dfdd

Your working environment

The research department

https://www.list.lu/en/research/erin/

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The successful candidate will contribute to RDI projects through:

- Professional software development, including aspects related to code maintenance, static program analysis, and documentation.
- Development of new and extension of existing parallel scientific software tools.
- Porting, profiling, and tuning software to various HPC systems and architectures.
- Support the research groups across the ENVISION unit to implement software frameworks for model interoperability and integrate software components into fully functional software systems.
- Active collaboration with the research groups of the ENVISION unit to improve our products, and create new efficient solutions for public and private sectors.
- Write well-designed, testable code and perform code reviews in close collaboration with the environmental scientists.
- Active participation in the software development life cycle, e.g. requirement analysis (user needs), design (documenting how to deliver the required functionalities), development-integration-testing (convert design in complete software & demonstrate product fits requirements), implementation (resolution of identified problems), documentation, disposition.
- Maintain state-of-the-art expertise in the field of software development.
- Contribute to the development of partnerships and networks at national and international levels.

Moreover, the successful candidate will contribute to the dissemination, valorisation and transfer of RDI results via:

- Software licensing.
- Participation in the drafting of technical reports, scientific articles, patents and inventions.
- Participation in the implementation of technological solutions (proofs of concepts, prototypes).

Which profile we are looking for

Education

- Master in Computer Science, Informatics or similar.

Required seniority

- At least 5 years working experience as a software developer.

Technical skills

- Very good knowledge of parallel programming in Python, Fortran, C, C++, Java and shell scripting.
- Experience in HPC (including heterogeneous architectures).
- Profiling and performance optimization of parallel programs.
- Algorithm and software solution development in UNIX and Windows environments.
- Proven experience of tools for professional source code management, continuous integration, version control, testing, code reliability, application security and writing software documentation. Basic knowledge of testing frameworks for at least one programming language (pytest, junit for example).
- Basic to Good knowledge of code-quality measurements.
- Experience with established web application frameworks is an asset.
- Experience with software coupling infrastructures in a geosciences environment is considered as an asset.
- Basic to good gitlab platform knowledge.
- Experience with popular web application frameworks is an asset.
- Communicative and willing to learn, self-organized, and creative.
- Service oriented towards our clients and team members.
- Ability to work both independently and collaboratively in an international team.

Language skills

- Fluent spoken and written English; French, German and Luxembourgish will be considered as assets.

Interested ? Please apply online

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