Offer #2025-08847

Research support engineer for debugger implementation (F/M)

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : Temporary scientific engineer

Level of experience : Up to 3 years

About the research centre or Inria department

The Inria Centre at the University of Lille was set up in 2008 and employs 360 people, including 305 scientists in 15 research teams. Recognised for its strong involvement in the socio-economic development of the Hauts-De-France region, the Inria centre at the University of Lille maintains close relations with large companies and SMEs. By fostering synergies between researchers and industry, Inria contributes to the transfer of skills and expertise in the field of digital technologies and provides access to the best European and international research for the benefit of innovation and businesses, particularly in the region.

For more than 10 years, the Inria centre at the University of Lille has been located at the heart of Lille's university and scientific ecosystem, as well as at the heart of Frenchtech, with a technology showroom based on avenue de Bretagne in Lille, on the EuraTechnologies site of economic excellence dedicated to information and communication technologies (ICT).

Context

The aim of EVREF is to support the remodularisation and development of modular object-oriented applications. We approach this objective from two complementary perspectives: reengineering and constructs for dynamic languages. In the context of

languages, we are revisiting concepts such as modules and composition; we are also working on a new generation of reflexive systems. We are experimenting with these programming constructs using Pharo, an object-oriented, reflexive and open source language. http://rmod.inria.fr

Assignment

You will join the EVREF team's debugging group, comprising 3 researchers and 2 PhD students.

You will be involved in two main projects. The first involves porting the WhyLine debugger algorithm (which asks 'why/why not' questions about the execution of a programme) to the Pharo environment, using its graphical and instrumentation tools. The second aims to enhance the Debugging Spy tool to capture more events in the Pharo environment and develop tools for analysing this data, in order to improve our instrumentation tools for empirical evaluations.

As part of these projects, you will be involved in the research work of doctoral students, as well as improving the Pharo debugger to support debugging research.

You'll be involved in team life (presenting your work to the team, taking part in Pharo sprints, and attending conferences on Pharo and software engineering when related to your assignments).

Main activities

Main activities:

- software development of the Pharo debugger and its debugging and instrumentation tools
- porting the WhyLine debugger to Pharo
- development of tools to support research activities (infrastructure for the Pharo debugger, etc.)
- participation in debugging workshops
- taking part in meetings to design, discuss and reflect on the project and the debugger in general.

Additional activities:

- Participation in team life
- Participation in Pharo sprints
- Participation, where appropriate, in project-related writing (articles, chapters, blogs, etc.)

Skills

Technical skills and level required: engineer (bac+5 university or school) in object-oriented software development

Languages: FR, EN

Interpersonal skills: clear communication, teamwork, initiative and autonomy

Additional skills: autonomy, initiative, adaptability

Benefits package

- Subsidized catering
- Public transport partially reimbursed
- Leave: 7 weeks' annual leave + 10 days' RTT (full-time basis) + possibility of exceptional leave (e.g. sick children, moving house)
- Possibility of teleworking and flexible working hours
- Professional equipment available (videoconferencing, loan of IT equipment, etc.)
- Social, cultural and sporting benefits (Association de gestion des œuvres sociales d'Inria)
- Access to professional training
- Social security

Remuneration

Remuneration according to profile

General Information

- **Theme/Domain :** Distributed programming and Software engineering
- **Town/city :** Villeneuve d'Ascq
- **Inria Center :** Centre Inria de l'Université de Lille
- **Starting date :** 2025-07-01
- **Duration of contract :** 12 months
- **Deadline to apply :** 2025-05-31

Contacts

- **Inria Team :** EVREF
- **Recruiter :**
  Costiou Steven / steven.costiou@inria.fr

About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

The keys to success

- Object programming, Python and/or Pharo
- Familiarity with software production environments and tools (git, github, CI, etc.)
- Statistical analysis (statistical methods for empirical studies, R language, etc.)
- Teamwork (communication, presentations, mutual support, definition of common objectives)
- Ability to plan, anticipate and adapt a software production schedule

Warning : you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.

Instruction to apply

Please send your CV and cover letter

Defence Security :
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST).Authorisation to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy :
As part of its diversity policy, all Inria positions are accessible to people with disabilities.