
Type de contrat : CDD de la fonction publique
Niveau de diplôme exigé : Thèse ou équivalent
Fonction : Post-Doctorant
Niveau d'expérience souhaité : De 3 à 5 ans

A propos du centre ou de la direction fonctionnelle

The Inria Lille - Nord Europe Research Centre was founded in 2008 and employs a staff of 360, including 300 scientists working in sixteen research teams. Recognised for its outstanding contribution the socio-economic development of the Nord - Pas-de-Calais Region, the Inria Lille - Nord Europe Research Centre undertakes research in the field of computer science in collaboration with a range of academic, institutional and industrial partners.

The strategy of the Centre is to develop an internationally renowned centre of excellence with a significant impact on the City of Lille and its surrounding area. It works to achieve this by pursuing a range of ambitious research projects in such fields of computer science as the intelligence of data and adaptive software systems. Building on the synergies between research and industry, Inria is a major contributor to skills and technology transfer in the field of computer science.

Contexte et atouts du poste

Job enironnements

IDEs (integrated development environment) provides some supporting tools to ease development, such as automatic completion. Now several important tasks are not well covered: for example, merging changes, assessing the tests to automatically rerun, debugging extreme situations,...

In addition, they are often based on static type information. The goal of this postdoc is to enhance IDEs for dynamically-typed languages: using multiple approaches: type inferencing, taking advantage of the AST structure, studying the use of examples to produce concrete types.

Finally, often tools are inflexible and cannot be adapted to specific domain or projects. New generation tools should support the developers customizing tools to their own workflow and domain following the PhD of A. Chis on Moldable tools.

Results will be submitted to international conferences and journals and an effort will be put to produce systems that can be used by (normal) developers so that user experiences provide real data.

The work will happen in collaboration between Inria Lille (RMOD), University of Bern and Pleiad from University of Chile.

RMOD

The goal of RMoD is to support remodularization and development of modular object-oriented applications http://rmod.inria.fr. We tackle this objective from two complementary perspectives: reengineering, and constructs for dynamic languages. In the context of languages, we revisit language concepts such as modules and composition, we are also working on a new generation of reflective systems. We experiment with these programming constructs using Pharo, an open-source, reflective, object-oriented language http://www.pharo.org used by more than 30 Universities worldwide and an industrial consortium http://consortium.pharo.org.

Mission confiée

Assignments

The goal of this Postdoc is to work on high level IDE on one or more of the following topics:

- recommender systems (following PhD of S. Proksch)
- automatic completion
- back in time debugger and scriptable debuggers
- automatic test selection and execution (following PhD of V. Blondeau)
- type inferencer for tooling (following work on RoelTyper and PhD of L. Spoon on type inferencer systems (following PhD of S. Proksch)
Principales activités
The plan is to:

- Survey the key developer activities.
- Define new model and enhance current
- Realize prototypes, possibly using Pharo.
- Run validation with real end-users.
- Publish results in top venues.

Compétences
Skills
Pharo, OOP, TDD
Reflective programming
Program transformation

Avantages sociaux
Benefits
- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Sports facilities
- Flexible working hours

More information about Lille:
http://www.lille3000.eu/portal/
http://www.lillemetropole.fr/mel.html
Rémunération

Remunerating

The gross monthly salary is 2653€