2023-06734 - System Engineering and Multi Disciplinary Analysis and Optimization research engineer

Contract type: Fixed-term contract  
Level of qualifications required: Graduate degree or equivalent  
Function: Temporary scientific engineer

About the research centre or Inria department

The Inria Centre at Rennes University is one of Inria's eight centres and has more than thirty research teams. The Inria Centre is a major and recognized player in the field of digital sciences. It is at the heart of a rich R&D and innovation ecosystem: highly innovative PMES, large industrial groups, competitiveness clusters, research and higher education players, laboratories of excellence, technological research institute, etc.

Context

The interface des sciences informatiques et des mathématiques, les 3500 chercheurs d’Inria inventent les technologies numériques de demain. Issus des plus grandes universités internationales, ils croisent avec créativité recherche fondamentale et recherche appliquée. Ils se consacrent à des problèmes concrets, collaborent avec les acteurs de la recherche publique et privée en France et à l’étranger, et transforment le fruit de leurs travaux vers les entreprises innovantes.

Les chercheurs des équipes Inria ont publié plus de 4500 articles en 2013. Ils sont à l’origine de plus de 300 brevets actifs et de 120 start-ups. Les 172 équipes-projets Inria sont réparties dans huit centres de recherche implantés en région.

Le sujet d'étude de l'équipe DiverSE est le logiciel : comment le concevoir, comment le maintenir, comment le valider ? L’objectif principal est de composer et de synthétiser automatiquement la diversité logicielle, de la conception à l’exécution, afin de répondre aux évolutions imprévisibles des systèmes logiciel en particulier dans un contexte DevOps. Nous répondons à cet objectif à travers 4 axes de recherche principaux :

- L’ingénierie des langages,
- La gestion de la variabilité des logiciels,
- L’évolution et la reconfiguration dynamique des logiciels
- La résilience d’un système logiciel (capacité à résister) dans un contexte d’exécution ouvert et parfois hostile

Assignment

Assignments:  
With the help of DiverSE team (Prof Comembrele, Prof Olivier Barais) the recruited person will be taken to do experiments in the context of the scientific simulation.

Collaboration:

Research engineer will collaborated with the software heritage team and a set of PhD students and researcher that will work on the topic.

Responsibilities:

The person recruited is responsible for producing experimental results, maintain the platform, and exchange with the community.

Main activities

Main activities:
- producing/gathering experimental data;
- maintaining a website and a data platform to disseminate results;
- communicating with the GEMOC community to assess the suitability of the proposal and identify lacks;
- analysing data (eg logs) with automated procedures

Skills

Technical skills and level required: automated software engineering, advanced programming.

Relational skills: ability to communicate and share results

Other valued appreciated: interests in software and open-source projects

General Information

- Theme/Domain: Distributed programming and Software engineering  
- Software engineering (BAP E)  
- Town/city: Rennes  
- Inria Center: Centre Inria de l'Université de Rennes  
- Starting date: 2024-01-01  
- Duration of contract: 1 year, 3 months  
- Deadline to apply: 2023-11-21

Contacts

- Inria Team: DIVERSE  
- Recruiter: Combemale Benoît / benoit.combemale@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

We are looking for highly motivated people in software. We are studying real-world, popular, open-source, software projects – and we hope to have concrete impacts on them! The candidate should have a strong interest and the skills for performing experiments and model based system design. It means the candidate should master techniques and tools for:

- producing/gathering experimental data (based on the testing/executions of existing software systems);
- analysing data with statistics/visualisations;

If you like software, system engineering and data science, you’re certainly the one! The candidates will work with a software engineer (fully devoted to the project), two PhD students (fully devoted to the project), some interns, and 8 professors.
Benefits package
- Subsidized meals
- Partial reimbursement of public transport costs
- Possibility of teleworking (90 days per year) and flexible organization of working hours
- Partial payment of insurance costs

Remuneration
Monthly gross salary from 2 695 euros according to diploma and experience

Instruction to apply
Please submit online: your resume, cover letter and letters of recommendation eventually

For more information, please contact benoit.combalenay@inria.fr

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.