Offer #2024-07693

fixed-term researcher @ Grenoble: Scheduling algorithms for Cloud and Edge computing

Contract type : Fixed-term contract

Level of qualifications required : PhD or equivalent

Fonction : Tempary Research Position

Level of experience : More than 12 years

About the research centre or Inria department

The Centre Inria de l'Université de Grenoble groups together almost 600 people in 22 research teams and 7 research support departments.

Staff is present on three campuses in Grenoble, in close collaboration with other research and higher education institutions (Université Grenoble Alpes, CNRS, CEA, INRAE, ...), but also with key economic players in the area.

The Centre Inria de l'Université Grenoble Alpe is active in the fields of high-performance computing, verification and embedded systems, modeling of the environment at multiple levels, and data science and artificial intelligence. The center is a top-level scientific institute with an extensive network of international collaborations in Europe and the rest of the world.

Context

The candidate will join the DataMove INRIA team located on the campus of the Univ. Grenoble Alpes near Grenoble. The DataMove team is a friendly and stimulating group with a strong international visibility, gathering Professors, Researchers, PhD and Master students all pursuing research on High Performance Computing.

This work is part of a joint collaboration with international industrial and academic partners.

Hiring date is flexible, starting as early as July 2024. The contract is for 8 months.

The city of Grenoble is surrounded by the Alps mountains, offering a high quality of life and where you can experience all kinds of mountain related outdoors activities and more.

Assignment

The job takes place in the BPI funded OTPaas project that develops a middleware for edge computing architectures aimed at middle sized companies of the industrial sector. Composed of a consortium of several industrial and academic partners, OTPaaS covers the whole stack from secure cryptographic protocols to high level data analytics algorithms. Its ultimate goal is to be installed in factories to improve french enterprises competitiveness.

The Datamove team expertise in task scheduling taking into account energy optimisation will be used in OtPaaS to schedule tasks execution on Kubernetes clusters.

Main activities

We are looking for a candidate that will join the OtPaaS team for:

1. porting the energy aware scheduling algorithms developed in Datamove to the OTPaaS platform
2. evaluating the performance these algorithms on the platform for the response time and energy consumption criteria

Skills

Expected technical skills include Linux, Kubernetes and a good mastering of development processes is a plus (git, continuous integration, containers, etc.).

Having worked in contacts with various industrial partners would be a valuable addition.

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (90 days / year) and flexible organization of working hours (except for intership)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage under conditions

Remuneration

From 3,085 € (depending on experience and qualifications).

General Information

- **Theme/Domain :** Distributed and High Performance Computing
- **Town/city :** Montbonnot
- **Inria Center :** Centre Inria de l'Université Grenoble Alpes
- **Starting date :** 2024-07-01
- **Duration of contract :** 8 months
- **Deadline to apply :** 2024-07-19

Contacts

- **Inria Team :** DATAMOVE
- **Recruiter :**
  Denneulin Yves / yves.denneulin@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 welcome candidates with a phD in computer science with experiences in parallel programming, distributed systems and parallel computer systems. Since the OTPaaS platform is a rather large project aimed at non expert users, having worked in a context in direct contact with end users is a plus.

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

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.