



**Offer #2025-08712**

## **PhD Position F/M xOS: The End Of The Process-Thread Duo Reign**

**Contract type :** Fixed-term contract

**Level of qualifications required :** Graduate degree or equivalent

**Fonction :** PhD Position

### **About the research centre or Inria department**

The Centre Inria de l'Université de Grenoble groups together almost 600 people in 23 research teams and 9 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 Alpes 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**

**Within the framework of a partnership (you can choose between)**

- collaboration between 2 Inria teams: *krakOS* and *Whisper*

### **Assignment**

**Assignments :**

With the help of his supervisors, the recruited person will prototype and evaluate xOS.

**For a better knowledge of the proposed research subject :**

A state of the art, bibliography and scientific references are available at the following URL: [https://theses.hal.science/LIG\\_SRCPR/hal-04191367v1](https://theses.hal.science/LIG_SRCPR/hal-04191367v1)

**Collaboration :**

The recruited person will be in connection with Alain Tchan, Renaud Lachaize and Jean-Pierre Lozi, the supervisors of this PhD.

**Responsibilities :**

The person recruited is responsible for prototyping and evaluating xOS.

**Steering/Management :**

The person recruited will be in charge of organizing meetings with the PhD supervisors.

## Main activities

Main activities (5 maximum) :

- Analyse the requirements of xOS
- Propose a solution for the VIC, the runtime and the universal language for describing execution flows and protection domains
- Design experimental platforms
- Perform experiments
- Write documentation and reports

Additional activities (3 maximum) :

- Present the work at conferences

## Skills

Technical skills and level required :

- Operating System Concepts
- Linux kernel programming
- C programming
- Security

Languages :

- French
- English

Relational skills :

- Work in a team

## 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 (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage under conditions

## Remuneration

2200 euros gross salary /month

## General Information

- **Theme/Domain** : Distributed Systems and middleware System & Networks (BAP E)
- **Town/city** : Batiment IMAG
- **Inria Center** : [Centre Inria de l'Université Grenoble Alpes](#)
- **Starting date** : 2025-05-01
- **Duration of contract** : 3 years
- **Deadline to apply** : 2025-04-06

## Contacts

- **Inria Team** : [KRAKOS](#)

- **PhD Supervisor :**  
Tchana Alain / [alain.tchana@inria.fr](mailto:alain.tchana@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

- Resilient

**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.