



**Offer #2024-07490**

## **PhD Position F/M Campagne Doctorant: verification of Linux kernel source code**

**Contract type** : Fixed-term contract

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

**Fonction** : PhD Position

### **Assignment**

Understand the opportunities and challenges that arise in verifying the source code of an existing OS.

Design and implement tools to facilitate such verification.

Consider how a verification effort can scale, across time and to larger code fragments.

### **Main activities**

Study of Linux kernel source code.

Design and implementation of program analyses.

Construction and validation of specifications for Linux kernel source code.

### **Skills**

Familiarity with programming in C and OCaml.

Familiarity with program verification tools such as Frama-C.

Familiarity with operating systems concepts and the Linux kernel code base.

Strong research skills, in terms of reading research papers, writing research papers, and making presentations.

### **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
- Flexible organization of working hours 12after 6 months of employment)
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

### **Remuneration**

According to civil service salary scales

### **General Information**

- **Theme/Domain** : Distributed Systems and middleware System & Networks (BAP E)
- **Town/city** : Paris
- **Inria Center** : [Centre Inria de Paris](#)
- **Starting date** : 2024-10-01
- **Duration of contract** : 3 years
- **Deadline to apply** : 2024-05-19

### **Contacts**

- Inria Team : [WHISPER](#)
- PhD Supervisor :  
Lawall Julia / [Julia.Lawall@inria.fr](mailto:Julia.Lawall@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.

**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

In your application (which can be in English or in French), please include:

- CV
- Letter of motivation
- Letters of recommendation
- Master's grades

### **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.