



**Offer #2025-09143**

## **Integration of a Secure Protocol for Zero-Touch Network Enrollment in the OpenSwarm Testbed**

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

**Fonction :** Temporary scientific engineer

### **Assignment**

The main task is to work on the integration of lightweight security protocols and infrastructure for embedded platforms.

It includes contributing to the integration of the ELA protocol -- designed for secure and automated device onboarding -- with the OpenSwarm testbed, enabling zero-touch network association for large numbers of embedded nodes.

This work includes extending the lakers Rust library, which implements ELA and EDHOC, and collaborating on the embedded-cal project to improve modularity and portability of cryptographic operations across microcontroller architectures.

### **Main activities**

- Integrate the ELA protocol with the OpenSwarm testbed
- Perform experiments and measure the performance of ELA in the testbed
- Write software in Rust, C, and Python to improve our lakers implementation of EDHOC for constrained IoT devices

### **Skills**

Technical skills and level required : Systems-level programming, embedded development, distributed systems

Languages : English

Relational skills : Communication and team work

Other valued appreciated :

### **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 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

## General Information

- **Theme/Domain** : Networks and Telecommunications  
Software engineering (BAP E)
- **Town/city** : Paris
- **Inria Center** : [Centre Inria de Paris](#)
- **Starting date** : 2025-10-01
- **Duration of contract** : 7 months
- **Deadline to apply** : 2025-08-09

## Contacts

- **Inria Team** : [AIO](#)
- **Recruiter** :  
Fedrecheski Geovane / [geovane.fedrecheski@inria.fr](mailto:geovane.fedrecheski@inria.fr)

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**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 :**

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