



Offer #2024-07807

Post-Doctoral Research Visit F/M Protection of personal and sensitive data based on trusted computing

Contract type : Fixed-term contract

Level of qualifications required : PhD or equivalent

Fonction : Post-Doctoral Research Visit

About the research centre or Inria department

The Inria Saclay-Île-de-France Research Centre was established in 2008. It has developed as part of the Saclay site in partnership with **Paris-Saclay University** and with the **Institut Polytechnique de Paris**.

The centre has [39 project teams](#), 27 of which operate jointly with Paris-Saclay University and the Institut Polytechnique de Paris; Its activities occupy over 600 people, scientists and research and innovation support staff, including 44 different nationalities.

Context

This post-doc position takes place within the framework of the PEPR (Priority Research Program and Equipment) Cybersecurity iPoP (interdisciplinary Project on Privacy) project involving several internationally recognized French research teams working on data protection, from universities, engineering schools and national research organizations, as well as the CNIL (French National Commission on Information Technology and Civil Liberties).

Assignment

The postdoctoral researcher will work in collaboration with the PETSCRAFT and PRIVATICS project teams at Inria and will be hosted at Inria Saclay in Palaiseau.

Two main tasks will be assigned to her:

Firstly, she will design and integrate a trusted computing support solution into the DARC platform to allow partners (industrial, governmental organizations, etc.) to securely provide sensitive data samples to the platform, with guarantees of data confidentiality (including from the administrators of the platform), in order to test the robustness of the sample against state-of-the-art data reidentification algorithms.

Secondly, she will collaborate on the design and implementation of service-oriented data management solutions based on trusted computing components, in order to (1) ensure protection against data leaks in the presence of bugs in the codes running in secure enclaves and (2) consider a generic solution for securing specific services allowing the confidential handling of personal data to enable the development of software solutions of the "PETs" (privacy enhancing technologies) type as services usable by application developers.

Other related topics combining data management in trusted computing environments and security techniques may also be considered.

Note: This feminine formulation is deliberately chosen by the PETSCRAFT team to promote diversity in recruitment, but of course, the position is open to all candidates.

Main activities

To achieve our goal, many challenges must be addressed. It is essential to approach the problem in successive stages: an analysis of techniques suitable for the Intel SGX context, a study on potential information leaks, the proposal of countermeasures based on protocols and evaluation strategies, and finally, the extension of these solutions to the use cases of the DARC platform and the design of PETs.

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

Remuneration

Monthly gross salary : 2.788 euros

General Information

- **Theme/Domain** : Security and Confidentiality
- **Town/city** : Palaiseau
- **Inria Center** : [Centre Inria de Saclay](#)
- **Starting date** : 2024-09-01
- **Duration of contract** : 12 months
- **Deadline to apply** : 2024-08-30

Contacts

- **Inria Team** : [PETSCRAFT](#)
- **Recruiter** :
Anciaux Nicolas / Nicolas.Anciaux@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

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.