Offre n°2025-08784

Post-Doctorant F/H Privacy protection in geolocalization systems

Type de contrat : CDD

Niveau de diplôme exigé : Thèse ou équivalent

Fonction : Post-Doctorant

A propos du centre ou de la direction fonctionnelle

The Inria Grenoble research center groups together almost 600 people in 23 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 (University Grenoble Alpes, CNRS, CEA, INRAE, …), but also with key economic players in the area.

Inria Grenoble 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.

Contexte et atouts du poste

Description of the GTTP project : Geolocalization is essential to the efficient operation of many modern organizations. Reliable geolocalization can improve industrial processes, enhance human safety, reduce journeys, costs and losses, increase profitability and create new value-added services. Online services such as streaming, e-commerce but also the ICT infrastructure itself, wireless networks and edge computing, increasingly depend on geolocalization to provide their services. Due to the critical role of geolocalization in the ecosystem, performance

requirements are high and manifold. Different applications demand different properties from the service: tracking systems necessitate scalability, large coverage, very low cost and energy efficiency to support billions of objects of various sizes and values; real-time services need low latency to meet clients' stringent demands; user-centered services impose strict privacy requirements. Yet, existing geolocalization infrastructures fail to meet all requirements, if any, and are still unreliable, unsafe for personal data, limited in scope, not scalable and not interoperable because innovations in this domain have remained siloed over the years.

The objective of this project is to study and demonstrate why and how an open and unified geolocalization architecture would enable operators and their users to collaboratively contribute to the common global needs for location services of entities of any size and of any value. Since the location of an object is sensitive information and can constitute a major threat to privacy, GTTP will study more specifically how to natively secure this architecture. GTTP aims at (i) studying and designing an unified privacy-first geolocalization infrastructure, (ii) developing a demonstrator and evaluating it on various use cases, and (iii) analyzing in depth privacy aspects related to the geolocalization of humans and the tracking of objects in this framework. To do that, GTTP will provide the necessary scientific methodology and software artifacts and demonstrate their functionality, properties and performance on testbeds with real-life applications. By the means of two real-life use case types implemented with real position providers, the benefits of using the outcomes of GTTP before and after deploying the GTTP infrastructure will be showcased. Ideally, this project will serve as a pilot to larger international initiatives focused on its generalization and adoption.

This post-doc will focus on the privacy and security aspects of the project, and will be hosted by the Inria PRIVATICS team.

Mission confiée

Contribute to the ANR GTTP, especially on the privacy and security aspects.

Tasks

- Contribute to a privacy-oriented risk analysis of targeted use cases
- Design and implementation of privacy-preserving mechanisms and protocols
- Evaluation of privacy-preserving mechanisms and protocols
- Production of reports and research papers

Compétences

- Interest in privacy and securityKnowledge in privacy protection schemes, secure protocols and cryptographic primitives
- Knowledge in networking and distributed systems
- Good software development skills (Python, ...)
- Good level of spoken and written english

Other valued skills : knowledge of geolocation / positioning systems

Avantages

- 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
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Complementary health insurance under conditions

Rémunération

2788€ gross salary / month

Informations générales

- **Thème/Domaine :** Sécurité et confidentialité
- **Ville :** Lyon
- **Centre Inria :** Centre Inria de Lyon
- **Date de prise de fonction souhaitée :** 2025-06-01
- **Durée de contrat :** 2 ans
- **Date limite pour postuler :** 2025-04-30

Contacts

- **Équipe Inria :** PRIVATICS

- **Recruteur :**
  Cunche Mathieu / mathieu.cunche@inria.fr

A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'e?orce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

Attention: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

Consignes pour postuler

Applications must be submitted online on the Inria website.

Processing of applications sent by other channels is not guaranteed.

Sécurité défense :
Ce poste est susceptible d'être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L'autorisation d'accès à une zone est délivrée par le chef d'établissement, après avis ministériel favorable, tel que défini dans l'arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l'annulation du recrutement.

Politique de recrutement :
Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.