2018-00713 - PostDoc (18 months): Web-Of-Browsers: Towards a fully decentralized web

Type de contrat : CDD de la fonction publique
Niveau de diplôme exigé : Thèse ou équivalent
Fonction : Post-Doctorant
Niveau d'expérience souhaité : Jusqu’à 3 ans

A propos du centre ou de la direction fonctionnelle
The Inria Rennes - Bretagne Atlantique center is one of Inria’s eight centers and has more than thirty research teams. The Inria Center is a major and recognized player in the field of digital sciences. It is at the heart of a rich R&D and innovation ecosystem: highly innovative PMEs, large industrial groups, competitiveness clusters, research and higher education players, laboratories of excellence, technological research institute, etc.

Contexte et atouts du poste
The WIDE team is recruiting a post-doctoral researcher for a duration of 18 months, with an immediate starting date.

The project Web of Browser aims at exploring the construction of a decentralized and browser-based web. This objective stems from the observation that browsers have become the most widely deployed execution environments in the world. Initially only designed to display HTML pages, they have evolved into comprehensive runtime platforms able to execute complex local code, interact with humans, and with remote web services. The recent introduction of WebRTC has further extended the capability of browsers by introducing support for browser-to-browser communication. This turns browsers into a decentralized execution environment where interactions between human and web services are enabled without third party.

Mission confiée
The objective of this post-doctoral project is to explore the programmability of browsers as the building block of a decentralized web. We would in particular like to develop a framework for emergent localities on the basis of our existing work, i.e. allow practitioners to easily construct advanced decentralized services by assembling simpler and composable distributed bricks. The postdoc offers scope for both algorithmic and experimental developmental work, notably in the domains of information discovery, routing, and coordination.

The project holds potential for strong synergies with related on-going projects running in the WIDE group, notably on private decentralized aggregation, privacy-preserving decentralized learning, and browser-fingerprinting anonymization.

Principales activités
The successful candidate will engage in explorative scientific research in the field of decentralized systems and algorithms, with focus on browser-based deployment and application.

Compétences
- Ability to conduct research autonomously in a collaborative setting.
- Self-initiative, curiosity and experimental rigor.
- Excellent ability to express oneself clearly and convincingly in both written and oral English.
- A genuine drive to expand one’s knowledge and horizons.
- Excellent experimental and programming skills.
- A good grasp of current research questions in distributed systems and/or distributed algorithms research.

Avantages sociaux
- Subsidised catering service

Informations générales
- Thème/Domaine : Systèmes distribués et intergiciels
- Système & réseaux (BAP E)
- Ville : Rennes
- Centre Inria : CRI Rennes - Bretagne Atlantique
- Date de prise de fonction souhaitée : 01-06-2018
- Durée de contrat : 1 an, 6 mois
- Date limite pour postuler : 15-06-2018

Contacts
- Equipe Inria : WIDE
- Recruteur : Taiani Francois / francois.taiani@inria.fr

L'essentiel pour réussir
The recruited post-doctoral researcher should hold a PhD in Computer Science, with ideally a focus on large distributed computer systems and web technologies. The candidate should be a driven and creative individual, with an interest in innovative and paradigm changing technologies.

Due to funding conditions, the offer is limited to candidates who have spent at least 12 months outside of France over the last 3 years.

Conditions pour postuler
What to include in your application
Applicants should apply, in the first instance, by submitting
- a CV (up to two A4 pages),
- a short statement outlining their research interests and motivation (up to half an A4 page),
- and the names and addresses of at least two academic referees.

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.
- Partially-reimbursed public transport
- Social security
- Paid leave
- Flexible working hours
- Sports facilities

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

**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.