2019-02153 - Post-Doctorant F/H DATA4US : Personal Data Transparency for web users

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 Sophia Antipolis - Méditerranée center counts 34 research teams as well as 8 support departments. The center's staff (about 500 people including 320 Inria employees) is made up of scientists (engineers of 50 nationalities), engineers, technicians and administrative staff. 1/3 of the staff are civil servants, the others are contractual agents. The majority of the center's research teams are located in Sophia Antipolis and Nice in the Alpes-Maritimes. Four teams are based in Montpellier, Biarritz, Bordeaux and Lyon. The center is a founding member of Université Côte d'Azur and partner of the I-site MUSE supported by the University of Montpellier.

Contexte et atouts du poste

The team consists of two CS researchers, Nataliia Bielova (PI) and Cedric Lauradoux (co-PI). Nataliia is an expert in privacy protection in Web applications and Web tracking technologies. Cedric is a privacy researcher with a very strong background in cryptography. Additionally, one Law postdoc will join the project. DATA4US will also benefit from the network of connections with Law researchers established at CPDP conferences, Priveweb 2019 workshop and Grenoble Alpes Data Institute.

Mission confiée

General Data Protection Regulation (GDPR) regulates collection of personal data, but today users' data is still silently collected as they browse the Web. GDPR empowers users with the rights to access their own data, but users have no means to exercise their rights in practice. In DATA4US, we propose a new architecture for exercising access rights that will explain the users whether their data has been legally collected and eventually help contact DPAs for further investigations.

Principales activités

The postdoc hired in DATA4US project will contribute to two challenges:

Challenge 1 - Showing to users when Web tracking is illegal. Multiple studies by Computer Science researchers, including our own, have demonstrated the prevalence of third party tracking on the Web. However, Computer Scientists alone cannot analyze legal requirements to conclude whether a certain type of tracking is legal or not. Law researchers have analyzed what kind of tracking is illegal according to GDPR and other legal sources, but only in theory: Law researchers need technical validation when interpreting legal sources and applying them to the concrete cases.

First challenge is to provide a tool for the users to log and monitor tracking performed by third parties by building upon our previous work [1]. We will show to the users how third parties are tracking their activity on the Web. The novelty is that tracking when tracking activity is illegal and explaining it back to the users. Notice that general public might not be able to understand the concepts of illegal tracking, we hence will aim explanations only at domain experts at this stage of the project.

Challenge 2 - New Web architecture for exercising GDPR rights. In our previous joint work [2], we have discovered that Subject Access Request (SAR) procedures that implement GDPR access rights, though compliant with the law, are suffering from a number of security vulnerabilities and implementations that can lead to data breaches. The problem is that the same technology that is used to track users (such as cookies) was not initially designed to identify users. Cookies (as many other digital identifiers) are chosen by third parties on the server side and stored on the client side (in the browser). Cookies can subsequently be changed in the browser or, if not properly secured, even stolen by network attackers. As a result, cookies are not sufficiently secure to be used to reclaim the data associated with a Subject Access Request and to prove data ownership. For this reason, today many third parties refuse SAR and don't provide access to users' data.

We aim to change this paradigm and to let the user generate his/her cookies on the client side by elaborating our recommendations from our joint work [2]. By using cryptographic schemes we then provide an easy and safe mechanism for a user to claim cookie ownership. To facilitate the adoption by the third parties of such a technology, we will need to collaborate with Law researchers and eventually Policy makers to demonstrate that there is an obligation of means and of results to have technologies allowing proof of ownership approved by the future laws.

References:


Compétences

- PhD degree in Law.
- A strong interest to understand technical aspects of Web applications.
- Fluent English required, both oral and written. Knowledge of French is not required.
- Knowledge of Data Protection Law, such as GDPR and ePrivacy is strongly recommended.

Informations générales

- Thème/Domaine : Sécurité et confidentialité Développement web (BAP E)
- Ville: Sophia Antipolis
- Centre Inria : CRI Sophia Antipolis - Méditerranée
- Date de prise de fonction souhaitée : 2020-02-01
- Durée de contrat : 1 an
- Date limite pour postuler : 2020-01-18

Contacts

- Equipe Inria : INDIES
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A propos d’Inria

Inria, l’institut national de recherche dédié aux sciences du numérique, promeut l’excellence scientifique et le transfert pour avoir le plus grand impact. Il emploie 2400 personnes. Ses 200 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3000 scientifiques pour relever les défis des sciences informatiques et mathématiques, souvent à l’interface d’autres disciplines. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 160 start-up. L’institut s’efforce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l’économie.

Consignes pour postuler

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 doit être obtenu pour un poste affecté dans une ZRR aurait pour conséquence l’annulation de l’attribution du poste.

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.
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 (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

Rémunération

Gross Salary: 2653 € per month