2018-00529 - Doctorant (e) : Smart Technology for Smart Society

Niveau de diplôme exigé : Bac + 5 ou équivalent
Fonction : Doctorant

A propos du centre ou de la direction fonctionnelle

Located at the heart of the main national research and higher education cluster, member of the Université Paris Saclay, a major actor in the French Investments for the Future Programme (Idex, LabEx, IRT, Equipex) and partner of the main establishments present on the plateau, the centre is particularly active in three major areas: data and knowledge; safety, security and reliability; modelling, simulation and optimisation (with priority given to energy).

The 450 researchers and engineers from Inria and its partners who work in the research centre's 31 teams, the 100 research support staff members, the high-level equipment at their disposal (image walls, high-performance computing clusters, sensor networks), and the privileged relationships with prestigious industrial partners, all make Inria Saclay Île-de-France a key research centre in the local landscape and one that is oriented towards Europe and the world.

Contexte et atouts du poste

Today’s smart handheld devices allow heterogeneous free data gathering of human surrounding environment and networking usage patterns anytime and anywhere. Hence, an unprecedentedly large amount of human sensory data (i.e., the Big Data era) can be collected and processed: opening ways to connect people, technology, and business. This big data implies advanced knowledge of humans’ behaviour and interactions at a planetary scale and can help tackle networking challenges when used correctly.

As our lives become more dependent on connectivity, it is easier to see that people have become eager to engage with mobile applications and connected services. As a consequence, smartphones have turned from a means of communication to a tool with high potential impact on the social integration of individuals in contemporary societies. They have changed the cultural norms and behavior of individuals, bringing positive (e.g., by simplifying information access all the time, with potential of facilitating better education systems in developing countries; by shortening geographical distances, social bonds are kept active, reducing stress while promising social support) and negative impact (e.g., by enabling people to create their own micro-cultures and engage into activities considered dangerous of society; by amplifying pre-existing differences in social participation and integration, rather than attenuating them; by having a highly negative and destabilizing influence on ongoing face-to-face interactions).

Lieu de la thèse : Ecole Polytechnique
Directeur de thèse Aline Carneiro Viana
Ecole Doctorale ED Paris Saclay
Description détaillée https://team.inria.fr/infine/smart-technology-for-smart-society/

Mission confiée

Thus, while examples of benefits of their usage can be easily found, smartphones are not a guarantee of social integration but an enabler whose impact depends on how it is being used. To understand how smartphones enable and constrain social integration, we need to understand (1) how, where and for what they are used, (2) how the uses of smartphones vary, as well as (3) how the psycho-social behavior of smartphone usage operate. The PhD thesis aims will be to expand our knowledge of smartphone usage; to connect that knowledge to the impact on social integration; and to provide policy recommendations on infrastructure and technological design development to improve and expand the social integration of individuals.

Current knowledge is fragmented because of the tendency of previous research to focus on: i) the study of specific behavior of smartphone use (ignoring thus complex interactions between behaviors), ii) small-N data on specific features of smartphone use, and iii) disciplinary-specific perspectives. Building on that knowledge, this PhD thesis aim to contribute a uniquely comprehensive account that improves on each of the above limitations. This is possible with
the help of an original and extensive smartphone usage datasets that we plan to analyze. This thesis will thus involve tasks related to dataset processing, enrichment and modeling as well as data analysis and knowledge extraction.

**Principales activités**

The outcome of the thesis would be to build on the acquired human knowledge and technology usability to provide policy recommendations on infrastructure and technological design development to improve and expand the social integration of individuals.

**Compétences**

Candidates must have a Master of Science or equivalent degree in Computer Science or Electrical Engineering. The ideal candidate has a strong background on machine learning, protocol design, scripting, statistics, and data mining. Knowledge of social networking, or complex networks is a plus. Candidates must be fluent in written and spoken English.

**Avantages sociaux**

- Restauration subventionnée
- Transports publics remboursés partiellement
- Sécurité sociale
- Congés payés
- Aménagement du temps de travail
- Installations sportives

**Rémunération**

1.982 euros brut/mois durant les 2 premières années, puis 2.085 euros brut/mois durant la 3ème année.

**Informations générales**

- **Thème/Domaine** : Réseaux et télécommunications
  Système & réseaux (BAP E)
- **Ville** : PALAISEAU
- **Centre Inria** : CRI Saclay - Île-de-France
- **Date de prise de fonction souhaitée** : 01-10-2018
- **Durée de contrat** : 3 ans
- **Date limite pour postuler** : 11-05-2018

**Contacts**

- **Equipe Inria** : INFINE-POST
- **Recruteur** :
  Carneiro Viana Aline / aline.viana@inria.fr

**Conditions pour postuler**

Applications including a CV, a motivation letter, and recommendation letters of two referees shall be sent by email to aline.viana@inria.fr. Applications will be evaluated until the position is filled.

**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.

**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.