2018-00423 - [Campagne Post-Doctorant 2018/CRI LILLE] - Understanding user reactions to unexpected changes in GUIs (M/F)

Contract type: Public service fixed-term contract
Level of qualifications required: PhD or equivalent
Other valued qualifications: PhD in Human-Computer Interaction
Fonction: Post-Doctoral Research Visit

About the research centre or Inria department

The Inria Lille - Nord Europe Research Centre was founded in 2008 and employs a staff of 360, including 300 scientists working in sixteen research teams. Recognised for its outstanding contribution the socio-economic development of the Nord - Pas-de-Calais Region, the Inria Lille - Nord Europe Research Centre undertakes research in the field of computer science in collaboration with a range of academic, institutional and industrial partners.

The strategy of the Centre is to develop an internationally renowned centre of excellence with a significant impact on the City of Lille and its surrounding area. It works to achieve this by pursuing a range of ambitious research projects in such fields of computer science as the intelligence of data and adaptive software systems. Building on the synergies between research and industry, Inria is a major contributor to skills and technology transfer in the field of computer science.

Context

Job environments

The selected applicant will join the Loki research team and work in collaboration with Prof. Géry Casiez, Dr. Mathieu Nancel and Dr. Sylvain Malacria. A client-server software platform is currently under development to remotely trigger changes on computers running MS Windows, in order to conduct field studies about noticeability of interface control change.

Assignment

Assignments

Modern interactive systems are highly automated, multi-threaded, and connected: explicit user input is not the only cause for system responses. Interacting with these dynamic systems can be cognitively challenging as visual updates occur more and more independently of the user's actions (notifications [1], changes of layout [3], pop-up windows, etc.). Moreover, interactive systems also tend to unexpectedly adapt their behaviour based on interaction patterns and histories (suggestion lists in web browsers [2] or virtual keyboards, input-output mappings, etc.) regardless of user's habits.

These situations raise interesting and novel research questions about the consequences of control and visual changes on a daily use, and of the best ways to either use or avoid them in Graphical User Interface (GUI) design: When does a change become unexpected? Do people understand the causes of visual changes? How do these changes impact everyday use of computing systems, both positively and negatively? How quickly do users detect them? How do they cope, at a behavioral level, with disrupting changes? And finally, how can we design reactive and adaptive systems that improve day-to-day interaction without disturbing the user?

The selected applicant is expected to work on at least one of two projects: a field study of the noticeability and consequences of slow changes to the input-to-output mapping of cursor control, performed over several weeks on participants' computers; or a characterization of the causes, consequences, and possible solutions to disrupting visual updates, (e.g. list updates, pop-up windows, etc.), that occur right before a user action and too quickly for motor interruption. Other projects can be discussed, including the selected applicant's own research projects.


General Information

- Theme/Domain: Interaction and visualization
- Information system (BAP E)
- Town/city: Villeneuve d'Ascq
- Inria Center: CRI Lille - Nord Europe
- Starting date: 11/1/18
- Duration of contract: 1 year, 4 months
- Deadline to apply: 3/29/18

Contacts

- Inria Team: LOKI
- Recruiter: Malacria Sylvain / sylvain.malacria@inria.fr

Conditions for application

Instructions to apply:

Candidates will be treated firstly with a complete file: CV + letter of motivation + list of publications + 2 representative publications + one or more letters of recommendation + prospects for professional integration after the post-doc.

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.

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.
Main activities

Main activities:

- Design, run and analyze the results of controlled and/or field experiments
- Implement demonstrators and/or background applications that can be used to test these novel designs
- Design novel interaction techniques
- Write scientific papers

Skills

Required skills:

- A PhD degree in Human-Computer Interaction or similar field
- A solid track record of publications in top-tier HCI venues
- Significant track record of design and implementation of interactive systems and GUIs
- Strong object-oriented programming skills
- Familiar with designing and analyzing evaluations of interactive systems, (knowledge of R is appreciated)
- Fluent English level

Benefits package

Benefits

- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Sports facilities
- Flexible working hours

More informations about Lille:

http://www.lille3000.eu/portail/
http://www.lillemetropole.fr/mel.html

Remuneration

Remunerating

The gross monthly salary is 2653€