
**Contract type:** Public service fixed-term contract  
**Renewable contract:** Oui  
**Level of qualifications required:** PhD or equivalent  
**Function:** Post-Doctoral Research Visit  
**Level of experience:** Up to 3 years

**Context**
The members of the AOSTE2 team ([https://www.inria.fr/equipes/aoste2](https://www.inria.fr/equipes/aoste2)) study time critical embedded communicating systems. Their results concern both probabilistic and non-probabilistic approaches while the interactions between different variability factors are considered. Currently, they collaborate with the partners of the FUI collaborative projects CEOS ([https://www.ceos-systems.com](https://www.ceos-systems.com)) and WARUNA.

**Assignment**
The position is dedicated to the study of the multicore scheduling for mixed-criticality applications while considering the impact of scheduling choices on the worst-case execution time of those applications. Solutions based on global and partitioned approaches will be compared for multicore processors that use architecture features like caches, pipelines and branch-predictors. Two case studies allow to validate the approach in the context of drone applications and autonomous cars.

**Main activities**
- Propose scheduling algorithms based on global and partitionned scheduling approaches taking into account communications  
- Study the schedulability conditions of those algorithms  
- Compare their performances  
- Participate to the team collaborations with partners within Inria and outside Inria  
- Participate to the drafting of technical documents and to their presentation in the main scientific events of our domain

**Skills**
- Technical skills and level required: real-time scheduling background  
  - Languages: English  
- Other valued appreciated:  
  - strong mathematical background  
  - statistical estimation  
  - good understanding of the interactions between the modelling and the implementation of an embedded communicating system

**Benefits package**
- Subsidised catering service  
- Partially-reimbursed public transport

**Remuneration**
- Location: Paris 12ème  
- Gross Salary per month: 2 653€ brut/mensuel

**General Information**
- **Theme/Domain:** Embedded and Real-time Systems  
- **System & Networks (BAP E):**  
- **Town/city:** Paris  
- **Inria Center:** CRi de Paris  
- **Starting date:** 11/1/18  
- **Duration of contract:** 1 year, 4 months  
- **Deadline to apply:** 3/23/18

**Contacts**
- **Inria Team:** AOSTE2  
- **Recruiter:** Sorel Yves / yves.sorel@inria.fr

**Conditions for application**
**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.
appointment.