2018-00330 - Control of complementarity hybrid dynamical systems - Post-Doctorants Inria Grenoble Research

Contract type: Public service fixed-term contract
Level of qualifications required: PhD or equivalent
Fonction: Post-Doctoral Research Visit

About Inria
Inria, the French National Institute for computer science and applied mathematics, promotes “scientific excellence for technology transfer and society”. Graduates from the world's top universities, Inria's 2,700 employees rise to the challenges of digital sciences. With its open, agile model, Inria is able to explore original approaches with its partners in industry and academia and provide an efficient response to the multidisciplinary and application challenges of the digital transformation. Inria is the source of many innovations that add value and create jobs.

About the research centre or Inria department
Grenoble Rhône-Alpes Research Center groups together a few less than 800 people in 35 research teams and 9 research support departments.

Staff is localized on 5 campuses in Grenoble and Lyon, in close collaboration with labs, research and higher education institutions in Grenoble and Lyon, but also with the economic players in these areas.

Present in the fields of software, high-performance computing, Internet of things, image and data, but also simulation in oceanography and biology, it participates at the best level of international scientific achievements and collaborations in both Europe and the rest of the world.

Assignment
This post-doc position subject is about Linear Complementarity Systems (LCS) analysis, which make an important class of hybrid dynamical systems with applications in circuits with piece-wise linear components, optimal control with state inequality constraints, genetic networks, etc.

In particular the design of time-varying stabilizing controllers, both by state and output feedback (keeping in mind that LCS are strongly nonlinear and nonsmooth dynamical systems, for which the separation principle does not automatically apply), will be tackled. Theoretical results will be supported by numerical simulations obtained with the INRIA software package SICONOS: http://siconos.gforge.inria.fr/4.1.0/html/index.html

Applicants should hold a PhD (defended between 1st September 2016 and 31st July 2018) in Systems and Control or Applied Mathematics. Starting date: 1st November 2018, duration: 16 months.

Main activities

Skills

Benefits package
- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave

General Information
- Theme/Domain: Optimization and control of dynamic systems
- Scientific computing (BAP E)
- Town/city: Montbonnot
- Inria Center: CRI Grenoble - Rhône-Alpes
- Starting date: 11/1/18
- Duration of contract: 1 year, 4 months
- Deadline to apply: 3/31/18

Contacts
- Inria Team: TRIPDP
- Recruiter: Brogliato Bernard / bernard.brogliato@inria.fr

Conditions for application
Starting date: 1st November 2018, duration: 16 months.

Applicants should hold a PhD (defended between 1st September 2016 and 31st July 2018) in Systems and Control or Applied Mathematics.

Applications have to be made on-line on the Inria web site before end of March.

For more details please contact Dr Bernard Brogliato (bernard.brogliato@inria.fr) or Dr Christophe Prieur (christophe.prieur@gipsa-lab.fr).

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.
- Flexible working hours
- Sports facilities

**Remuneration**

Gross salary: 2650 Euros per month.