2018-00540 - Open Research & Development
Post-doc / Engineer position available at
INRIA (Chroma team) on advanced
perception for Autonomous Vehicles in the
Star project

Renewable contract : Oui
Level of qualifications required : Graduate degree or equivalent
Fonction : Post-Doctoral Research Visit

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.

Context

The Inria research team Chroma is involved in several academic and industrial
projects in the field of Autonomous Vehicles. The proposed R&D work has to be
performed in the scope of a French FUI project “STAR”, in cooperation with several
companies and laboratories. The objective of INRIA in the project is to develop, to
experimentally validate and to demonstrate the capabilities of an Embedded
Perception in the context of Mobile Robotics and Autonomous Vehicles applications.
Several well published and patented results have already been obtained in the scope
of this project.

Assignment

A one year (re-newable) Research & Development Post-doc or Engineer position is
available at Inria Grenoble Rhône-Alpes, in the scope of the STAR project. The
objective is to customize the team perception systems, for an experimental
autonomous bus of the project, with different sensors and configurations.

Main activities

The recruited Post-doc / engineer will work within a team of 4 engineers already
working on different projects, with occasional interactions with some PhD students
and researchers of the Chroma team. The main task will be to understand the team
perception algorithms, and to propose new bricks on navigable space, navigability
near pedestrians, test and validation methods or any subject related to the
understanding of the scene for autonomous vehicle in a city. A Gazebo simulation
have to be built for the project, including bus and area where the project will be
tested in real life. The implementations and the experimentations will be performed
using the ROS framework, Gazebo simulation and multiple experimental platforms
(bus, shuttle, Renault Zoe). The recruited engineer will also contribute to the
improvement of the experimental platform of the team, and he will participate to
some scientific publications, industrial conferences or various demonstrations.

Skills

- Engineer with R&D experience or PhD in Computer Science, Robotics or closely
related fields.

General Information

- Theme/Domain : Robotics and Smart
environments
- Software engineering (BAP E)
- Town/city : Montbonnot
- Inria Center : CRI Grenoble - Rhône-
Alpes
- Starting date : 2018-04-01
- Duration of contract : 3 years
- Deadline to apply : 2018-06-30

Contacts

- Inria Team : CHROMA
- Recruiter :
  Laugier Christian /
  christian.laugier@inria.fr

The keys to success

The ideal candidate is highly
autonomous, with a strong interes in the
Autonomous Vehicle field and all the
associated technologies.

Strong communication skills and
teamwork abilities needed.

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
declared 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.
- Good theoretical and practical background in one of the following domains: Robotics, Multi-sensors perception or Scene Understanding.
- Good skills in C/C++, Python and Linux.

The following qualifications would be an advantage:
- Experience using the Robotics library ROS
- Familiarity with CUDA and Boost libraries
- Theoretical knowledge of Bayesian models
- Ability to work as a teammate with other researchers
- Reasonable English skills (written and spoken)

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