



**Offer #2020-02982**

## **Engineer - Grenoble Mobility Lab**

**Contract type** : Fixed-term contract

**Renewable contract** : Yes

**Level of qualifications required** : Graduate degree or equivalent

**Fonction** : Temporary scientific engineer

**Level of experience** : Recently graduated

### **About the research centre or Inria department**

Grenoble Rhône-Alpes Research Center groups together a few less than 650 people in 37 research teams and 8 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 team [Necs](#) is a joint Inria-Gipsa-Lab team, bi-located at the Inria Grenoble – Rhône Alpes center in Montbonnot and at [Gipsa-Lab](#). Necs team's research is focused on networked systems analysis and control. The main application of the team concerns traffic prediction and control. In this setting, together with the Metro of Grenoble and the DIR-CE, the team developed two traffic platforms for the collection and analysis of vehicular traffic in the city of Grenoble. The [Grenoble Traffic Lab](#) (GTL) and the [GTL-Ville](#) collect in real time traffic data and provide users with travel time prediction and traffic analysis on the South Ring of Grenoble and on the city center, respectively. The platform is currently constituted of a real time database, a show-room and a traffic management software. These platforms play a big role to test and validate the control algorithms and the traffic models developed by the team.

### **Assignment**

The main objective of the recruited engineer will be to build a new traffic platform to include micro-mobility and public transportation and to integrate the three platforms into the new Grenoble Mobility Lab (GML). In particular, the candidate will:

- Oversee the definition of a software modular architecture for the new platform
- Coordinate the maintenance of the current GTL and GTL-Ville platforms
- Integrate and maintain the algorithms of the different components of the system (prediction, control, management of historical data, filtering, data monitoring, sensor diagnostics)
- Develop programming interfaces linked with the architecture chosen (Matlab, Python, GPS traces, etc.)
- Develop web application to make available the GML to other researchers and to the general public.
- Coordinate joint technical efforts with other partners (DIR CE, Metro of Grenoble, TomTom, Karrus ITS, etc.)

### **Skills**

- Engineering diploma or MSc degree or equivalent in computer science or related fields
- Skilled in PHP, Javascript, Matlab and Python
- Knowledge of database management systems: MySQL, PostgreSQL
- Good knowledge of C++ and Java
- Experience in website development, data management, software and infrastructure architecture is a plus

### **Benefits package**

- Subsidized meals

- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (after 6 months of employment) and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage

## General Information

- **Theme/Domain** : Optimization and control of dynamic systems  
Software Experimental platforms (BAP E)
- **Town/city** : Montbonnot
- **Inria Center** : [Centre Inria de l'Université Grenoble Alpes](#)
- **Starting date** : 2021-02-01
- **Duration of contract** : 12 months
- **Deadline to apply** : 2020-12-31

## Contacts

- **Inria Team** : [NECS](#)
- **Recruiter** :  
Delle Monache Maria Laura / [Maria-Laura.Delle\\_Monache@inria.fr](mailto:Maria-Laura.Delle_Monache@inria.fr)

## About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

## The keys to success

- Ability to write, understand and debug clean, maintainable software code.
- Ability to read and interpret technical journal and reports
- Writing abilities and oral communication skills in English and in French
- Highly motivated to work in an international and multidisciplinary research team

**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.

## Instruction to apply

Application documents:

- CV
- Recommendation letters
- Cover letter
- Bonus points: Programmer portfolio

The applications should be send to: Maria Laura Delle Monache <mailto:ml.dellemonache@inria.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.