Job vacancy #2023-06516

Engineer (H/F) Seamless Shared Urban Mobility

Contract type: Fixed-term contract
Level of qualifications required: Graduate degree or equivalent
Fonction: Temporary scientific engineer

About the research centre or Inria department

The Inria University of Lille centre, created in 2008, employs 360 people including 305 scientists in 15 research teams. Recognised for its strong involvement in the socio-economic development of the Hauts-De-France region, the Inria University of Lille centre pursues a close relationship with large companies and SMEs. By promoting synergies between researchers and industrialists, Inria participates in the transfer of skills and expertise in digital technologies and provides access to the best European and international research for the benefit of innovation and companies, particularly in the region. For more than 10 years, the Inria University of Lille centre has been located at the heart of Lille's university and scientific ecosystem, as well as at the heart of Frenchtech, with a technology showroom based on Avenue de Bretagne in Lille, on the EuraTechnologies site of economic excellence dedicated to information and communication technologies (ICT).

Context

The main goal of the European Sum project (Seamless Shared Urban Mobility) is to promote the shift from private vehicles to Public Transport (PT) and New and Shared Modes (NSM) in order to reduce per capita emissions and mitigate the negative effects of urbanization, such a systemic shift is not easy in practice.

The Sum project involves 30 participants involving universities, research centers, public transport operators and companies.

Assignment

To improve the competitiveness of NSM and increase their modal share, we will focus the study on the two following problems. For both of them we will define optimization models and efficient solution methods based on the structure of the problems.

- **Scheduling and Ticketing integration of NSM and PT to integrate** the use of PT and NSM to maximize the synergies between NSM and PT instead of treating them as competitive services. This will alleviate the user’s barrier related to the inability to combine both modes and reduce the door-to-door travel times of passengers by using NSM to fill the gaps of PT and increase its service area.

- **Mobility Management**, including pricing and nudging schemes that introduce novel business models and drive down the cost of NSM, thus alleviating the barrier related to the high price of NSM. Pricing will include experiments with studying the effect of completely free PT and NSM services

Skills

- Good knowledge in optimization.
- Programming in Python or C++

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 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, machine learning and statistical methods
- **Data production, processing, analysis (BAP C)**
- **Town/city:** Villeneuve d'Ascq
- **Inria Center:** Centre Inria de l'Université de Lille
- **Starting date:** 2024-01-01
- **Duration of contract:** 3 years
- **Deadline to apply:** 2023-11-12

Contacts

- **Inria Team:** INOCs
- **Recruiter:** Brotcorne Luce / Luce.Brotcorne@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.

**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

- Send CV, cover letter, contact details and transcript to Luce.Brotcorne@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.