Offer #2024-08212

Ingénieur en acquisition et traitement de données capteurs

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : Temporary scientific engineer

Level of experience : From 3 to 5 years

About the research centre or Inria department

The Inria center at Université Côte d'Azur includes 42 research teams and 9 support services. The center's staff (about 500 people) is made up of scientists of different nationalities, engineers, technicians and administrative staff. The teams are mainly located on the university campuses of Sophia Antipolis and Nice as well as Montpellier, in close collaboration with research and higher education laboratories and establishments (Université Côte d'Azur, CNRS, INRAE, INSERM ...), but also with the regional economic players.

With a presence in the fields of computational neuroscience and biology, data science and modeling, software engineering and certification, as well as collaborative robotics, the Inria Centre at Université Côte d'Azur is a major player in terms of scientific excellence through its results and collaborations at both European and international levels.

Context

As part of the H2020-AGRIFOOD-TEF and STAIRS projects (GDRA: Grand Défi Robotique Agricole), ACENTAURI is offering a specialist engineer position on the acquisition and processing of multispectral data.

The objective is to acquire data and process it in order to supply environmental monitoring applications.

It will therefore be

to acquire multi-spectral camera data with a drone
to develop processing and analysis tools
to define relevant indexes for monitoring purposes
to feed a Decision Support System
to conduct studies and analysis with specialists in the agriculture, agrifood and forestry sectors to monitor diseases and growth of agricultural and forestry products

Regular travel is planned for this position to make acquisitions on site. The B license is compulsory as well as the drone remote pilot certificate.

Assignment

Missions:
As part of the two H2020-AGRIFOOD-TEF projects and the STAIRS project (GDRA: Grand Défi Robotique Agricole), the recruited person will be required to participate in data acquisition campaigns in France (exceptionally in Europe) from a instrumented drone. These or two campaigns can be carried out as part of the service to SMEs/Startups within the framework of AGRIFOOD-TEF or as part of the construction of specific DATASETS for the STAIRS project. In addition, he will also be responsible for providing a state of the art review of existing DATASETS.

The analysis of multi-spectral data requires knowledge in classical image processing but also in physics and agronomy.

Collaboration:
The recruited person will be linked to the engineering team already in place in the AGRIDOOD-TEF project. It will have to share the tasks allocated to the AGRIDOOD-TEF project services.

Responsibilities:
The recruited person will be responsible for setting up and planning acquisitions as well as the necessary authorizations regarding the use of drones and the acquisition of sensor data.

Main activities

Main activaties:

User needs analysis
Proposed solutions
Development of programs/applications and interfaces
Design of experimental software platform
Writing documents

Additional activities:

Writing reports
Writing meeting minutes
Test, modification and Validation

Skills

Technical skills and level required:
The candidate should preferably have an engineering degree with already proven experience (at least 3 years). The candidate must have solid foundations in software development and image and signal processing (Matlab, C/C++, Python, Git, OpenCL, CMAKE, ROS1, ROS2, etc.). Knowledge of programming machine learning methods (learning and inference) and GPU programming will be highly appreciated.

LANGUAGES :
a good level of reading/writing/speaking English is desired.

Interpersonal skills:

The candidate will be in contact with the members of the team and will have to integrate into the ACENTAURI engineering team. He/She must have appropriate interpersonal skills.

Additional skills appreciated:
The B license and the drone remote control license are mandatory. He/she must also be highly motivated for multidisciplinary studies and all aspects of R&D ranging from fundamental to experimental work.

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
- Contribution to mutual insurance (subject to conditions)

Remuneration

From 2692 € gross monthly (according to degree and experience)

General Information

- **Theme/Domain :** Robotics and Smart environments
  Instrumentation et expérimentation (BAP C)
- **Town/city :** Sophia Antipolis
- **Inria Center :** Centre Inria d'Université Côte d'Azur
- **Starting date :** 2025-01-01
- **Duration of contract :** 12 months
- **Deadline to apply :** 2024-12-31

Contacts

- **Inria Team :** ACENTAURI
- **Recruiter :**
  Martinet Philippe / philippe.martinet@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

tastes and appetites for technology
excellence in robotics
high work capacity
persevering and communicating
enthusiastic
teamwork
good organization and rigor in the work
Feeling comfortable in a dynamic scientific environment, enjoying learning and listening are essential qualities to succeed in this mission.
Passionate about innovation, with expertise in robotics development and a great capacity for conviction.
knowledge and skills in programming and debugging

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

Applications must be submitted online on the Inria website. Collecting applications by other channels is not guaranteed.

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.