# Offre n°2025-09011

# Engineer F/M in learning robotic skills with foundation models, imitation learning and robot learning

*Le descriptif de l'offre ci-dessous est en Anglais*

**Type de contrat :** CDD

**Niveau de diplôme exigé :** Bac + 5 ou équivalent

**Fonction :** Ingénieur scientifique contractuel

## Contexte et atouts du poste

This position is funded by the euROBIN European project (European Network of Excellence in ROBotics and AI), which involves 32 partners in Europe.

Our team is participating in one of the challenges of the project, so called "Personal Robotics challenge" where we want to develop the skills that robots need to helps humans in their tasks, such as opening doors, carrying small to medium heavy objects, navigate in a human environment, manipulate small objects, understanding natural language instructions and reasoning about possible plans. We will be tackling the problem with two approaches: 1) teleoperation and imitation learning, i.e., showing to the robots how to solve the tasks, and acquiring demonstrations to train machine learning models; 2) generative AI.

The position may involve regular travels to the European partners of the project, in particular to Munich (DLR) and Karlsruhe (KIT), as well as participating in "hackatons" with the partners to implement and compare concrete ideas, and robotics competitions. In particular, two robotics demonstrations will take place in 2026 in Bruxelles and Wien (ICRA 2026).

The recruted engineer should participate in all the team's projects and activities.

## Mission confiée

**The overall objective is to develop research about teleoperation of human-like robots for data collection, imitation learning, and generative models for skills execution in concrete cases, especially dynamic tasks involving forces.**

Most of the work will target the Tiago++ robot (2 arms + torso + wheeled base), but, when it is relevant, we will extend it to humanoid robots (Talos and G1). The code will be tested as often as possible on the real platforms.

The recruited person will be in connection with Serena Ivaldi and Jean-Baptiste Mouret. The engineer will also collaborate with the other engineers and phd students of the team.

## Principales activités

The main objective is to develop and publish new algorithms that help to fulfill the objectives of the euROBIN project. The engineer will be actively involved in the day-to-day experiments of the team, present the work to the other partners, and perform demos with the robots. He/she will also participate with the Inria team to robotics competitions and hackathons organized by the euROBIN project, and demonstrations of the robots' skills at the European Parliament and eventually ICRA 2026.

## Compétences

Ideal skills: whole-body control, C++ programming, machine learning, reinforcement learning, diffusion models, VLM/LLM

Required: good programming proficiency in Python or C++, knowledge of robotics (kinematics, dynamics, etc.) and machine learning.

Very good knowledge of English is a strong requirement (many interactions with the European partners).

Technical skills and knowledge:

- Whole-body control
- Machine learning methods
- Generative AI methods (diffusion, VLM, LLM..)
- Python and C++ programming
- ROS middleware and associated tools (Rviz, MoveIt!, etc.)
- Linux and RTOS
- Code versioning and continuous integration (git)

Required soft skills:

- Rigour and intellectual honesty
- Curiosity and desire to learn
- Analytical mindset and abstraction skills
- Practical mindset and ability to develop robust and reliable solutions
- Autonomy and organizational skills
- Desire to “work well”
- Not afraid of challenging projects

- Love working in a multi-cultural environment
- Team player
- Good communication skills at work, and ability to report progress

## Avantages

- 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

## Rémunération

From 2692 € gross/month according to experience

## Informations générales

- **Thème/Domaine :** Robotique et environnements intelligents
  Ingénierie logicielle (BAP E)
- **Ville :** Villers lès Nancy
- **Centre Inria :** Centre Inria de l'Université de Lorraine
- **Date de prise de fonction souhaitée :** 2025-09-01
- **Durée de contrat :** 12 mois
- **Date limite pour postuler :** 2025-07-16

## Contacts

- **Équipe Inria :** LARSEN
- **Recruteur :**
  Ivaldi Serena / serena.ivaldi@inria.fr

## A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a

accompagné la création de plus de 200 start-up. L'institut s'e?orce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

## L'essentiel pour réussir

The ideal candidate loves working with (real) robots and solving concrete problems. He/She is proficient in programming (C++, Python), is curious about technology, and likes working in a team.

**Attention**: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

## Consignes pour postuler

**Sécurité défense :**
Ce poste est susceptible d’être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L’autorisation d’accès à une zone est délivrée par le chef d’établissement, après avis ministériel favorable, tel que défini dans l’arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l’annulation du recrutement.

**Politique de recrutement :**
Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.