

**Junior Professor Chair (Tenure track)**  
**VAT: Autonomous Vehicles and Transportation**

Two laboratories have been identified by the CNRS for this position, combining fundamental research and platforms dedicated to autonomous vehicles. Below is the job description as seen by the LAMIH laboratory UMR CNRS 8201.

**Location:** LAMIH / Université Polytechnique Hauts-de-France (UPHF), Valenciennes

**Duration:** 3 to 6 years (depending on the skills of the candidate)

**Starting:** between September 2024 and December 2024

**Gross salary Minimum** (depending on the skills of the candidate): 4550 € per month

**THE RESEARCH POSITION: Major Assets**

1. Beyond the position itself, the advantage is to directly **access to a full-time senior researcher position** at the end of the tenure track period. The chair is financially **highly supported** in research **with extra 400 k€** (200k€ from ANR + 200k€ added from UPHF/LAMIH).
2. As regards teaching, max 64 hours of teaching time per year. **Speaking French is not required**. Teaching will be mainly at INSA Hauts-de-France for Master/Engineer level.
3. The chair is fully **included and accompanied inside the department of Automatic Control**. It is an important brick reinforcing its activities in this field. Internationally, many collaborations exist, notably with NTU Singapore, PolyU Hong-Kong, UFMG in Brazil... Research projects related to the field do also exist in the department ([ANR CoCoVéIA](#), [ANR HM-Science](#)).
4. At the end of the period (3 to 6 years), after evaluation of scientific merit and professional aptitude by a tenure commission, it will give access to a **permanent position of director of research at the CNRS**.

**THE CANDIDATE: Expectations**

1. Holders of a doctorate or a PhD or equivalent degree in a relevant field (automatic control, robotics...) with a good research experience. There is no restriction on the age or nationality of applicants.
2. Given the strong support and resources available within the chair, it is expected that after 2 or 3 years the candidate will be able to submit applications for highly competitive projects allowing to reinforce its notoriety and improve the research of the department in the field, an ERC project being a very good example.

**Schedule**

**March 20:** final date for applying. To apply for this offer, the official CNRS website is <https://emploi.cnrs.fr/Offres/CPJ/CPJ-2024-040/Default.aspx?lang=EN> where you will have first to create an account (by clicking "candidate profile" then "candidate account").

The recruitment is done in 2 phases.

1. 1<sup>st</sup> phase selection on file. The application must contain at least an extensive CV, including the candidate's job history and publications + a research project link to the tenure track.
2. 2<sup>nd</sup> phase. Oral examination (around May; schedule, jury and details will be provided later)

For more information, please contact Pr. Jimmy Lauber at [jimmy.lauber@uphf.fr](mailto:jimmy.lauber@uphf.fr).

## Summary of the Scientific Project

The general objective of this project is to strengthen CNRS activities in the field of robotics, control engineering, and AI for autonomous systems interacting with humans, with two main research axes: (1) Developing new control approaches and architectures for autonomous vehicles taking into account human aspects, including the development of observers and estimators exploiting available data, and (2) Learning driving situations to adapt to driver preferences and constraints and enhance human driving capabilities in complex environments to improve safety and facilitate driving (especially for professional drivers, aging individuals, or those with reduced mobility) using technologies from robotics, autonomous systems, and artificial intelligence. Perception and understanding of situations in open and dynamic environments, as well as vehicle uncertainty management and integrity, are major challenges addressed in this project, aiming to strengthen excellence laboratories in the field.

**Keywords:** Automatic control and AI, Autonomous Vehicle, Human-Machine systems

## Environment offered at the LAMIH

In the automatic control department of the LAMIH, you will join an inspiring environment in a team of 41 permanent staffs (33 researchers, 8 engineers) among which 5 are in the top 2% Scientists Worldwide 2023 by Stanford university. Indeed, the activities of the department covers from the development of theoretical tools for the control, observation and diagnostic of complex system to their application to real world experiments. One of the recognized strength of the LAMIH is to be able to provide a unique experimental environment to validate the methodological and theoretical development proposed by the team through its platforms (<https://www.uphf.fr/lamih/plateformes/plateformes> see figure below) and their associated engineers that could be usefully exploited such as: [SHERPA-PSCHITT](#) (automotive and railway driving simulators), [ITM](#) and [DS7](#) (instrumented autonomous vehicles and test benches), [Gyrovía](#) (test track), etc... Projects have already been initiated in this direction, on the mobility sides; for example, on shared Human-Machine control in autonomous vehicle: [ANR CoCoVéIA](#) (2020-24), [ANR HM-Science](#) (2022-26 with NTU Singapore).

