

Tenure Track Faculty, Assistant Professor

Artificial Intelligence for Safe and Smart Mobility

INSA Rouen Normandie
Department of Computer Science and Information Technology (ITI)
LITIS Laboratory, UR 4108

Keywords: artificial intelligence, smart mobility, machine learning, computer vision, human-computer interaction, automatic decision making

Deadline for applications: 15th April 2024

Contract duration: 5 years

After evaluation of the scientific achievements and professional capabilities of the chairholder by a tenure commission, he/she will be eligible for a full-tenure position of Professor.

Research activity description

The LITIS laboratory is a research unit attached to INSA Rouen Normandie, Université Rouen Normandie and Université Le Havre Normandie. The LITIS groups lead researches in several fields belonging to the domain of computer science and applied mathematics. The scientific activities of the chair will be developed in a transversal project on Artificial Intelligence for Safe and Smart Mobility involving the expertise of three LITIS teams: APP (machine learning), MIND (human-computer interaction and decision making) and STI (computer vision). The chair will be attached to one of these teams.

This project will contribute to the objective of safe autonomous mobility covering issues ranging from perception to decision making. At the level of perception for an autonomous vehicle, the aim is to develop efficient approaches for multi-sensor data fusion for a complete 3D mapping and semantic analysis of road scenes. The development of statistical learning algorithms adapted to the diversity of data (structured, non-Euclidean geometric, spatio-temporal, multi-modal/multi-sensor) is another issue considered with deep architectures.

Finally, coordination, control and interaction issues are also addressed through shared decision making with users and the development or learning of explainable models. On this aspect, decentralized solutions and/or including a symbolic dimension and integrating explanation interfaces are favored.

The chair will contribute to at least one of these issues, with a preference for cross-disciplinary profiles linking these teams. A detailed description of the research topics of the three LITIS groups involved is available on the laboratory web site <https://www.litislab.fr/>.

Teaching activity description

The chairholder will have a teaching duty of 64 hours per year during the tenure-track period. She/He will be attached to the Computer Science and Information Technology Department (ITI, <http://iti.insa-rouen.fr>) at INSA Rouen Normandie. She/He will be involved in the ITI department teaching classes as well as in the preparatory cycle (STPI).

Candidate's profile

The candidate must hold a Ph.D. thesis in Computer Science or any closely related field with the research profile of the employment, with a solid experience on Artificial Intelligence fields such as machine learning, computer vision, human-computer interaction or/and automatic decision making. Previous experiences in projects applying Artificial Intelligence for smart mobility will be appreciated. The excellence of the candidate must be reflected in a significant scientific output (publications in top-tier peer-reviewed journals, communication in top-tier peer-reviewed international conferences of her/his domain). The candidate must be able to manage research activities, to lead national and international research projects and to supervise young researchers. The candidate must demonstrate teamwork skills.

Salary and human and financial resources

In order to carry out the research and teaching projects, the Chair will be co-funded by the National Agency of Research (ANR) with an amount of 200 k€ (of which at least 120 k€ of payroll, thesis or postdoc).

The gross monthly salary is around 3615 €/month

Application and contacts

- First, interested candidates should send a Curriculum Vitae and a list of publications accompanied by a short cover letter to both:
 - Laurent Vercoouter (laurent.vercoouter@insa-rouen.fr), Research contact
 - Géraldine Del Mondo (geraldine.del_mondo@insa-rouen.fr), Teaching contact

This preliminary step is essential to discuss the research and teaching projects and the integration in the laboratory.

- Second, they should apply officially via the Galaxie website where the position offer will be published. The selected candidates for the audition will present their project to the selection committee with the conditions specified in the invitation letter.

Evaluation criteria

- Excellence of the candidate, motivation, supervisory skills
- Quality and originality of the research and teaching projects
- Integration of the project within the laboratory
- Ability to establish collaborative networks
- Adequacy of the means to the proposed project and ability to mobilize complementary means