INSA DE ROUEN	Référence GALAXIE : 4108

Numéro dans le SI local :	0201
Référence GESUP :	0201
Corps à l'issue de la titularisation :	Professeur des universités
Article :	CPJ
Chaire :	Non
Section 1 :	61-Génie informatique, automatique et traitement du signal
Section 2 :	27-Informatique
Section 3 :	
Intitulé du contrat et du poste à pourvoir :	L'intelligence artificielle pour une mobilite intelligente sure
Nature et objet de l'appel à projet de recherche et d'enseignement :	L'Intelligence Artificielle pour la Mobilité Autonome Intelligente. Des imageries conventionnelles et non-conventionnelles aux algorithmes d'apprentissage statistique robustes, adaptables et aux approches sémantiques pour des décisions explicables.
Nature et objet de l'appel à projet de recherche et d'enseignement (version anglaise) :	Artificial Intelligence for Smart Autonomous Mobility. From conventional and unconventional imagery to robust, adaptable statistical learning algorithms and semantic approaches for explainable decisions.
Research fields EURAXESS :	Computer science
Montant du financement associé :	200.000 euros
Durée prévisible du projet :	5 ans
Implantation du poste :	0760165S - INSA DE ROUEN
Localisation :	Saint Etienne du Rouvray
Code postal de la localisation :	76800
Etat du poste :	Vacant
Adresse d'envoi du dossier :	AVENUE DE L'UNIVERSITE BP 08 76800 - SAINT ETIENNE DU ROUVRAY
Contact administratif : **N° de téléphone :** **N° de Fax :** **Email :**	VARIN CLAIRE DIRECTRICE DES RESSOURCES HUMAINES 02 32 95 66 28 02 32 95 66 81 02 32 95 66 80 florence.vattier@insa-rouen.fr
Date d'ouverture des candidatures :	23/03/2023
Date de fermeture des candidatures :	27/04/2023, 16 heures 00, heure de Paris
Date de prise de fonction :	01/09/2023
Mots-clés :	apprentissage automatique ; vision par ordinateur ; interaction homme-machine ; intelligence artificielle distribuée ; intelligence artificielle ;
Profil enseignement : **Composante ou UFR :** **Référence UFR :**	Informatique, Technologies de l'information
Profil recherche :	
Laboratoire 1 :	EA4108 (200615352R) - LABORATOIRE D'INFORMATIQUE, DE TRAITEMENT DE L'INFORMATION ET DES SYSTÈMES - EA 4108
Application Galaxie	OUI
Informations complémentaires :	Seuls seront convoqués à l'audition, les candidats préalablement sélectionnés sur dossier par la commission

Poste ouvert également aux personnes 'Bénéficiaires de l'Obligation d'Emploi' mentionnées à l'article 27 de la loi n° 84-16 du 11 janvier 1984 modifiée portant dispositions statutaires relatives à la fonction publique de l'Etat (situations de handicap).

Le poste sur lequel vous candidatez est susceptible d'être situé dans une "zone à régime restrictif" au sens de l'article R.413-5-1 du code pénal. Si tel est le cas, votre nomination et/ou votre affectation ne pourront intervenir qu'après

autorisation d'accès délivrée par le chef d'établissement, conformément aux dispositions de l'article 20-4 du décret n°84-431 du 6 juin 1984.

Le profil détaillé se trouve en pages suivantes

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: 27th April 2023

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 project of the chair will be developed in a transversal project on Artificial Intelligence for Safe and Smart Mobility involving the expertise of several LITIS teams.

This project mobilizes the App (machine learning), MIND (human-computer interaction and decision making) and STI (computer vision) teams of LITIS that 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 use of conventional and non-conventional imagery allows for the processing of data under adverse weather conditions. 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 3443.5 €/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 Vercouter (`laurent.vercouter@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