

## Junior Professor Chair in artificial intelligence

**Contract duration: 5 ans**

**At the end of the 5 years, tenure as University Professors (after advice from an evaluation committee)**

### Research :

#### **Laboratory description :**

In 2017, the I-site E2S UPPA label of excellence, led by the UPPA-INRAE-Inria-CNRS consortium, provided a decisive impetus to UPPA's research activities, which have evolved towards issues associated with energy and environmental transitions. UPPA is thus one of the 17 Universities of Excellence at the national level.

Within the UPPA, the laboratory of Mathematics and applications of Pau (UMR CNRS 5142) LMAP brings together the entire mathematical community of UPPA, i.e. 54 researchers and teacher-researchers, on two sites: Pau and Anglet. Its themes are mainly related to applied mathematics:

- Mathematical analysis: analysis of deterministic or stochastic partial differential equations, optimisation, dynamic systems, mathematical modelling,
- Numerical analysis and simulation: discretization methods for PDEs, approximation, inverse problems, scientific computing and high-performance computing,
- Probability and statistics: stochastic modelling, probabilistic analysis, statistical data processing, big data, artificial intelligence, semi-parametric and non-parametric inference.

The fields of application mainly concern geo-resources, aerothermodynamics, the environment, health, operating safety and structural optimisation.

In addition, LMAP has skills in fundamental mathematics: projective algebraic geometry, low-dimensional topology. As multidisciplinary research is at the heart of LMAP's activity, we also have skills in fluid mechanics and heat.

Benefiting from a particularly favourable industrial fabric in the fields of petroleum engineering and aerothermodynamics, LMAP is developing a strong industrial partnership with both multinational companies and local SMEs.

**Web site :** <https://lma-umr5142.univ-pau.fr/fr/index.html>

**Research Project description:** The theme of the Chair is artificial intelligence in the broadest sense, whether the underlying tools and methods are in statistics, discrete optimization and/or computer science (Machine Learning).

The person recruited will have a PhD in statistics and/or optimization and/or computer science. He/she will have experience in the effective implementation of algorithms in a deep learning context. His/her research project will include a component oriented towards partnerships and technology transfer.

This chair is part of the Regional AI Research Network (R3IA), coordinated by Inria. The chairholder will be able to exchange regularly with colleagues in the field from all regional ESR establishments, in particular with the project teams of the Inria Bordeaux Sud-Ouest center (Astral, Mnemosyne, Flowers, for example).

**Teaching:** The person recruited will have a service of 64 HeqTD per year, for 5 years. He/she will be involved in teaching related to AI in the courses of the Master of Mathematics and Applications on the Pau site and/or in the artificial intelligence training courses on the Anglet campus, in Master's degree or in engineering school. He/She will also participate in the animation of the courses of the GREEN University School of Research for Energy and the Environment concerned by big data and AI skills.

**Financial means:** The project will be financed by the ANR for 200 K€. It will cover at least 120K€ of payroll for the chairholder's collaborators (PhD student, post-doc, IT contractual), the balance being used for the project's operation (missions and travel, computer equipment). The chairholder will be strongly encouraged to submit an ERC project within 3 years after the beginning of the chair and to obtain additional funding through his or her partnership activity and by responding to calls for proposals.

### **Applicant Requirements:**

Candidates must fulfil one of the following conditions:

- Hold of a doctorate as provided for in Article L. 612 7 of the Education Code;
- Hold a doctorate in engineering
- Hold a foreign university degree judged equivalent to the above diplomas; in this case, a request for equivalence and a translation are mandatory;
- To justify titles or scientific works judged equivalent to the above diplomas; in this case, the candidates must formulate a request for equivalence.

### **Applications, selection and auditions :**

Applications must be submitted exclusively online on Galaxie website (FIDIS) by October 12, 2022 at the following address:

[https://www.galaxie.enseignementsup-recherche.gouv.fr/ensup/cand\\_recrutement\\_enseignants\\_chercheurs.htm](https://www.galaxie.enseignementsup-recherche.gouv.fr/ensup/cand_recrutement_enseignants_chercheurs.htm)

A sample application form can be downloaded at the following address:

<https://organisation.univ-pau.fr/fr/recrutement/recrutement-des-personnels-enseignants/recrutement-chaire-de-professeur-junior-cpj.html>

The evaluation will be carried out by a commission composed of internal and external experts. The composition of the commission will be made public before its work.

Only those candidates pre-selected by the committee will be invited to an audition. It will take place in Pau or by videoconference depending on the health situation. The audition will consist of a 40-minute presentation by the candidate of his (her) previous research and teaching works, his(her) research and teaching projects for the position of Junior Professor chair followed by a 20-minute discussion with the committee.

### **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.