

# Position Offered: PREDOCTORAL RESEARCHER

Project: *Development of cross-cutting artificial intelligence services*

**Technological and scientific fields:** Artificial Intelligence, High Performance Computing

**Location:** Madrid, Comunidad de Madrid, ICMAT, <https://www.icmat.es>

**Research Group/PI:** Algebra and Geometry, <https://www.icmat.es/researchers/groups/group-a> David Martín de Diego.

## PROJECT SUMMARY

The importance of AI can be seen in its application in socially relevant areas such as drug development, the introduction of autonomous vehicles, or predictive medical systems. To support this fundamental discipline, the CSIC created the AIHUB connection that has identified several transversal aspects of interest in this community, one of them being high performance computing, especially in relation to massive AI models and machine learning, which is the subject of this project. In the pre-doctoral training project, the person involved will be trained in HPC and AI, learning to master the related techniques and will know first-hand the HPC needs of the AIHUB community to transversally support such needs.

## PROFESSIONAL PROFILE

### Minimum requirements:

- Graduate or Bachelor's degree in Mathematics and related subjects.
- Master's degree in Mathematics, Artificial Intelligence and related subjects
- Knowledge of English and Spanish.

### Merits to be considered:

- Proficiency in Python programming language.
- Training in Bayesian analysis and machine learning techniques.
- Proven experience with research contracts.

## WHAT IS OFFERED

State-of-the-art training in Artificial Intelligence and High Performance Computing is offered, as the ultimate goal of the project is to provide cross-disciplinary HPC support to the AIHUB connection. The successful candidate will receive pre-doctoral training in both disciplines with a view to perform his/her PhD thesis on HPC and AI related issues with the focus on improving the fundamentals of large-scale computational methods in Bayesian machine learning and, at the same time, providing HPC support to the members of the AIHUB connection. The candidate will learn about the HPC infrastructures of the groups integrated in AIHUB and will receive training at CESGA and international institutions, foreseeably Duke University and Aalto University, as well as participate in the dissemination and transfer tasks of ICMAT and AIHUB.

### Contract conditions:

Predoctoral Researcher contract of 4 years' duration. Gross annual salary of 23,871.33 €.

**Start of contract: before 31 December 2024**

## PRINCIPAL INVESTIGATOR CONTACT

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