CALL FOR DOCTORAL TRAVEL FUNDING 2025
DataIA Institute – Université Paris-Saclay

Background

The DataIA Institute is the Artificial Intelligence Institute of Université Paris-Saclay.

Winner of the "Instituts Convergences" call for projects launched by the French National Research Agency (ANR) in 2017, the DataIA Institute has gathered the artificial intelligence (AI) expertise of the Paris-Saclay ecosystem to strengthen interdisciplinary collaboration between institutions in data science and AI. In January 2021, the Institute refocused its activities on the Université Paris-Saclay cluster of excellence, becoming the bearer of the University's strategy in artificial intelligence, research, and training. As France's leading artificial intelligence ecosystem, DataIA Paris-Saclay Institute aims to federate and structure multi-disciplinary expertise to develop cutting-edge research in data science in conjunction with other disciplines, such as the humanities and social sciences. It mobilizes over 800 faculty members from 47 laboratories (including 15% international) within the Paris-Saclay University perimeter.

In May 2024, the Institute was officially awarded the "AI-Cluster" label by the French government.

This call aims to support AI research specifically through small project boosts.

Scientific scope and objectives

This funding supports doctoral mobility for a PhD student to visit a laboratory outside the DataIA ecosystem or to host a PhD student from an external laboratory within the DataIA ecosystem. Expenses such as conference participations are not eligible.

The applicant must demonstrate that the research project aligns with the themes and strategic axes of the DataIA AI-Cluster (*Appendix 1*).

Terms of project proposal submissions

Specifically, all faculty from DataIA's partner institutions are eligible to be project holders and manage the allocated funding (*refer to Appendix 2*).

Submission process

Candidates must submit their resume along with their projects, justifying their alignment with DataIA.

Proposal format and evaluation criteria

The proposal needs to be submitted using the form provided in the following link: https://www.dataia.eu/sites/default/files/aapg-2025-phdmobility-form.docx.

The following criteria will be used to evaluate the project: scientific excellence, synergy between partner institutions, and the potential impact of the application on the chosen subject.

Proposal submission

This call for projects is also available on: https://www.dataia.eu/en/call-doctoral-travel-funding-2025.

For any questions, please contact: submission-dataia@inria.fr.

Selection process

DataIA cluster's steering committee (comité de pilotage, COPIL) will examine the eligibility of the projects and assign external reviewers. After receiving the external reviews, the COPIL will make the final decision.

Validity of the funding

Selected projects will receive funding of up to € 2,000 per month of travel, which must be spent within the following year and completed by December 31, 2029.

Project acceptance and commitments

Principal investigators agree to:

- Use the funding as described in the project proposals.

- Participate to the annual data collection on the progress of the funded project requested by the ANR;

- Include the following acknowledgement on all publications and communication materials related to the funded project:

(EN Version 🇬🇧) *This research work is supported by France 2030 funding managed by the National Research Agency (ANR) as part of IA CLUSTER program, reference ANR-23-IACL-0003 – DATAIA CLUSTER*

(FR Version 🇫🇷) *Ce travail de recherche a bénéficié d'un financement de France 2030, géré par l'Agence Nationale de la Recherche (ANR), dans le cadre du programme IA CLUSTER, référence ANR-23-IACL-0003 – DATAIA CLUSTER*

At the end of the project, they will submit a brief report to the DataIA Institute summarizing the achievements and all publications completed during the project duration.

If the DataIA institute considers that the funding has not been used in accordance with the objectives stated in the project proposals, a refund may be requested. Similarly, unused funds must be paid back by the partner institution.

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Artificial Intelligence-Centric Themes

1/ Learning Paradigms: Data diversity, data efficiency.

The first theme is centered on developing the fundamentals of learning to meet today's new challenges: diverse and complex data such as images, text, symbols, and graphs; learning with data distributions instead of data points; and new learning paradigms including model pre-training, and their data-efficient adaptation through efficient fine-tuning, prompting, and in-context learning.

2/ AI for inverse problems, simulations, and invariances.

AI is increasingly used as a component of signal/image processing or simulation systems, bringing both computing efficiency and increased modeling flexibility. To address these uses, we will support topics in AI methods to solve probabilistic models and inverse problems, including those making advances in variational inference, improving autodifferentiation approaches, and including different types of invariances in architectures or data augmentations. Approaches applying these advancements to scenarios such as in hybrid AI/physical models, including problems in image reconstruction, signal processing, and other sensor data, will be considered within this theme.

3/ Trustworthiness and control of AI systems.

When the whole population frequently uses an AI system or is utilized in decisions that impact individual lives, assessing, characterizing, and controlling its imperfections and failure modes is essential. This theme includes, yet is not restricted to, the following topics: robustness and certification; fair decision and error equalization; uncertainty quantification, exploration, and reliability; empirical evaluation of AI systems in terms of biases and robustness; and frugality.

Interdisciplinary Axes

1/ Physics & AI

Physics and related fields, such as material science or chemistry, they are demanding of the numerical simulations and the inference methods they use. Physics problems solved through AI tools that make intensive use of numerical simulations for prediction, model testing, and inference, tasks where AI is a game-changer to switch to high-precision physics at scale.

Hence, projects funded by this call may address topics proposing innovative AI approaches to solve physics problems. Examples of these problems include research in mathematical physics, the fundamental constituents of matter, and physical and analytical chemical sciences. A non-exhaustive list of these topics can be found in the descriptions of ERC panels PE1_12, PE2, PE3, PE4, PE5, and PE9.
(see https://erc.europa.eu/sites/default/files/document/file/ERC_Panel_structure_2020.pdf).

2/ Medicine & AI

AI-based innovations in medicine are drawing attention from the AI and medical communities. The potential of AI to improve and change medical diagnosis and care is widely recognised, with a large set of public and private actors involved.

However, challenges must be overcome to achieve this. The data are scarce and complex, and all aspects of trust, such as controlling risk and privacy, are crucial. Through this axis, DataIA will support AI applications to medical problems, such as those which can be included in the ERC panels LS2, LS5, LS6, LS7.

(see https://erc.europa.eu/sites/default/files/document/file/ERC_Panel_structure_2020.pdf).

3/ Mathematics & AI

The interactions between mathematics and AI have seen unprecedented development during the last decades, giving rise to new successful approaches and raising numerous challenges. Examples of these are the crucial role of mathematics in AI in exploring (i) the validity domain of algorithms and (ii) providing a wealth of abstract theories as resources for designing new AI algorithms.

Projects funded by this call may explore topics at the intersection of AI and the non-exhaustive list of subjects included in the ERC panel PE.

(see https://erc.europa.eu/sites/default/files/document/file/ERC_Panel_structure_2020.pdf).

Appendix 2
List of Academic Partners of the DataIA AI-Cluster

- AgroParisTech
- CEA
- CentraleSupélec
- Centre Inria Saclay Île-de-France
- CNRS
- ENS Paris-Saclay
- FMJH
- IHES
- INSERM
- Institut Gustave Roussy
- Institut d'Optique Graduate School
- INRAE
- ONERA
- Université Évry Paris-Saclay
- Université Paris-Saclay
- Université Versailles St-Quentin-en-Yvelines