Call for Fellowship – 2020

Submission date (all levels): 15th February 2021

1.   Context

Hi! Paris is the new interdisciplinary center jointly launched by HEC Paris and Institut polytechnique de Paris (IP Paris) for research and education on AI and Data Analytics for Science, Business and Society. The Center is entirely funded by corporate donors, which currently are L'Oreal, Cap Gemini, Total, Kering and Rexel.

2.   Fellowships

A central goal of Hi! Paris is to provide long-term incentives to promote research and teaching in the area of AI and Data Analytics for Science, Business and Society. To this end, Hi! Paris has created a Fellowships program, which provides funding for researchers at HEC Paris and IP Paris.

Fellows from the center will receive an annual budget with some flexibility in the allocation of the budget between salary, research, scientific events organization, and funding of PhD students. In exchange, Fellows of the center are expected to contribute to (i) the scientific life of the center, (ii) teaching in relevant fields for the center, and (iii) supervise Ph.D students. Sections 4 and 5 below provide more details on the various types of Fellowships and corresponding obligations for the Fellows.

Fellowships are allocated through open calls. Applications to these calls are evaluated by the Scientific Advisory Board of the center (see Appendix). Based on these evaluations, the governance committee and the Directors of Hi! Paris propose a list of Fellows to the Directeur Général of HEC Paris and the President of IP Paris. Fellows are appointed for 3 years. Renewal of Fellowships are subject to a new application.

3.   Research areas and priorities

All research domains related to AI and Data Analytics for Science, Business and Society are eligible.

Any given year, each institution (IP Paris and/or HEC Paris) may choose to issue a list of priority areas for its fellowships. Priority areas are determined based on the scientific needs of the institution and its discussions with corporate donors of the center. Applicants may also choose to contact corporate donors via the executive director of Hi! Paris (Gaël Richard: *contact at hi-paris dot fr*) to identify research topics of common interests and possibly obtain data from corporate donors for their project. However, this engagement is neither a necessary nor a sufficient condition for obtaining a fellowship from Hi! Paris.

4.   Type of fellowship and funding

Four types of fellowships are proposed depending on the level of seniority of the applicant. Table 1 provides details about (i) the duration of each Fellowship, (ii) its total budget over the entire duration of the Fellowship, and (iii) eligible uses for the budget.

Type	Duration	Max funding (over the full period)	Eligible expenses
Pre-starting *(≤ PhD + 4)*	3 years	90 k€	**Research budg**et (interns, travels, equipment) + additional compensation for the Fellows (max 10k€/year)[1]
Starting *(≤ PhD + 7)*	3 years	180 k€	Research Budget + Hi! Paris scientific event + PhD grant) + additional compensation for the Fellows (max 12 k€/year)[1] (expenses can be spread over a period of 4 years)
Consolidator *(≤ PhD + 12)*	3 years	240 k€	Research Budget + Hi! Paris scientific event + PhD grant + Engineers/post docs/visiting professors) + potential additional salary for the Fellows (max 15k€/year)[1] (expenses can be spread over a period of 4 years)
Advanced *(> PhD + 12)*	3 years	300 k€	Research Budget + Hi! Paris scientific event + PhD grant+ Engineers/post docs/visiting professors) + potential additional salary for the Fellows (max 18k€/year)[1] (expenses can be spread over a period of 4 years)

Table 1: Type of fellowship and funding

Obligations of the Fellows

First and foremost, Fellows of Hi! Paris are expected to produce scientific knowledge in the area of AI and Data Analytics for Science, Business and Society at the highest international standards, as evidenced by publications in high impact scientific journals. In addition, Fellows are expected to contribute to education in areas of interest for the Hi! Paris and to participate to the life of Hi! Paris. More specifically, Table 2 lists minimal obligations of the Fellows according to their seniority.

Type	ERC proposal	Involvement in teaching in AI & Data Analytics	Hi! Paris activities
Pre-starting	N/A	At least 1 course linked to AI / Data (typically 18h to 36h given in one of the institutions HEC Paris/IP Paris – can be part of teaching load (service))	Participate actively in the scientific activities of Hi! Paris + at least 1 event with corporate or communications (meetup, round table, meeting with corporate donor, interviews,...)

[1] Specific conditions may apply depending on the affiliation

Starting	Submission within 2 years	*Idem pre-starting*	Participate actively in the scientific activities of Hi! Paris
			+ at least 1 event **per year** with corporate or communications (meetup, round table, meeting with corporate donor, interviews,...)
			+ at least 1 workshop organisation during the project lifetime
			+ at least 1 PhD thesis supervision during the project lifetime
Consolidator	*Idem Starting*	*Idem pre-starting*	*Idem Starting*
Advanced	*Idem Starting*	*Idem pre-starting*	*Idem starting*

Table 2: Minimal obligations of the Fellows

5. Eligibility and Assessments of Applicants

All professors (all seniority levels) of HEC Paris, IP Paris and researchers of CNRS / INRIA in a lab/teams of IP Paris are eligible. Note that the fellowships are organised in two separate sets depending on the affiliation of the principal investigator in the fellowship. The tentative number of fellowships per seniority level is given below: 1 at HEC Paris (Starting) and 7 at IP Paris (1 Pre-starting and 2 per other seniority levels).

The conditions for the different levels are the following:

-   Pre-starting: ≤ 4 years after PhD
-   Starting: ≤ 7 years after PhD
-   Consolidator: ≤ 12 years after PhD
-   Advanced: > 12 years after PhD

Assessment of applications will be carried out by the Scientific Advisory Board of Hi! Paris for each set separately. The two main evaluation criteria will be:

-   Excellence of the applicant (*Groundbreaking research in the past and role, capacity to execute proposed research, capacity to propose a solid ERC proposal within 2 years*)
-   Excellence of the research proposed (*research challenges, ground breaking nature and potential impact in research and for society,...)*

The final selection will be made by Hi! Paris' governance committee based on the recommendations of the SAB. If applicable, the Scientific Advisory Board will also take into account the fit of the project with the priority areas identified and the use of data supplied by corporate donors of the center.

6. Important dates
-   Call for fellowship: December 10, 2020
-   Submission date (all level): February 15, 2021
-   Selection results: April 15, 2021

7. Format, Template for proposals

Applications should be written in English and comply with the following format:
- A first page with a header with the applicant's last name and a summary of his research proposal of less than 1,500 words.
- A maximum of eight pages containing an extended description of the research proposal and its deliverables.
- A page containing a brief budget description.
- A Curriculum Vitae of the applicant (max 2 pages)
- 2 pages for the track record (up to the last ten years), including a list of 1 to 10 representative publications or working papers and narrative information on the groundbreaking research in the past.

The font types should be Times New Roman, Arial or similar, with size font of at least 11pt, single line spacing and margins with 2 cm side and 1.5cm for top and bottom

8. How to apply

The applications should be submitted, at the latest on the date of the deadline, **as one pdf file** at:
https://easychair.org/conferences/?conf=hiparisfellowship202

9. Priority areas per institution (if applicable)

The priority areas for HEC Paris fellowships are
- *Data & AI for Work* (future of work, digital transformation, marketing analytics, new business models and digital entrepreneurship, job search analytics…)
- *Data & AI and Ethics* (human vs. machine decisions, privacy, bias and fairness…)
- *Data & AI and Law* (legal tech, privacy, predictive justice…)
- *Data & AI and Regulation*

The priority areas for IP Paris fellowships are:
- *Foundations of AI and Machine learning*

    o Theory and methods of machine learning
    o Reinforcement learning: theory, deep reinforcement learning,
    o Generative models
    o Optimal transport
    o Large scale optimization and sampling: distributed algorithms, federated learning …
    o Explainability, Ethics and Privacy
    o Robustness, Structured data

- *Applications of AI to Science and Society including*
    o Energy (Sustainable ICT, micro-grids, energy efficiency)
    o Robotics incl. bio robotics,
    o Human-machine interface systems,
    o Audio, Music, Computer vision, image processing
    o Economics and finance
    o Natural Language Processing