Call for applications: Chair of Junior Professor CPJ 2026

Lead institution/organization: French National Centre for Scientific Research (CNRS)
Name of head of establishment/organization: Antoine PETIT

Sites concerned: Paris

Academic Regions: Île-de-France

Planned partner institutions/organizations:
ENS - Paris Sciences et Lettres
SORBONNE UNIVERSITE

Project name (en français): Apprentissage et cognition : approches biologiques et basées sur l'apprentissage artificiel
Project name (in English): Learning and Cognition: Biological and Machine Learning-Based Approaches

Acronym: APPCO

Keywords: Cognition, AI, Modelling, Learning, Sociality, A-priori knowledge

Target duration: 5 years

Scientific theme:
Humanities and social sciences, Informatics

Institutional strategy: *Please describe how this recruitment is in line with institutional strategy. If applicable, please also summarize any CPJs obtained in previous years and give an assessment of the initial results of the host laboratory's activity (2000 characters maximum including spaces)*

One distinguishes at least two visions of learning. Living organisms possess a priori knowledge that structures their cognition. This knowledge then enables them to express meta-representational capacities such as metacognition, self-awareness, and social cognition. Modern AI architectures, on the other hand, appear to acquire significant cognitive abilities without these initial building blocks, relying instead on massive datasets.
Comparing biological and artificial learning could shed light on the nature of cognitive capacities and their emergence, the role of initial "cognitive building blocks", and the specificities of artificial learning systems. In other words, understanding how human cognitive capacities articulate with the biological mechanisms that underlie them —and how artificial intelligence systems either illuminate or challenge existing models— is the central ambition of this CPJ APPCO. This chair sits at the convergence of three fields: computer science and AI, life sciences (biology, neuroscience), and the philosophy of mind and cognitive sciences.
The focus on the interplay between these two dimensions places this CPJ at the core of two cross-cutting challenges of the CNRS-State COMP 2024–2028: the "Brain" challenge and the "Generative AI for Science" challenge, as well as within the scientific priority "Experiments, Simulations, and Modeling in the Age of Artificial Intelligence" under the "Digital" field. Positioning this chair at the interface between the CNRS Institute of Computer Science and the CNRS Institute of Humanities & Social Sciences would foster interdisciplinary collaboration around a complex scientific object—cognition—which requires cross-disciplinary approaches between computer science, neuroscience, and human sciences. Thus, this CPJ would help structure a key disciplinary interface between artificial and human intelligences.

Strategy of the host laboratory: *Please describe how this recruitment is in line with the host laboratory's strategy (1000 characters maximum including spaces):*

The Institut Jean Nicod is a Human and Social Sciences laboratory specialising in the philosophy of mind and cognitive science. Hosting such a CPJ could present a valuable opportunity to develop research in the field of AI modelling. The laboratory's well-established foundation in long-standing empirical-based research, fostering a conducive environment for interdisciplinary research and innovation, would be a significant asset for the CPJ holder. The ISIR is a laboratory in informatics, holding significant pertinence across a wide range of application areas, particularly with regard to the emerging applications of robotics and intelligent systems in the life sciences. Their researchs are characterised by a close interdisciplinary approach, drawing on cognitive science and neuroscience. A particular focus is placed on the establishment of synergies with engineering and information science, with the objective of advancing the cognitive and interactive capabilities of robots.

RNSR references of the host laboratory(ies):
200212785T - UMR8129 Institut Jean Nicod
200918463J - UMR7222 - Institut des Systèmes Intelligents et de Robotique (ISIR)

Strategy in terms of international attractiveness: *Please describe how this recruitment is in line with the establishment's international strategy (on hosting foreign students, partnerships with foreign institutions, joint diploma project, taking part in a European project, etc.) (1000 characters maximum including spaces).*

The Chair holder will be expected to implement actions and set up partnerships in the given thematic field and particularly to commit to submitting a project in the framework of European calls for proposals like ERC, Horizon Europe Consortium, etc. during the 5 years of his/her contract.

Summary of scientific project: *1000 characters maximum including spaces*

At the interface between human sciences and computer science, the CPJ APPCO seeks to combine computational modeling, behavioral experimentation, and conceptual analysis in analytic philosophy and the sciences (cognitive sciences, biology): specifically, the cognitive foundations and computational models. The goal is to model cognitive capacities (causal reasoning, spatial, numerical, and social cognition, as well as communicative and linguistic abilities) under ecologically realistic conditions, in order to test whether biological a priori knowledge is necessary for their emergence.
The question of modular versus generic architectures is central here: which organizational structure best supports generalization, learning, and transfer? Socially interactive agents would serve as a relevant evaluation tool, given that human cognition is deeply tied to social interactions.

Summary of teaching project: *1000 characters maximum including spaces*

Teaching will be discussed according to the site which the successful candidate is assigned to. He/She will be involved in teaching on existing courses at each site.

Financial summary: Please use the attached financial form to describe the financial requirements involved and how they are broken down to carry out the scientific project (PhD student, post-doctoral fellow, IT, equipment, etc.)

How the ANR package will be used	200.000 €
PhD Student	
Post-doctoral fellow	

Engineer	
Equipment	
Operations (missions, conferences, …)	
Co-financing of the € package	€
Specify the nature of the planned expenditure	
Co-financing of the € package	
Co-financing of the CPJ's remuneration	
Total funding for the CPJ (including the ANR package) in €	€

Dissemination of scientific results:

The results will be disseminated via world-class scientific productions like publications, software, patents, and so forth. The project will also communicate with a wide range of target audiences including the scientific community, the media, decision-makers, the general public, schools, etc. applying an appropriate schedule. Specific tools may be developed like websites, newsletters, meetings, international conferences, summer schools and other conferences.

Open Science:

The CNRS has adopted a strong policy in favor of open science. Open science consists in making research results “as accessible as possible and as closed as necessary”. To achieve this, the CNRS objective is for 100% of the texts of publications resulting from the work of its units to be in open access, particularly through researchers submitting them to HAL. The data produced should also be made available and reusable unless specific restrictions apply. In addition, the guidelines on the individual evaluation of researchers have been revised to conform with the DORA declaration, to be more qualitative and to take all facets of a researcher's work into account.

Science and society:

The relationship between science and society is now recognized as a full dimension of scientific activity in its own right. The project will develop this dimension in synergy with all partners involved. The resulting research will help inform the public decision-making process. Participatory science initiatives may be organized with stakeholders form the project's socioeconomic and cultural ecosystem.

Indicators:

In particular, the CPJ's activities will be assessed on the basis of scientific output (publications, software, parents, etc.) institutional and private partnership with formal contracts, international influence, the promotion and dissemination of work to multi-disciplinary scientific communities, innovation and its transfer to society and scientific dissemination to non-specialist audiences.