

Milano, 17/03/2023 prot. n. 65633
[Cod. riferimento: C3 1°L]

CALL FOR APPLICATIONS FOR THE AWARD OF 1 POST-DOC RESEARCHER (RTD/RTDA) CONTRACT FOR THE ACADEMIC FIELD 02/A2 AT THE CENTRE DIRB OF UNIVERSITA' COMMERCIALE "LUIGI BOCCONI" OF MILAN WITH FUNDS MADE AVAILABLE BY MUR – PNRR MISSIONE 4 COMPONENTE 2 – NEXT GENERATION / PROJECT PE1 FAIR SPOKE 4.

Article. 1
Call for Competition

To promote the education and improvement of junior scholars, the Università Commerciale "Luigi Bocconi" of Milan, announces a competition by exams and academic titles for the award, by means of an appropriate contract, according to the ex art. 24 of Law 240/2010 and using the relative University Regulations emanated with the Rectoral Decree n° 106 of 21th December 2022, of 1 Post-doc Researcher Position with the following characteristics:

Duration: 3 years

Academic Field: 02/A2 THEORETICAL PHYSICS OF FUNDAMENTAL INTERACTIONS

Scientific Sector: *FIS/02 Theoretical Physics, Mathematical Models and Methods; FIS/04 – Nuclear and Subnuclear Physics*

In the Bocconi Virtual Centre "DIRB – Divisione Ricerche Bocconi"

Professor of referral: **prof. Riccardo Zecchina**

Financed by: MUR – PNRR Missione 4 componente 2 – Next Generation

Project: PE1 FAIR - Future Artificial Intelligence Research (CUP B43C22000800006) - Avviso n. 341 del 15/03/2022

Research Project: Modelling biological and artificial neural systems.

The project aims to study the computational and algorithmic aspects underlying the most advanced models of biological and artificial neural networks. The specific goal is to understand what are the effects of biological and/or physical (e.g., energy consumption) on the fundamental mechanisms of neural computation.

Research topics include (but are not limited to): modelling internal representations and codes in biological and artificial neural networks; modelling neural responses to visual stimuli; and integrating connectome data into network models. Particular attention will be directed to identifying specific issues at the intersection of computational neuroscience and advanced machine learning.

Methods used will be based primarily (but not exclusively) on statistical physics of complex systems, nonlinear dynamics, machine learning, high-performance simulation tools, and data analysis.

Responsibility in the Project: Task member.

Job description: The research activity will consist of studies aimed at integrating different methodologies, from theoretical studies and numerical investigation on HPC systems provided by the University, to comparison with real data.

Article. 2 ***Admission Requirements***

In order to participate in the competition, candidates must have a PhD or equivalent carried out in Italy or abroad, with the exclusion of Professors and researchers who already hold a position with tenure, even if they have ceased service.

Candidates with a degree of kinship (up to the fourth degree of kinship) to any professor in the University Board, the University Rector or the Managing Director are not allowed to apply.

These statutory pre-requisites must be in place at the deadline for the presentation of applications determined by the present announcement.

Applicants will obtain a conditional acceptance. At any time, the administration can arrange, with reason, exclusion from the selection procedure due to the lack of necessary pre-requisites.

Candidates are also required, as a preferential qualification, to have the following professional skills: familiarity with mathematical modeling methods of statistical physics, non-linear physics, machine learning, and/or familiarity with computational methods of simulation and data analysis.

Article. 3 ***Applications***

Applicants should apply by submitting the complete package via our on-line application system, which can be found at "www.unibocconi.eu/post-doc" by **23:59 of April 17th, 2023 (Italian time)**.

Each candidate's application must clearly indicate:

- surname and name
- date and place of birth
- citizenship
- residence
- contact address

The application must include the following documents, which must be attached to the application:

- professional C.V., in pdf format;
- list of any titles/qualifications and publications, in pdf format;
- any publication, or document that the candidate intends to submit for evaluation, in pdf format, up to a maximum of 3 scientific publications;

For any problem related to uploading files, the candidate can contact faculty@unibocconi.it.

Article. 4 ***Evaluation Committee***

The Evaluation Committee for this competition, appointed by the Rector based on the

proposal of the Director of the competent Research Center, after consulting the professor of Referral of this call for applications, is made up of three professors, of which at least two professors are from the Bocconi Core Faculty, employed in the Academic Field of this call or of a similar scientific disciplinary sector.

The competition will be carried out by an evaluation of titles and examination as well as an interview.

For hiring via the National and International job market, the evaluation of the applications will be carried out by the Evaluation Committee, who will draw up a short list of candidates. Each shortlisted candidate will be interviewed in person or via conference call according to International Job Market practices to assess their research abilities and interest in covering the Post-doc researcher position proposed by the University.

At the end of the selection process the Evaluation Committee, will write an overall evaluation for each candidate, forming a table of eligible candidates which will be published on the University website.

For eligible candidates, the University, following the proposal of the Research Center, has the possibility to make an offer which must explain: the contract type, teaching load required, responsibility in the Project, proposed salary, which cannot be less than the minimum wage. It must also indicate the deadline by which the candidate must communicate their acceptance of the offer.

If the candidate accepts the offer, the University will draw up a fixed term, private law contract.

Article.5 ***Rights and Duties of the Post-Doc Researcher (RTD/RTDA)***

The grant will last for 3 years and indicatively run from ***May 1st, 2023***.

The normal obligations of the research include:

- Research activity as part of the Research Project presented, as well as additional programs elaborated by the Center, supervised by the *Professor of referral*, who will check the activity carried out.

The Post-doc Researcher position is not compatible with the attendance of degree or master's degree courses, research doctorates in Italy or abroad and involves the placement on unpaid leave for the employee in service in the public administration.

It is possible to carry out, with the consent of the Post-Doc Researcher, a teaching activity for a maximum of 48 hours per semester in addition to the Post-Doc Research contract.

Evaluation for the purpose of extension or renewal of the Agreement: Upon the expiration of the first contractual period (three months before the expiry) the Post-Doc Researcher job performance will be assessed as follows:

With respect to the research activities: evaluation of the research activity performed of the Project and the quality of scientific publications produced.

The outcome of this evaluation is formalized and sent to the Researcher and to the Dean of

the Faculty.

The Director, on the basis of this evaluation, can propose the extension or renewal of this contract for a functional period of the Project, and in any case within a maximum duration of 5 years.

Article.6
Compensation

The amount of the compensation is **€ 36.840,00 gross per annum**, payable as follows:

- SALARY: 13 (thirteen) equal installments made on a monthly basis, on the 27th (twenty-seventh) day of each month.
- SEVERANCE PAYMENT: an annually set aside-amount equal to 1/13,5 (one thirteenth and a half) of the salary to be paid within the end of the month following the expiration of the Agreement.

The University will provide insurance for risks of injury and civil responsibility.

Article.7
Causes of deferral or suspension of the contract

If a candidate is on maternity leave, minimal payments will be made by INPS (national insurance) as according to the Ministerial Decree dated 12th July 2007, published in the "Gazzetta Ufficiale" n. 247 of 23rd October 2007. For illness the article 1, comma 788 of the Law 27th December 2006, n. 296 and subsequent modifications and additions will apply. During the period of mandatory maternity leave, a top-up payment will be made by Bocconi University up to the monthly amount of the grant as according to article 5 of the Decree dated 12th July 2007.

Article. 8
Treatment of Personal Data

According to a General Data Protection Regulation n. 679/2016 all personal data supplied by candidates to People & Culture, both in electronic and paper format, is exclusively for evaluation purposes and to publicize the acts related to the current evaluation procedure and the conferral of a Post-doc Researcher position as detailed in this announcement.

Article. 9
Advertising

This current competition announcement is published on Gazzetta Ufficiale, on the website of Università Bocconi - Faculty and Research\faculty recruiting\post-doc positions and on the MUR and EU websites. A copy of the announcement is available from the International Faculty Office.

PEOPLE & CULTURE
(dott. Marcello Valtolina)

