



ALMA MATER STUDIORUM | AREA  
UNIVERSITÀ DI BOLOGNA | DEL PERSONALE

## THE HEAD

**SUBJECT: Comparative assessment procedure based on qualifications and interview for the award of no. 1 post-doc research contract pursuant to Article 22-bis of Law 240/2010, at the Department of Computer Science and Engineering - SSD IINF-05/A - GSD 09/IINF-05**

**Given** The Decree of the Director of the Department of Computer Science and Engineering dated March 11, 2026, requesting the establishment of one postdoctoral position within the HEU project "Transfer and Federated Learning for HPC Monitoring and Optimization" (SEANERGYS), a European project funded by the EuroHPC JU program (HORIZON EUROPE) - CUP: J53C25001040006;

**Considering** that on 24 March 2026 the Board of Governors approved the departmental request;

**Considering** that the above-mentioned research needs represented by the Department of Computer Science and Engineering can be met by means of a public selection procedure;

**Having regard to** the legislation referred to in Article 13 of this call for applications;

## ORDERS

### Article 1 – Subject of the selection

To establish a comparative assessment procedure based on qualifications and interview for the award of no. 1 post-doc research contract pursuant to Article 22-bis of Law 240/2010, entitled "Transfer and Federated Learning for HPC Monitoring and Optimization", SSD IINF-05/A Information Processing Systems - GSD 09/IINF-05 - INFORMATION PROCESSING SYSTEMS.

The post-doc research contract is to be activated on the basis of a request made by the Department of Computer Science and Engineering of the Alma Mater Studiorum - Università di Bologna. The primary place of work for the post-doc research contract holder will be Bologna.

The contract will last 12 months. The gross annual employee remuneration is € 28.456,48.

### Article 2 - Activities to be performed

The task envisages research activity to which the activation of the contract is linked. This activity is performed under the supervision of a Scientific supervisor chosen by the Department of Computer Science and Engineering in Professor Andrea Borghesi.

For the purposes of reporting on the research project, the notional quantification of annual activities is 1,720 hours per year. Post-doc research contract holders organise their work in consultation with their Scientific supervisor in relation to the organisational aspects of the project. The performance of the research activity must be self-certified monthly and validated by the Scientific supervisor.

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The post-doc research contract is entitled: “Transfer and Federated Learning for HPC Monitoring and Optimization”.

Description of the main research activity in which the post-doc researcher will be engaged: The research will develop advanced transfer and federated learning methods for predictive maintenance, and energy-aware optimization in High-Performance Computing environments. Key objectives include: (i) designing transfer learning strategies robust to hardware and workload heterogeneity across HPC systems (domain adaptation, selective fine-tuning); (ii) developing communication-efficient federated protocols for non-IID telemetry data, with adaptive aggregation and client selection; (iii) integrating these techniques into an emerging HPC monitoring platform, including data ingestion pipelines, distributed training orchestration and lifecycle support; and (iv) defining validation benchmarks and operational KPIs to support adoption across HPC centers.

The scientific productivity targets to be achieved over the term of the contract will be: The project will deliver: (i) 2-3 peer-reviewed journal article or conference paper on transfer learning and federated learning for HPC monitoring and optimization or presenting methodological advances and large-scale validation results; (ii) one open-source release of the developed modules integrated into the HPC platform, with reproducible benchmarks and documentation; (iii) a public dataset or anonymized telemetry benchmark specification, where possible; and (iv) dissemination through workshops, tutorials, and collaboration with European HPC centers and initiatives.

### **Article 3 -Admission requirements**

The selection procedure is open to applicants, including citizens of non-EU countries, who hold a PhD degree or equivalent qualification awarded in Italy or abroad, by the deadline for submitting applications.

In the case of a PhD degree awarded abroad, applicants will need to do one of the following:

1. enclose the decree of academic recognition of the degree (issued pursuant to Article 74 of Italian Presidential Decree no. 382/1980, formerly equivalence, or Article 38 of Legislative Decree 165/2001), if they already have the PhD on the expiry date of the call for applications.
2. request from the University of Bologna, at the application stage, the procedure for recognition of the foreign qualification pursuant to Article 38(3.2) of Legislative Decree no. 165/2001. In this case, the applicant undertakes to forward the necessary documentation to the following email address, [apos.contrattidiricerca@unibo.it](mailto:apos.contrattidiricerca@unibo.it) or certified mail ([scriviunibo@pec.unibo.it](mailto:scriviunibo@pec.unibo.it)), should she or he be successful in the procedure. The recognition procedure lasts a maximum of 45 days from the delivery of all necessary documentation to the office;
3. as a residual measure, attach a copy of the receipt indicating the start of the equivalence procedure, in accordance with Article 38 of Italian Legislative Decree 165/2001. The form for requesting foreign degree equivalence can be found at [Moduli equivalenza titoli di studio](#). Pursuant to the provisions of Article 38(3) of Italian Legislative Decree no. 165/2001, as amended by Law 69/2025, the Civil Service Department concludes the recognition procedure only with respect to the

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successful applicants, who are required, under penalty of forfeiture, to submit an application for recognition to the Italian Ministry of University and Research within fifteen days of the publication of the final ranking list. It should be noted that the time limit for concluding the procedure for issuing the provision of recognition of a foreign qualification by the Department of the Civil Service on the opinion of the Ministry is 150 days from the date of the application and is suspended if it is necessary to supplement the documentation. The provision must in any case be produced to the Administration before taking up employment.

One should note that simple Declarations of Validity (*Dichiarazioni di Valore*) cannot be attached. Pending the issuing of the provision referred to in point 2 or 3, applicants may take part in the competition by being admitted conditionally.

For more information on procedures for the recognition of foreign qualifications, one should consult the University's webpage on "[Recognition of a foreign qualification](#)".

Participation in this procedure is not permitted to:

- staff permanently employed by universities, public research organisations and institutions whose postgraduate scientific diploma has been recognised as equivalent to a doctorate in accordance with Article 74(4) of Italian Presidential Decree no. 382 of 11 July 1980;
- persons who have benefited from fixed-term researcher contracts pursuant to Article 24 of Law 240/2010 in the text in force after the date of entry into force of Decree-Law no. 36 of 30 April 2022, converted, with amendments, by Law no. 79 of 29 June 2022 (RTT);
- persons who are related up to and including the fourth degree of kinship and affinity to a professor within the Department or Entity proposing the activation of the contract or to the Rector, the Director General or a member of the Board of Governors of the University.
- persons who have already held post-doc research contracts in accordance with Article 22-bis of Law 240/2010 at the University of Bologna or other Italian state or independent universities, or online universities, or at the bodies referred to in paragraph 1 of the same Article, for a period which, added to the expected duration of the assignment referred to in this call for applications, exceeds a total of three years, even if not continuous. For the purposes of calculating the above total duration, periods spent on maternity or paternity leave or leave for health reasons under the applicable legislation are not taken into account;
- persons who have already held research contracts (Article 22 of Law 240/2010), post-doctoral assignments (Article 22-bis of Law 240/2010) and research assignments (Article 22-ter of Law 240/2010), even if awarded or stipulated by different institutions, for a period which, added to the expected duration of the assignment referred to in this call for applications, exceeds a total of 11 years, even if not continuous. For the purposes of calculating the above total duration, periods spent on maternity or paternity leave or leave for health reasons under the applicable legislation are not taken into account.

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#### **Article 4 - Submission of applications**

Applications to take part in the selection process must be submitted exclusively online by accessing the Pica portal: <https://pica.cineca.it/unibo/>

**Deadline of the call for applications:** Tuesday May 5, 2026 12:00 noon (Italian time).

The application must be submitted at the same time as all the necessary accompanying documentation.

The following documents, preferably in PDF format (other formats JPG, BMP, PNG), must be attached in the online procedure:

1. scan of a valid ID document (10MB max);
2. curriculum vitae containing scientific-professional activity (10MB max);
3. list of publications (include type of publication, all authors, full title, year of publication – or specify if accepted but pending publication – any additional information useful for finding them online);
4. any further annexes deemed useful for the purposes of the evaluation (e.g. master's degrees, postgraduate specialisation courses, scholarships and assignments for research activities, receipt of prizes and awards for research activities, letters of reference, etc.).

In their application, applicants must declare, under their own responsibility:

1. name and surname;
2. place and date of birth;
3. nationality;
4. residence;
5. (if Italian citizens) that they are registered in the electoral rolls, or that they are not registered with an indication of the reasons for their non-registration or cancellation;
6. that they have never been convicted of any criminal offence and that they have no pending criminal proceedings; conversely, they must indicate the convictions (the date of the measure and the judicial authority that issued it) and any pending criminal proceedings. The existence of a previous criminal conviction is not in itself a cause for refusal of employment unless it is a conviction for an offence that prevents the establishment of an employment relationship with the public administration because it results in disqualification from public office, or inability to enter into contracts with the public administration, or the termination of the employment relationship (Articles 28, 29, 32-ter, 32-quater, 32-quinquies of the Italian Penal Code, Articles 3, 4 and 5 of Law no. 97 of 27 March 2001). In other cases, the Administration will be responsible for independently ascertaining the seriousness of the criminal deeds committed by the person concerned with respect to their possible access to state-funded employment. Such checks are carried out with the aim of ascertaining the existence of the element of trust that constitutes a fundamental prerequisite in the relationship between employer and employee, as well as for

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- the purpose of assessing the existence of the requirements of moral suitability and aptitude to perform the activities of a civil servant;
7. that they have the degree required in Article 3 of this call for applications with the relevant information;
  8. that they are fit for continuous and unconditional work in the post to which the selection relates;
  9. that they are not permanently employed by the institutions referred to in Article 22(1) of Law 240/2010 (universities, public research organisations and institutions whose postgraduate scientific diploma has been recognised as equivalent to a doctorate in accordance with Article 74(4) of Presidential Decree 382 of 11 July 1980);
  10. that they have not benefited from fixed-term researcher contracts pursuant to Article 24 of Law 240/2010 in the text in force after the date of entry into force of Decree-Law no. 36 of 30 April 2022, converted, with amendments, by Law no. 79 of 29 June 2022 (RTT);
  11. that they are not related up to and including the fourth degree of kinship and affinity to a professor within the Department or Entity that is proposing the contractual assignment or to the Rector, the Director General or a member of the Board of Governors of the University.
  12. that they have or have not been the holder of previous post-doc research contracts pursuant to Article 22-bis of Law 240/2010 and, if they have, they must state the months already benefited at the date of submitting the application;
  13. that they have not already held research contracts (Article 22 of Law 240/2010), post-doctoral assignments (Article 22-bis of Law 240/2010) and research assignments (Article 22-ter of Law 240/2010), even if awarded or stipulated by different institutions, for a period which, added to the expected duration of the assignment referred to in this call for applications, exceeds a total of 11 years, even if not continuous. For the purposes of calculating the above total duration, periods spent on maternity or paternity leave or leave for health reasons under the applicable legislation are not taken into account;
  14. email address for receiving communications relating to the competition;
  15. for foreign citizens only, that they have adequate knowledge of the Italian language and enjoy civil and political rights also in the States of their nationality or origin, or conversely the grounds for not enjoying such rights.

During the opening phase of the call for applications, the system allows applications to be saved in draft mode. The application must, in any case, be finalised and sent by the deadline, after which the computer system will deny access to the application and its submission. Applications still in 'draft' mode will not be considered, once the deadline for submitting applications has expired.

Applicants will receive an email confirming their application submission, which will also contain an identifier number that will identify the applicant from that moment onwards and must be quoted in any further communication. The identifier number must also be retained for the purposes of

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communications from the University requiring, for the sake of privacy, that the name be omitted from the communication.

Any changes must be promptly notified to [apos.contrattidiricerca@unibo.it](mailto:apos.contrattidiricerca@unibo.it).

In the event of technical problems, you can contact Cineca Support at the bottom of the webpage at <https://pica.cineca.it/unibo/>.

#### **Article 5 - Compulsory requirements for applicants under penalty of exclusion**

Applicants will be automatically excluded from the selection procedure in the following cases:

- Failure to comply with the deadlines and procedures for sending their applications;
- Lack of the requirement set out in Article 3 of this call for applications.

All candidates are admitted to the selection procedures subject to verification that they actually meet the requirements to participate. The Administration may decide to exclude an applicant from the selection procedure at any time, including after the interview.

#### **Article 6 – Award Committee**

The Award Committee is appointed by a measure issued by the Administration and is composed of three members chosen from among professors or researchers, excluding junior fixed-term researchers, or members with an equivalent role if they come from foreign universities or research institutions, chosen by the Department that proposed the activation of the contract and, as a rule, are classified in the subject area or, subordinately, in the subject group in which the procedure has been advertised.

In order to ensure equal opportunities between men and women for access to work and treatment at work as provided for in Article 57 of Legislative Decree 165/2001, as a rule, the members are representatives of each gender.

The Committee shall appoint from among its members a chairperson and a secretary to take the minutes.

Notice of the Committee's appointment is published on the website of the Alma Mater Studiorum – Università di Bologna.

#### **Article 7 – Selection procedures**

Applicants are assessed by means of a comparative procedure based on qualifications and interviews and is aimed at verifying the applicants' possession of a scientific-professional curriculum suitable for the performance of the activity that is the subject of the call for applications.

The final score is the sum of the score obtained in the preliminary comparative assessment and the score obtained in the interview. A maximum of 100 points in total may be awarded, of which a maximum of 60 points for the preliminary comparative assessment and a maximum of 40 points for the assessment of the interview.

The Committee conducts the preliminary comparative assessment on the basis of the following criteria:

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a) the consistency of the publications as well as their originality, innovativeness, methodological rigour, relevance and congruence with the subject of the call for applications. The Committee will only take into consideration publications or texts accepted for publication in accordance with the applicable regulations, as well as any essays included in collective works and articles published in journals in paper or digital format with the exclusion of internal notes or departmental reports: up to a maximum of 25 points;

(b) scientific research activity with reference to research carried out in the three years prior to the publication of the call for applications, (e.g.: scholarships and assignments/contracts for research activities, receipt of prizes and awards for research activities, etc.), up to a maximum of 20 points;

c) other previously performed activities (e.g. ownership of patents, teaching activities, participation as a speaker at conferences and congresses, etc.) that are duly certified up to a maximum of 15 points.

The Committee proceeds collectively towards expressing a reasoned assessment and the attribution of the relative score, for each individual assessment criterion.

Following the preliminary assessment, applicants with a score of at least 40/60 shall be admitted to the interview.

The interview shall be conducted in public and online, using a video conference call on the Teams platform. The workstation through which the tests will be held must be equipped with a webcam – essential for recognition purposes – a microphone and headphones and/or speakers.

Notice of the date, time and the list of those admitted to it will be published with at least 15 days' notice on the University website on the following page: <https://bandi.unibo.it/ricerca/incarichi-post-doc>.

The publication of the notice on the University's website serves as notification for all participants in the selection process, without any further communication being required.

Notice of the publication will be sent to the email address indicated by the applicants in their application.

Failure to make the online connection to the interview at the scheduled date and time, or late connection thereto, even if due to force majeure, will be considered as a renunciation of participation in the selection process.

When the applicants are called to take part, the scores obtained in the preliminary assessment will be made known to them.

The Alma Mater Studiorum - Università di Bologna accepts no liability with regard to the email not being received or read. Candidates, however, are responsible for keeping themselves informed by checking the call for applications website for information on the selection.

Applicants must attend the interview with an appropriate identification document.

Those with citizenship of an EU country must show their passport or an identity document issued by their country of origin. Those from non-EU countries must show their passport.

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The interview is aimed at assessing the candidates' scientific maturity and preparation, with particular reference to the activities that are the subject of the selection.

The discussion will take place in English, in addition, adequate knowledge of the following language shall be tested: Italian.

The interview is deemed to have been passed with a minimum score of 28/40. For those who have passed both tests, the final score will be the sum of the scores obtained in the assessment of qualifications and in the interview.

#### **Article 8 – Formulation of the ranking list**

Once the interviews have been completed, the Committee shall draw up a ranking list, taking into account the overall marks awarded to the candidates.

Where there is a tie, preference will be given to the younger candidate.

The ranking list shall be approved by a measure issued by the Administration and will be published in the online Notice Board of the Alma Mater Studiorum – Università di Bologna and will be valid for 6 months.

From the date of publication of that notice, the time limit for appeals begins to run, if the measure has not otherwise been made known.

#### **Article 9 – Entry into service**

The successful applicant will be invited to enter into an individual contract for the purpose of establishing a fixed-term employment relationship, which must be signed within the deadline set by the Administration.

The employment relationship is governed by the individual contract, by the Regulations governing post-doc research contracts pursuant to Article 22-bis of Law 240/2010, by legal provisions and by EU regulations.

The individual contract shall specify the grounds for termination of the contract and the periods of notice. The cancellation of the recruitment procedure, on which the contract is based, is in any case a condition of termination of the contract, without any obligation to give notice.

The probationary period lasts one day of actual work for every fifteen calendar days, starting from the date the employment relationship begins. At the end of this period, unless the employment contract has been terminated by one of the parties, the employee's service will be confirmed and the entire period worked from the start of the contract will be counted for seniority purposes.

Employees of public administrations, other than those referred to in Article 22(1) of Law 240/2010, are granted leave of absence for the entire duration of their contract, without social security allowances or contributions, or are placed in a position of secondment if such a position is provided for by the regulations to which they belong, likewise without social security allowances or contributions.



### **Article 10 – Documents required for the purposes of taking part in the public selection and for entry into service**

In order to take part in the public selection, documents, publications and titles in English, French, German and Spanish can be produced in the original language.

Documents and titles drawn up in other languages must be submitted in the original language with an Italian or English translation attached. The translation must be certified as conforming to the foreign text by the competent diplomatic or consular mission or by an official translator. As regards the documentation required for entry into service, deeds and documents drawn up in a foreign language must be accompanied by an Italian translation, certified as conforming to the foreign text by the competent diplomatic or consular mission or by an official translator.

### **Article 11 – Rights and obligations**

Without prejudice to the rights and obligations provided by the Italian Civil Code for employment relationships, by entering into the employment contract, the contracting party assumes the right and obligation to perform the activity referred to in Article 2.

The contracting party shall perform the agreed activities in compliance with the hierarchical obligation existing in the entity to which he or she belongs, with the obligation to coordinate his or her activity in line with the envisaged research activity.

The contracting party shall carry out the requested activities personally, without the use of any substitutes.

The statutory regulations on maternity protection, accidents and illness apply to the post-doc researcher.

The post-doc researcher undertakes to comply with the provisions of the Regulations governing post-doc research contracts, the Regulations governing industrial and intellectual property rights, the Regulations containing the code of conduct for preventing and combating discrimination and moral and sexual harassment and the rules on trusted advisor(s), and in the University's Code of Ethics and Conduct.

The post-doc researcher also undertakes to comply with occupational health and safety training obligations and personal data protection obligations, at the time that he or she starts work and, in any case, within a period of no more than 60 days.

### **Article 12 – Processing of personal data and Procedure Supervisor**

Information on the processing of personal data provided in order to participate in the selection procedure is available at [www.unibo.it/privacy](http://www.unibo.it/privacy) (Privacy policy for participants in competitions and selections announced by the University).

The administrative procedure supervisor (RPA) is Michele Menna.

For any further information on the competition procedure, one can contact the APOS - Personnel Division - Selection and Contracts Unit - University of Bologna - Piazza Verdi n. 3 - Tel. +39 051 2098951 - 2099612; e-mail: [apos.contrattidiricerca@unibo.it](mailto:apos.contrattidiricerca@unibo.it).

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### **Article 13 – Regulatory framework**

The legislation under which this call for applications is issued is as follows:

- Law no. 240/2010 and, in particular, Article 22-bis;
- Italian Legislative Decree no. 165 dated 30 March 2001;
- Presidential Decree no. 445 of 28 December 2000;
- Presidential Decree no. 487 of 9 May 1994;
- Law no. 241 of 7 August 1990;
- Ministerial Decree 592 of 6 August 2025;
- Regulations governing post-doc research contracts pursuant to Article 22-bis of Law 240/2010<sup>1</sup>, issued by Rector's Decree no. 1620/2025 prot. no. 352687 of 14 October 2025.

Head of the APOS - Personnel Division

Michele Menna

Digitally signed

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<sup>1</sup> [Link to the University Legislation Documentation Site.](#)