

**Purpose:** Public comparative procedure for the recruitment of one Assistant Professor with a full-time fixed-term employment contract for three years, pursuant to art. 24 paragraph 3 letter a) (junior) of Law no. 240/2010, as part of the National Recovery and Resilience Plan (PNRR), Mission 4 "Education and Research" - Component 2 "From Research to Business"

## THE DIRECTOR

**Given that** with executive provision ref. 7960 dated December 12, 2022, the public selection procedure was announced for the filling of 66 fixed-term researcher positions in accordance with Article 24, paragraph 3, letter a) of Law No. 240 of December 30, 2010, within the framework of the National Recovery and Resilience Plan (PNRR);

within this selection procedure, one of the positions provided for in Annex No. 26 and related to the SSD MAT/07 remained vacant due to the voluntary resignation of the successful candidate;

Acknowledging that the Council of the Department of Mathematics – MAT, in the meeting held on December 6, 2023, resolved to initiate a new selection procedure based on the allocation of organizational points intended for the contract terminated due to resignations.

**With Reference To** the Regolamento UE of February 12th, 2021, no. 2021/241, which established the Dispositivo per la Ripresa e la Resilienza;

**With Reference To** the National Recovery and Resilience Plan (PNRR), approved by the ECOFIN Council decision on July 13, 2021;

**With Reference To** the projects approved under the PNRR, and specifically the following notice: "Public notice for the submission of Proposals for the creation of 'Extended Partnerships involving universities, research centers, and companies for the funding of basic research projects,'" announced by Directorial Decree No. 341 dated March 15, 2022 (hereinafter referred to as the Extended Partnerships Call);

**With Reference To** the notice published in the Official Gazette - 4th special series of January 5<sup>th</sup>, 2024, with which the University of Bologna has published a selection notice for the assignment of fixed-term research contracts of type a), pursuant to law no. 240, art. 24, paragraph 3, letter a) (RTDA) to be applied to PNRR resources

**With Reference To** the rules referred to in Article 13 of the present call for application;

**With Reference To** the resolution of the Department of Mathematics – MAT, in the meeting held on December 6, 2023, adopted in accordance with Article 17 of the Regulation for the discipline of fixed-term researchers, issued with Directorial Decree No. 344 of 2011 dated March 29, 2011, and subsequent amendments;

**With Reference To** the resolution of the Board of Directors on December 20, 2022, approving the departmental request;

**Considering** that the teaching and research needs of the Department of Mathematics – MAT can be met through the initiation of a selection procedure;

## **ORDERS**

### **Art. 1 – Purpose**

To announce a comparative evaluation procedure based on qualifications and a public discussion for the recruitment of a fixed-term researcher position in accordance with Article 24, paragraph 3, letter a) (junior) of Law 240/2010, with a full-time commitment for a duration of 36 months, in the Scientific Sector 01/A4 – Mathematical Physics and the Scientific Discipline MAT/07 – Mathematical Physics.

The position is activated to meet the research and study needs of the Department of Mathematics – MAT at Alma Mater Studiorum - University of Bologna. The primary workplace for the researcher will be in Bologna.

The contract will have a duration of 36 months with an annual gross amount of €36,840.00. The economic treatment will be annually increased in accordance with the adjustments determined for the remuneration applicable to non-contracted personnel.

The contract is activated with resources allocated from the National Recovery and Resilience Plan (PNRR), Project "PE7 - SERICS, SEcurity and Rights in the CybeRspace," Code PE0000014, approved under the PE Call, CUP J33C22002810001.

### **Art. 2 – Activities to be performed**

It is envisaged that the researcher will perform 350 hours of supplementary teaching activities and student services for each academic year during the validity of the contract. Within the aforementioned 350 hours, 60 hours of face-to-face teaching are included.

In accordance with the provisions of Article 10 of the Regulation for the discipline of fixed-term researchers issued with Directorial Decree No. 344 of March 29, 2011, and subsequent amendments, the activities that the researcher will be required to carry out are related to the development of the project: " Reliability and risk management in complex systems".

The candidate will deal with the introduction of mathematical physics models for complex cyberphysical interconnected systems. The first part of the research activity will be devoted to the introduction of (deterministic and/or stochastic) models describing the topology of the interconnections and their evolution in time, through the theory of complex networks. The second part of the research activity will be dedicated to the study of systemic risk from the point of view of statistical mechanics. The aim is the introduction of new risk measure linked to the emergent macroscopic properties, of efficient techniques for anomaly detection and of exogenous/endogenous strategies of risk mitigation that lead to systems that are more robust to external attacks and internal fluctuations.

The researcher's scientific productivity objectives will be aimed at achieving significant research results that can be published in high-impact, peer-reviewed international journals. Additionally, the objectives include participating in conferences to disseminate the research findings and presenting research projects.

### **Art. 3 – Admission requirements**

The selection is open to applicants, including those who come from non-EU countries, in possession of PhD or equivalent qualification obtained in Italy or abroad. In any case, applicants must be in possession of qualification at the date of the deadline for the submission of applications to the present selection.

In case of a Ph.D. obtained abroad, it is necessary to attach the decree of academic recognition of the degree (so-called decree of equivalence, as provided for by Article 74 of Presidential Decree No. 382/1980). This requirement applies to those who already possess it. Alternatively, the recognition decision of the degree for the purpose of participating in competitions for researcher positions in universities and public research institutions must be provided, in accordance with Legislative Decree No. 206/2007 - amended by Legislative Decree No. 15/2016 (for EU degrees) - and Presidential Decree No. 394/99, Article 49 (for non-EU degrees). In the meantime, before the competent authorities issue the recognition decision, it is possible to submit the receipt confirming the submission of the recognition request.

For more information on the procedures for the recognition of foreign degrees, it is recommended to consult the university's web page regarding "Non-academic recognition to participate in researcher competitions" at the following address: <https://www.unibo.it/en/teaching/enrolment-transfers-and-degrees/recognition-of-a-foreign-degree-1>.

In any case, the proof of the equivalence of the foreign qualification must be produced to the administration prior to beginning service and, anyhow, within 180 days from the publication of the approval decree of the procedure on the official university bulletin, otherwise the exclusion from the position of winning candidate occurs.

Applications from professors, associate professors, or researchers with tenure will not be accepted, even if the applicant is not in service. The selection is not open to any persons who are related by blood up to the fourth degree, to a professor working in the Department that proposed the activation of the single contract, or to the Rector, Director General or a member of the Board of Governors of the University.

Furthermore, the selection is not open to anyone who has had research fellowship or fixed-term researcher contracts at the University of Bologna or any other state-funded, private-funded or distance-learning Italian university pursuant to articles 22 and 24 of Italian Law 240/2010, or with any other body listed in paragraph 1 of Art. 22 of Italian Law 240/2010 for a period which, summed to the foreseen duration of this contract, exceeds a total of 12 years, even if not consecutive. For the purposes of the duration of the above-described periods, in compliance with the laws in force any periods of maternity or sick leave shall not be calculated.

State employees may on unpaid leave for the entire duration of the contract, thus occupying a non-tenure position without pay or social security contributions, in cases where such a position is allowed by the structure of origin, likewise without pay or social security contributions.

#### **Art. 4 – Application procedure**

The submission of the applications for participation in the selections must be made exclusively via electronic procedure by accessing the following link:

<https://personale.unibo.it>

#### **Call deadline: February 2<sup>nd</sup>, 2024 at 12:00 (noon, Italian Time).**

The application must be submitted at the same time with the insertion of all the attached documentation required.

The following documents shall be enclosed to the electronic application form (preferably files: PDF, other supported files: JPG, BMP, PNG):

1. identification document scanned (10MB max);
2. curriculum vitae with indication of the scientific-professional activity (10MB max);
3. reference letters, if any. Letters can be submitted directly by the candidate uploading it during the application, in case of possession (10MB max), or can be submitted by the referee. In this case candidates should provide the referee e-mail address. When the application is closed, the system will send an automatic request to the referee, referring to the candidate and the procedure. The referee must submit his letter through the link into the e-mail. At this address he/she will upload his/her letter by the application deadline in order to be considered as part of the candidate's application.
4. scientific publications (other supported files are TIFF and PS, 20MB max each document) which are already printed at the date of the call of application deadline, or scientific publications accepted for printed, together with the editor acceptance letter. While uploading each document will be asked to indicate the title, the authors' names, the editor, the year of publication. Optional information are the month, the ISBN code, the DOI code, the booklet number.

It is specified that, in accordance with Ministerial Decree 243/2011, a doctoral thesis is to be considered a publication. Therefore, in the event that the candidate intends to submit it, it must be included in the maximum number of publications, which is set at 12 (twelve) for this specific case.

While applying, applicants shall declare under their own responsibility:

1. surname and name;
2. place and date of birth;
3. citizenship;
4. residence address;
5. (if Italian citizens) registration to electoral rolls. If any, the reasons why he/she is not registered or cancelled from them;

6. that there have not been any criminal proceeding against them or current criminal proceedings; otherwise, applicants shall specify the proceedings against them (the date of the measure and the judicial authority that issued it) and pending penal proceedings. The existence of a previous criminal conviction is not in itself an impediment to hiring, unless it is a conviction for a crime that prevents the establishment of the employment relationship with the public administration as it derives from the interdiction from public office, or the inability to contract with the public administration, or the termination of the employment relationship (articles 28, 29, 32-ter, 32-quater, 32-quinquies of the Criminal Code, articles 3,4, 5, L. 97 of March 27, 2001). In other cases, the Administration will ascertain the gravity of the criminally relevant facts committed by the person concerned, for the purposes of access to public employment. This check is carried out with the aim of ascertaining the existence of the fiduciary element which constitutes the fundamental prerequisite of the relationship between employer and worker, as well as for the purpose of assessing the existence of the requisites of moral suitability and aptitude to carry out activities as a public employee;
7. to have or not to have benefited of non-voluntary leave periods due to maternity/paternity compulsory abstention or for serious health reasons, indicating the periods in case
8. possession of the qualification required pursuant to Art. 3 of this call for application and the mark obtained, if any;
9. to be fit to the employment the selection refers to;
10. that they are not, nor have been, professors, associate professors or researchers with tenure, even if not in service;
11. that they are not related by blood up to the fourth degree, to any professor working in the Department that proposed the activation of the single contract, or to the Rector, Director General or a member of the Board of Governors of the University of Bologna;
12. elected e-mail address for the purpose of the participation in this contest;
13. Foreign citizens shall also declare to have a proper knowledge of Italian and to enjoy civil and political rights also in their origin countries or the reasons for loss of enjoyment.

Any modification shall be timely communicated to the Ufficio Ricercatori a tempo determinato.

In case of technical problems, contact the support: [assistenza.cesia@unibo.it](mailto:assistenza.cesia@unibo.it).

#### **Art. 5 – Applicants' obligations**

The penalty of exclusion from the selection shall apply in the following cases:

- Non compliance with the terms and procedures for submitting the application form indicated in article 4 of this call for applications;
- Lack of the qualification required to participate in the selection indicated in each attachment.

All applicants shall be admitted to the contest and the Administration reserves the right to check that they actually are in possession of the requirements necessary to apply for the selections; the Administration may, at any time and even after the exams, order the exclusion from the selection hereto.

## **Art. 6 – Selection Board**

The Evaluation Committee is appointed by administrative measure and is composed of three professors in the first or second tier, classified in the relevant sector or, if applicable, in the same macro-sector for which the procedure is announced. In the case of committee members not originating from national universities, they must hold an equivalent position. The members are identified by the Department that proposed the activation of the contract.

Two of the members, external to the University, are selected by lot following the procedures outlined in Article 8-bis of the Regulation for the discipline of calls for Professors of the First and Second tier in implementation of Articles 18 and 24 of Law 240/2010, as issued with Directorial Decree 977/2013 and subsequent amendments. The third member is identified by the Department Council from among internal or external professors.

To ensure equal opportunities for men and women in access to employment and in job treatment, as outlined in Article 57 of Legislative Decree 165/2001, at least one member is typically of the female gender. The Committee appoints a president and a recording secretary from within its members. The appointment of the Committee is announced on the Alma Mater Studiorum – University of Bologna website.

## **Art. 7 – Selection procedure**

The selection is carried out by the Committee through a preliminary evaluation of the candidates, providing a detailed and reasoned analysis of their qualifications, curriculum vitae, and scientific output, including the doctoral thesis. The assessment is based on criteria defined by the Ministry of Education, University, and Research (MIUR) in accordance with Ministerial Decree 243/2011.

Following the preliminary evaluation, the candidates deemed comparatively most meritorious, within a range of 10 to 20 percent of the total number of candidates, and in any case not fewer than six individuals, will be admitted to the public discussion with the committee regarding their qualifications and scientific output. This discussion may also take the form of a seminar open to the public. All candidates are admitted to the discussion if their number is equal to or less than six.

Any reference letters produced by the candidates will also be considered.

The discussion will take place in a language chosen by the candidate, either Italian or English. In the case of opting for the public discussion in Italian, the candidate must demonstrate a sufficient proficiency in the English language.

The discussion with the Commission will take place starting from 19<sup>th</sup> February 2024, and it will be carried out in public form and in public or electronically by Commission decision, using the audio and video teleconferencing tool via the Teams platform (the workstation from which candidates will take do the interview must be equipped with a webcam - essential for the recognition of the candidate - microphone and headphones and/or audio speakers).

With reference to each procedure, the notice of the day and time in which the public discussion will take place will be announced together with the publication of the list of admitted candidates on the University website at: <https://bandi.unibo.it/docenti/rtd>.

The publication on the University website will constitute official notification to all applicants, without any obligation for any further communication.

The publication will be communicated by e-mail to the address indicated by the candidates in the application.

The Alma Mater Studiorum - University of Bologna does not assume any responsibility for the non-receipt or the not-read of the e-mail.

It is up to candidates to keep themselves informed by consulting the University website page to find necessary information about selection.

Candidates attending the interview must bring a valid identification document with them.

EU citizens shall bring their passport or an identity document issued by their country of origin. Non-EU citizens shall bring their passport.

#### **Art. 8 – Individuation of the winner and recruitment**

After the exams, the Board proceeds to identify the winner. On equal merits, priority will be defined according to the date of birth and the youngest one shall precede.

The procedure's acts are approved pursuant to an administration resolution and will be published in Alma Mater Studiorum – University of Bologna Official Bulletin.

The terms to raise any appeal shall start from the date of publication of the forementioned notice, in case the resolution has not been otherwise disclosed.

In case of the winner's withdrawal, the candidate who obtained the highest overall score after the winner will be called.

The Department of Mathematics - MAT will formulate the proposal for appointment with the favorable vote of the absolute majority of professors in the first and second tier. This proposal will be approved by the Board of Directors. Additionally, the Department will suggest the effective date of the contract.

#### **Art. 9 – Employment procedures**

The winner, upon the conclusion of the appointment procedure as outlined in the previous Article 8, will be invited to enter into an individual contract aimed at establishing a fixed-term employment relationship with a full-time commitment.

The employment relationship is governed by a personal contract, statutory laws and EC regulations. The personal contract shall specify any reasons for which it might be terminated, as well as the relevant periods of notice. In any case the contract will be terminated immediately and without notice in the event of the cancellation of the recruitment procedure to which it is inalienably linked. The trial period shall last three months. At the end of the period, unless the employment relationship has been terminated by either of the parties, the employee is confirmed for service and the whole period worked from the beginning of the contract shall be calculated for seniority purposes.

#### **Art. 10 – Documentation required for the participation in the public selection and for hiring purposes**

For the purposes of participation in the public selection, documents and qualifications in English, French, German and Spanish can be produced in the language of origin. Documents and qualifications written in other languages must be presented in the original language with an Italian

or English translation attached. The translation must be true and correct, written by an Italian consular, a qualified diplomatic representative, or an official translator.

Regarding the documentation necessary for hiring purposes, all the documents written in any foreign language shall be accompanied by a true and correct translation into Italian, written by an Italian consular, a qualified diplomatic representative, or an official translator.

#### **Art. 11 – Rights and duties of a researcher with a fixed-term contract of employment**

In accordance with the rights and duties of public employees prescribed by the Italian civil code, on signing the contract the researcher will be expected to perform all those activities mentioned for each position in the relative attachment as well as to carry out the research periods in the company and abroad (the latter only where applicable).

In the event that medical assistance services are provided, the researcher will also assume rights and duties related to this activity.

These activities will be carried out in respect of the existing hierarchy and in coordination with existing programmes and research projects.

The researchers will perform the requested activities in person, substitution is not permitted.

Existing Italian laws concerning maternity, injury and illness will be applied.

The researcher undertakes to fulfill the obligations of conduct prescribed by the code of conduct, issued by DPR 62/2013.

#### **Art. 12 – Processing of personal data and person in charge for the contest**

Information about the processing of personal data (provided during the application process) are available at the link: [www.unibo.it/privacy](http://www.unibo.it/privacy) (Notice for participants in contests and selections published by the University).

The person in charge of the contest is Mr. Michele Menna, Director of the Personnel Area of University of Bologna.

For further information, please contact: Ufficio Ricercatori a tempo determinato dell'Alma Mater Studiorum - Università di Bologna – Piazza Verdi n. 3 - Tel. +39 051 2099980 – 2098958 - 2098972, Fax 051 2086163; e-mail: [apos.ricercatoritempodeterminato@unibo.it](mailto:apos.ricercatoritempodeterminato@unibo.it). Mr. Gianfranco Raffaelli is the person in charge of the Office.

#### **Art. 13 – Reference Regulations**

The present notice is issued based on the following regulations:

- Art. 24 of Law no. 240 dated December 30th, 2010;
- D.P.R. (Decree of the President of the Republic) no. 445 dated December 28th, 2000;
- Leg. Decree no. 165 dated March 30th, 2001;
- Law 241/1990;
- Regulation for fixed-term researchers of Alma Mater Studiorum – University of Bologna, (link: [http://www.normateneo.unibo.it/NormAteneo/Regolamento\\_ricercatori\\_a\\_tempo\\_determinato.htm](http://www.normateneo.unibo.it/NormAteneo/Regolamento_ricercatori_a_tempo_determinato.htm)).

For the Director of Area del Personale  
Digitally signed by Giovanni Longo