

Repertorio n. / File no.

Anno 2025 Titolo VII Classe 1 Fascicolo 29

DISCLAIMER: The English version is a translation of the original in Italian for information purposes only. In case of a discrepancy, the Italian original will prevail

Selection procedure for the awarding of research contract

**The Director of the Department of Physics and Astronomy "Galileo Galilei"
HEREBY DECLARES**

Art. 1 – Subject

A selection procedure is hereby announced for the awarding of no. 1 research contract in accordance with the current Regulations for the awarding of research contracts pursuant to art. 22 of law 240/2010, as specified in Table 1

TABLE 1	
Title of the research project	Nonequilibrium dynamics in crowded enzymatic media: characterization and inference from observations
Specific activities to be performed	The project aims to model enzymatic media as reaction-diffusion systems, capturing crowding at an effective level and then developing improved models based on N-body Fokker-Planck equations. The candidate will focus on thermodynamical and transport properties, comparing theoretical results with recent experimental data. They will perform simulated experiments to elucidate the optimal conditions under which different theoretical ingredients can be observed. Finally, they will begin exploring information-theoretic approaches to infer enzymatic activity from tracer trajectories.
Place of work	Department of Physics and Astronomy – DFA- address: Via F. Marzolo n. 8 – 35131 Padova
Principal investigator	Prof. Amos Maritan

Contract duration	24 months
Annual gross amount	€ 28.283,92
GSD Scientific Disciplinary Group	02/PHYS-04 THEORETICAL PHYSICS OF MATTER, MODELS, MATHEMATICAL METHODS AND APPLICATIONS
SSD Scientific Disciplinary Sector	PHYS-04/A THEORETICAL PHYSICS OF MATTER, MODELS, MATHEMATICAL METHODS AND APPLICATIONS
Maximum number of publications to be submitted (including the doctoral thesis) and documentable research products listed among the products evaluable in the latest ANVUR assessment	3
Elements subject to evaluation	<p>a) scientific-professional curriculum including overall scientific productivity and research activities carried out at public and private institutions, with particular reference to the relevance to the contents of the research project: 35 points;</p> <p>b) scientific publications and other documentable research products, with particular reference to their relevance to the contents of the research project: 25 points;</p> <p>c) oral test to assess the candidate's aptitude for research: 40 points.</p>
Oral test	<p><i>The date, time, and location where the oral exam will be held, or the link for the candidates' online connection, will be indicated in the minutes of the first meeting of the selection committee, which will be published at the link</i></p> <p>https://unipd.link/contratto-DFA-MARITAN2025</p>
Foreign language whose adequate knowledge will be assessed through an oral test	English
Financial coverage	Project titled "Activeinfo" – Bando STARS@Unipd 2023 STARS" – Responsabile scientifico Dott.

	Daniel Maria Busiello (codice UGOV BUSI_STARS_MUR24_01) CUP C95F21009990001
--	---

Art. 2 – Admissions requirements

The selection is open to:

- Italian or foreign candidates who possess, by the deadline for submitting applications for admission to the selection, a PhD degree or an equivalent qualification obtained abroad.
- Candidates enrolled in the final year of a PhD program, provided that the degree is expected to be obtained within six months from the date of publication of the selection call on the University's Official Notice Board.

If the PhD degree has been obtained abroad, it must have a minimum duration of three years and its recognition for academic purposes must be declared.

Applicants with a qualification obtained abroad must enclose a copy of the decision issued by the competent authorities recognising equivalency or equivalence to the corresponding Italian qualification. The documentation recognising the foreign qualification, or at least the receipt of delivery of the application for recognition submitted to the competent Authorities, must be produced to the Administration when the contract is signed, it being understood that the documentation certifying the equivalency or equivalence of the foreign qualification must, in any case, be produced to **the Administration no later than 120 days from the start of the contract**, under penalty of termination of the employment contract.

Candidates who find themselves in one or more of the following situations are excluded from participation in the selection procedure:

- 1) exclusion from the enjoyment of civil and political rights;
- 2) dismissal or removal, or declaration of disqualification from a position of public service within a Public Administration;
- 3) permanent staff, employed on an indefinite basis in a university, public research institution, or an institution whose scientific advanced diploma has been recognized as equivalent to a PhD degree pursuant to Article 74, fourth paragraph, of the Presidential Decree of July 11, 1980, n. 382;
- 4) being a relative or relative by law, up to and including the fourth degree of kinship, to a professor belonging to the Department proposing the hiring or with the Rector, the Director General or a member of the Board of Administration of the University;
- 5) Have held fixed-term researcher contracts pursuant to Article 24 of Law 240/2010 (RTT);
- 6) Have held contracts under Article 22 of Law 240/2010, as amended by Law n. 79/2022, for a period which, when added to the duration of the contract being advertised, exceeds a total of 5 years, even if not continuous. For the purpose of calculating the duration of these relationships, periods spent on maternity leave or health-related leave are not considered, in accordance with current regulations

Candidates must declare that they are aware that the research contract is not compatible with:

- 1) Enrollment in Bachelor, master, PhD, or medical specialization courses, in Italy or abroad, without prejudice to the provisions of Art. 7 of the Regulations for the conferment of research contracts pursuant to Art. 22 of Law 240/2010;
- 2) Scholarships or research grants awarded for any reason by national or foreign institutions, except those exclusively aimed at international mobility for research purposes;
- 3) Holding research fellowships, including at other universities or public research institutions;
- 4) Other subordinate employment activities, even part-time or fixed-term, with public or private entities;
- 5) Carrying out additional activities prohibited by laws or other regulatory sources, or that may conflict with the institutional activities of the University.

The employee serving in public administrations other than those indicated in paragraph 1 of Article 22 of Law 240/2010, as amended by Law 79/2022, must be placed on unpaid leave by their home administration for the duration of the research contract, starting from the date of commencement of activities.

Candidates are admitted to the selection process with reserve. Exclusion from the selection due to lack of prescribed requirements can be ordered at any time, even after the completion of the tests, by a motivated decree of the Director of the Department of Physics and Astronomy "Galileo Galilei" that issued the call.

This Administration guarantees equality and equal opportunities between men and women for access to employment and treatment at work.

Art. 3 – Submitting an application

The application to take part in the public selection, as well as the qualifications and the documents and publications and other documentable research products deemed useful for the selection procedure, must be submitted electronically, under penalty of exclusion, using the dedicated application, on the Pica platform page: <https://pica.cineca.it/unipd/> .

The application can be completed starting from **26/09/2025 h. 2.00 p.m. on 13/10/2025 until 2.00 p.m.**

For further information on this matter, candidates can refer to the Notes on the Submitting the Applications and the PICA Guidelines, available at: https://www.unipd.it/bandi_list

Under penalty of exclusion, the application must be signed by the candidate and accompanied by a copy of a valid identity document.

The candidate may also access the application procedure by means of identification through the SPID system (Sistema Pubblico di Identità Digitale) - level 2. In that case, it will not be necessary to sign the application.

The service may be temporarily suspended for technical reasons.

In the event of proven technical issues preventing from accessing the service, the Administration reserves the right to accept applications also in paper format, provided that they are received by the deadline of the call for applications.

The application for participation is to be considered in all respects of law as a self-certification pursuant to Articles 46 and 47 of Presidential Decree 445/2000 and subsequent amendments of the data contained therein and of the attached documents.

Those who come from non-EU countries and hold a regular residence permit may use self-certifications with the same methods adopted by EU citizens in case they are required to provide evidence of status, facts and personal qualities that can be certified or attested to by Italian Public Bodies, or if self-certifications are provided in application of international conventions in force between Italy and the candidate's country of origin.

Those who come from non-EU countries and do not hold a regular residence permit may use the online procedure to upload their qualifications in PDF format and certificates, issued by the competent authorities of the State of which they are nationals, accompanied by an Italian translation authenticated by the Italian consular authority certifying their conformity with the original. The originals of these documents must be shown to the committee during the discussion on qualifications and scientific production and, in any case, produced to the Administration at the time of hiring, if this takes place.

Reference cannot be made to documents submitted to this or other administrations, or to documents attached to the application for taking part in another selection procedure.

All qualifications required by the call and documentation deemed useful for the purposes of this selection must be attached to the application for participation in the selection in .pdf format, within the deadline established for the submission of applications.

Candidates with recognized disabilities, pursuant to Law no. 104 of 5 February 1992, must specify in the application the necessary assistance in relation to their status, as well as any need for additional time for the interview.

Any information or clarifications regarding the methods of submitting applications can be requested from the Department of Physics and Astronomy "Galileo Galilei" at the contacts (**phone +39 0498277299/7115, email: settore.ricerca@dfa.unipd.it**).

To report problems exclusively of a technical nature, contact support via the link at the bottom of the page: <https://pica.cineca.it/unipd>.

Candidates undertake to communicate any change in the contact details indicated in the application.

Art. 4 – Selection Procedure

The selection is carried out by comparative evaluation. The elements subject to evaluation and the information regarding the oral test are indicated in Table 1.

Publications in the University's Official Notice Board have the value of notification for all purposes. Therefore, candidates who have not been notified of their exclusion from the selection process are required to appear without any prior notice, carrying a valid identity document, on the established days and at the established location without further summons. Failure to appear in person or to

connect via telematic means is considered a definitive implicit withdrawal from the selection process.

Being placed on the list of positively evaluated candidates in an evaluation procedure does not constitute a qualification for subsequent evaluation procedures. In case of equal merit, preference is determined by the younger age of the candidate.

The Director's Decree approving the selection acts and the list of candidates positively evaluated with the relative score are published in the University's Official Notice Board, on the University website and on the Department of Physics and Astronomy "Galileo Galilei" website.

Art. 5 – Scientific Publications and Other Documentable Research Products

Publications and other documentable research products that candidates intend to present must be sent exclusively in pdf format through the appropriate section "Publications and documentable research products listed among the products evaluable in the last ANVUR evaluation of research quality available on the date of publication of the call deemed useful for selection purposes", of the electronic procedure.

Publications and documentable research products listed among the products evaluable in the last ANVUR evaluation must be presented respecting the **maximum number provided for in Table 1. Failure to observe the maximum limit of publications and other documentable research products to be submitted for participation in the selection will be noted by the Selection Committee and will result in exclusion from the selection procedure, by order of the Director of the Department of Physics and Astronomy "Galileo Galilei".**

Without prejudice to the maximum number of publications and documentable research products indicated in Table 1 of this call, for proven and motivated technical reasons not dependent on those submitting the application, publications that exceed the space of 30 megabytes must be reported in a detailed list to be inserted in the IT platform; publications, in this case, must be uploaded in non-modifiable format (PDF/A) on a portable mass memory (pen drive, USB stick), which must be received no later than the deadline of the call by registered mail, post or express mail or courier with acknowledgment of receipt to the addresses: **via F. Marzolo n. 8, 35131 Padova - Italy**. Alternatively, the aforementioned list may be sent by certified email to the addresses PEC **dipartimento.dfa@pec.unipd.it**.

For this purpose, the date of the postmark or the accepting courier's stamp **will not be considered as proof**.

The envelope must clearly indicate the candidate name and surname and report the selection they intend to participate in, specifying the Department of Physics and Astronomy "Galileo Galilei", the Scientific-Disciplinary Group and the Scientific Disciplinary Sector. The device must show the candidate name, surname and date of birth.

Alternatively, both publications and research products that exceed the space of 30 megabytes and the list can be sent by certified email to the addresses PEC (dipartimento.dfa@pec.unipd.it) within the deadline of the call.

The Administration assumes no responsibility for any disruptions attributable to third parties, fortuitous events or force majeure, which result in the non-receipt of the portable mass memory.

a) Publications

Only publications or texts accepted for publication, together with the publisher's confirmation letter, according to current regulations, as well as essays included in collective works and articles published in print or digital journals with the exclusion of internal notes or departmental reports if they are without an international ISSN or ISBN code, will be subject to evaluation.

The doctoral thesis or equivalent qualifications are to be considered as publications pursuant to Ministerial Decree 243/2011 and if presented as a publication, it will be counted in the maximum number of publications.

It is also specified that only documentation relating to qualifications, publications and curricula uploaded by those submitting their application on the PICA platform and visible and resident therein will be evaluated by the Selection Committee. In particular, only information available in the application will be used, while **information retrievable from web page links inserted in the curricula attached to the applications will not be used.**

For publications published abroad, the following details should be provided if possible: the date, place of publication or, alternatively, the ISBN or ISSN code or other equivalent..

For publications published in Italy, prior to the 2th September 2006, the obligations according to the forms provided for by Article 1 of the Lieutenant's Decree of the 31th August 1945, n. 660 must have been fulfilled; starting from September 2, 2006, the obligations according to the forms provided for by Law no. 106 of the 15th April 2004 and the related regulation issued with Presidential Decree no. 252 of the 3th May 2006, must be fulfilled by the deadline of the selection notice.

Publications written in French, English, German and Spanish may be submitted in the original language. Publications subject to evaluation may be presented in the original language also in cases where the selection procedure concerns a specific linguistic sector.

In other cases, publications written in a foreign language must be accompanied by a translation into Italian, certified as conforming to the foreign text, drafted by the competent diplomatic or consular representation or by an official translator, or, in cases where it is allowed, drafted by the candidate and declared to conform to the original text by means of a substitute declaration of affidavit pursuant to Article 47 of Presidential Decree 445/2000.

b) Documentable research products

This refers to the products listed among those eligible for evaluation in the latest ANVUR research quality assessment available at the date of publication of the call.

The VQR call is available at <https://www.anvur.it/it/ricerca/qualita-della-ricerca/procedure-valutative/riferimenti-normativi-e-documenti>

Art. 6 – Withdrawal of application from the procedure

Any withdrawal from participation in the selection procedure, signed and dated, must be promptly communicated to the Director of the Department of Physics and Astronomy "Galileo Galilei" via certified email (PEC) to dipartimento.dfa@pec.unipd.it or sent to the Head of the Department of Physics and Astronomy as a pdf application, duly signed and dated, with a copy of a valid identification document attached, via email to the address settore.ricerca@dfa.unipd.it.

The withdrawal will take effect from the first meeting of the Selection Committee following the date of receipt.

Art. 7 - Selection Committee

The selection Committee is appointed by decree of the Department Director in accordance with Article 9 of the Regulations for the awarding of research contracts pursuant to Article 22 of Law 240/2010 available at the following link https://www.unipd.it/bandi_list

In its first meeting, the selection Committee predetermines the criteria for evaluating the elements specified in Table 1 and establishes the content of the oral examination. The report of the first meeting is published for at least seven days on the University's Official Notice Board, on the University's website, and on the Department of Physics and Astronomy "Galileo Galilei" website (<https://www.dfa.unipd.it/servizi/amministrazione-trasparente/bandi-di-concorso/bandi-didattica-ricerca-e-altre-tipologie/contratti-di-ricerca/>).

Subsequently, the Committee reviews the admitted applications and, having verified the absence of incompatibility causes and conflicts of interest for each commissioner, proceeds with the comparative evaluation of candidates, assigning scores to the evaluation elements.

After completing the oral test, it identifies the winning candidate, who must have achieved an overall threshold score of 60 hundredths, and draws up the list of positively evaluated candidates with their relative scores.

The selection proceedings are approved by Decree of the Department of Physics and Astronomy Director and published on the University's Official Notice Board, on the University website, and on the Department of Physics and Astronomy website.

Art. 8 – Employment contract and hiring

The hiring of the research contract holder takes place through the stipulation of a fixed-term subordinate employment contract, on a full-time basis, prepared by the University. The contract is drawn up in written form and is signed by the Rector or her delegates and by the contract holder.

The research contract is stipulated for the exclusive purpose of carrying out the research activity indicated in the Table 1 of this selection call.

The contract contains the specific functions, rights and duties related to the position assumed and the remuneration due. Regarding tax, welfare and social security treatment, reference is made to the provisions for employment income from subordinate work regulations.

Within six months from the approval of the selection proceedings, in case of renunciation or resignation of the winner within the same research project, compatibly with the timing and methods established by Ministerial Decree 47/2025, the Structure that requested the selection may stipulate a research contract with a candidate positively evaluated in the same selection following the descending order of the final score, provided that this score is above the threshold limit indicated in the call.

The research contract does not give right to access to other positions.

The contract holder who is a non-EU citizen must possess a valid residence permit for work purposes in Italy in order to be employed

Art. 9 – Rights and duties

The contract holder is required to personally carry out the research activity object of the contract under the direction of the Director of the Structure and the Principal Investigator and will be subject to a specific technical- scientific report to be submitted annually for approval by the Structure.

The work performance of the contract holder is articulated in relation to the organizational aspects and functional needs of the research itself. The Principal Investigator can identify particular methods of carrying out the service.

For matters not expressly provided for in this article, reference is made to Article 14 of the Regulations for the awarding of research contracts pursuant to Article 22 of Law 240/2010.

Art. 10 - Confidentiality and intellectual property

Any potential invention, eligible for patenting, created by the research contract holder in the performance of their duties, is regulated in accordance with the current legislation on the matter, the specific University Regulations, and the clauses of the individual contract.

Art. 11 - Economic treatment

For the duration of the relationship, research contract holders are entitled to an annual gross all-inclusive economic treatment in accordance with Article 22 of Law 240/2010.

The recognized economic treatment is indicated in table 1.

The annual gross remuneration is not subject to indexation or revaluation.

Art. 12 – Safeguard provisions

For matters not specified in this call, reference is made to Article 53 of Legislative Decree 165/2001, to the rules contained in the current Regulations for the awarding of research contracts pursuant to Article 22 of Law 240/2010 of the University of Padua.

The Department of Physics and Astronomy reserves the right to verify the truthfulness of substitute declarations of certifications or notarial deeds made by candidates pursuant to Presidential Decree 445/2000, at every stage of the procedure. If the above-mentioned check reveals the untruthfulness of the content of the declarations, the declarant forfeits any benefits resulting from the provision issued on the basis of the untruthful declaration, without prejudice to the provisions of Article 76 of Presidential Decree 445/2000, regarding the penalties provided for by the penal code and special laws on the matter.

The persons responsible for the procedure is the Department Manager, Marco Agnello.

Art. 13 - Processing of personal data

The processing of personal data provided by candidates takes place in compliance with the provisions of EU Regulation 27.04.2016 n. 679 (General Data Protection Regulation - GDPR)

The complete information on the processing of the candidate data is available at the following link <http://www.unipd.it/privacy>.

The English version of this selection notice has the sole purpose of enabling candidates to understand the content thereof; only the Italian version of the selection notice is legally binding.

Padua, 26/09/2025

The Head of the Department
Prof. Flavio Seno