

SELECTION ANNOUNCEMENT No. 2021S51

BY EXAMINATIONS TO RECRUIT NO. 1 LEVEL II RESEARCH TECHNOLOGIST ON A FULL-TIME FIXED-TERM CONTRACT FOR 18 MONTHS (FINANCIAL POSITION D3) PURSUANT TO ART. 24BIS OF LAW NO. 240 OF 30.12.2010, AND TO THE NATIONAL COLLECTIVE BARGAINING AGREEMENT OF 19.04.2018, AT THE DEPARTMENT OF PHYSICS AND ASTRONOMY.

By implementing Art. 24bis of Law no. 240 of 30.12.2010 and the National Collective Bargaining Agreement of 19.04.2018, the University of Padova plans to recruit Level II research technologist by examinations on a full-time fixed-term contract, for 18 months (financial position D3) at the Department of Physics and Astronomy.

The main research and technological innovation goals of the project are:

the technologist will be involved in studying and improving new tagged neutron inspection systems for non-intrusive inspections as part of the ENTRANCE (H2020) project which started in October 2020.

Under the supervision of the local scientific coordinator the technologist will be involved in Monte Carlo simulations to study the new geometry of the radiological screen around the neutron generator. He will also deal with the definition of the new mechanics of the labeled neutron system, for its implementation and for its integration in field tests (ports of Bulgaria and Croatia) and he should be available to move to Europe for the tests.

The technologist will participate in the experimental tests and specific data analysis.

The aforementioned activities require the following **professional skills, knowledge and competences**:

- specific skills: labeled neutron inspection technology, both hardware and software
- software skills:
 - MonteCarlo codes: Geant4 and MCNP with particular experience with neutron and gamma transport
 - C ++, Python
 - Applications: Root
 - Spectral analysis for the identification of illicit materials and SNM
- technical skills:
 - scintillation detectors: design, construction and characterization
 - characterization and use of different readouts such as PMT and SiPM
 - knowledge of neutron generators: their use, characterization of the neutron beam, coincidences with the associated particle, screening and mapping of the dose field.
 - nuclear electronics skills: cards for SiPM, VD, digitizers and also control electronics for alarms and controls between X-ray and neutron systems.
- ability to work in a multidisciplinary team
- English language (B2 level)
- availability to travel to the countries of the European Community that will be the site of the tests.

Admission requirements

Candidates must have the following requirements by the selection announcement deadline:

- academic qualifications:
 - a first-cycle degree (Laurea Triennale) (ex Ministerial Decree DM 270/04) Laurea ex D.M. n. 270/2004, in class L-30 Physics

or a first-cycle degree (Laurea Triennale) (ex Ministerial Decree 509/99) recognised as the equivalent by Interministerial Decree 9.7.2009, in class 25 Physics

or an Italian University Diploma (ex Law 341/1990) recognised as the equivalent by Interministerial Decree DI 11.11.2011: Metodologie fisiche, Ottica tecnica

- a second-cycle degree (*Laurea Magistrale*) (ex DM 270/04) in class LM-17 Physics, LM-58 Universe Sciences;
or a second-cycle degree (*Laurea Specialistica*) (ex DM 509/99) recognised as the equivalent by Interministerial Decree DI 9.7.2009 in class 20/S Physics, 66/S Universe sciences;
or a degree (*Diploma di Laurea V.O.*) (prior to DM 509/99) recognised as the equivalent by Interministerial Decree DI 9.7.2009 in Astronomia, Fisica.

A degree (*Diploma di Laurea*) (prior to DM 509/99) in Fisica must be recognised as the equivalent of an LM-17 Physics or LM-58 Universe Sciences second-cycle degree (*Laurea Magistrale*) by the awarding university.

Candidates **holding a foreign degree** may take part in the selection only after completing a degree-equivalency process pursuant to Art. 38, paragraph 3 of Legislative Decree DL 165/2001. Candidates are conditionally admitted to the selection procedure if the equivalency process is underway, but no final decision has been reached. They must have had their degree recognised as the equivalent of an Italian degree by the time they are recruited.

The degree-equivalency process must be started before the selection-announcement deadline, otherwise the candidate will be excluded from the selection procedure. Candidates must inform the procedure manager that they have applied for degree equivalency.

The degree-equivalency application form is available at:

<http://www.funzionepubblica.gov.it/strumenti-e-controlli/modulistica>

- specific professional qualification pertinent to the research:
 - **at least two years of professional experience relevant to the activities to be carried out**
- italian citizenship (Italians who are not citizens of the Republic of Italy have the same rights as Italian nationals), or citizenship of an EU Member State. Following implementation of Art. 7 of Law 97/2013, the following may also apply for the selection procedure: family of citizens from an EU Member State who do not have citizenship of an EU Member State, but do have the right of residence, or the permanent right of residence; and third-country nationals with a long-term EU permit of stay, with refugee status, or with subsidiary protection status;
- candidates with full political rights;
- candidates who are physically suitable for the position;
- candidates who have completed their military service.

Non-Italian nationals are required to:

- have full civil and political rights in their country of origin;
- fulfil the same requirements as Italian nationals, but do not need Italian citizenship;
- have a good knowledge of Italian.

Application form

The application form and appendices for this selection announcement **must be submitted online** with the Pica platform at: <https://pica.cineca.it/unipd/tipologia/pta>.

To apply online, candidates must have a valid email address so that they can register with the system. They must also provide all of the information needed to complete the application and attach the required documents in electronic form.

The system allows the application to be saved in draft form until the submission deadline. The online application procedure and submission must be completed by **2 pm on 15th October 2021, when the selection announcement closes**.

The system will certify the date that the online application form is submitted by emailing candidates an automatic receipt. Once the submission deadline has expired, the system will shut down access and applications can no longer be sent.

If necessary, a submitted application form can be withdrawn and another one submitted **before the application deadline (2 pm on 15th October 2021)**.

Each application will be given an identification number which must be included in any correspondence, along with the selection announcement code stated in the online procedure. Candidates must complete each and every part of the application form in accordance with the online instructions. The application is to be completed as follows:

- with a digital signature using a smart card, USB token or remote signature that enables the user to sign documents with signature software. Alternatively, a web portal may be used to provide a certified remote signature. Candidates with a smart card or USB token for digital signing can check for compatibility with the server's digital-signing system. If compatible, the user may sign the application on the server;
- candidates who do not have compatible digital-signing devices and users of remote digital signatures without web portal access for signing documents will have to save a system-generated pdf file on their computer. After which, they must not edit the file and e-sign it in CADES format. A file with a p7m extension will be generated and uploaded into the system. If the file is edited before the e-signature is applied, the system will be unable to verify whether the content of this document matches the original. If this occurs, the application will be rejected.
- If none of the aforementioned options are available:
print and hand-sign the application form, then upload **a scanned copy along with a scanned form of identification. Candidates not providing identification may be excluded from the selection procedure.**

The system may be momentarily offline for technical reasons.

Non-Italian candidates are to submit their application form as per the methods and deadlines stated in this application procedure.

Documents must be in a static, non-editable format and must not contain executable codes or macro-instructions. PDF is the preferred format. Documents must not exceed 30 MB.

The University of Padova is not liable for undelivered correspondence should candidates not provide a complete address, or when late or no notification is provided should the address on the application form change. Nor is it liable for problems caused by third parties, misfortune or force majeure.

For additional information or queries about the application procedure, please contact the Technical and Administrative Personnel office on +39 049 827 3159 - 3494 between 9 am and 1 pm.

Contact the following email address for technical problems only: unipadova@cineca.it.

Candidates must state under their own responsibility their surname and first name, their date and place of birth, their permanent address, any telephone number, any criminal convictions and pending criminal procedures, that they enjoy full political rights, their military-service status, a detailed statement they meet the aforementioned requirements, and the exact contact address for any correspondence.

Candidates are admitted to the selection procedure conditionally. Should any of the requirements not be met, candidates may be excluded from the selection procedure at any moment, even after they have taken the tests.

Selection

Candidates are selected by examinations.

A total of 60 points are awarded for examinations. They are divided as follows:

- 30 points for written test;
- 30 points for oral examination.

Examinations

Examinations will comprise a written test and an oral examination.

- **The written test** will focus on the following topics:
 - Montecarlo codes, detectors, generators, tagged neutron inspection technology, readout electronics and SiPM
- **The oral examination** will focus on the following topics:
 - Montecarlo codes, detectors, generators, tagged neutron inspection technology, readout electronics and SiPM

The knowledge of the English language (European Framework of Reference for Languages: level B2) will be tested during the oral examination.

Examinations (calendar, locations and process of selection) will be published on the University of Padova's Official Register (<https://protocollo.unipd.it/albo/viewer>) and on the University of Padova website (<https://www.unipd.it/selezione-2021S51>) **starting from 2 pm on October the 5th 2021.**

Publication of this calendar is considered to be notification.

Approved candidates must come on the date and at the time that will be communicated. No further notice will be given.

Candidates must show a valid ID document before being admitted to the examinations.

Any candidates not coming to the examinations will be deemed to have waived their place, regardless of the reason.

The examinations pass mark is 21/30 (7/10).

The list of candidates admitted to oral examinations will be published with their scores for the written test on the noticeboard of the Department of Physics and Astronomy, Via Marzolo, 8 - 35131 Padova, and posted on the University of Padova website at <https://www.unipd.it/selezione-2021S51> .

All Commission sessions during the oral examination are public. At the end of each oral examination, the Commission will draw up a list of the candidates assessed with a score for those who have passed the examination. This list will be posted on the noticeboard of the Department of Physics and Astronomy, Via Marzolo, 8 - 35131 Padova, and on the University of Padova website at <https://www.unipd.it/selezione-2021S51> .

Candidates can access the list with a personal password provided to all selection participants.

Overall ranking

The final score is calculated by adding up the score for the written test and the score for the oral examination.

The overall ranking will be published in the University of Padova's Official Register. Any appeals may be filed the day after the ranking is published.

The overall ranking is effective immediately.

The winner is entitled to the gross annual salary for the D category, financial position D3, as per the University section of the current National Collective Bargaining Agreement (CCNL), as well as to an additional quota as specified in the "University Regulations for Recruiting and Regulating 'Fixed-term Research Technologists', in accordance with Art. 24-*bis* of Law no. 240 of 30 December 2010." The salary will be paid into a bank or post-office account only.

The administration may decide not to draw up the agreement should there cease to be the need, opportunity or resources to proceed.

The ranking is valid for three years from its publication date and may be used to recruit additional fixed-term technologists with the same profile and level. All other aspects of employment will depend on the University's specific needs.

Pursuant to Decree no. 111 of 6th August 2021, starting from 1st September 2021, the winner who will begin working at any university premises is required to have and show the COVID-19 vaccination certificate, i.e. "Green pass", when requested.

This requirement does not apply to those who are exempted from the vaccination campaign as per suitable medical certification issued according to the criteria defined by the Ministry of Health. However, they will need to show this certificate when asked.

It is understood that these provisions remain in place until the state of emergency comes to an end, namely 31st December 2021, provided no further extensions are granted through ministerial provisions.

Anything not stated above is covered by the "University Regulations for Recruiting and Regulating 'Fixed-term Research Technologists', in accordance with Art. 24-bis of Law no. 240 of 30 December 2010", available at: <http://www.unipd.it> (see "Statuto e Regolamenti").

Pursuant to Law no. 241 of 7.8.1990, the selection-procedure manager is Maria Zanato – *Ufficio personale tecnico amministrativo*, Riviera Tito Livio, 6, Padova, Italy.

The Technical-Administrative Staff office (*Ufficio personale tecnico amministrativo*) is open to the public at the following times:

From Monday to Friday from 10 am to 1 pm and on Tuesday and Thursday from 3 pm to 4.30 pm.

NB: This selection announcement has been translated into English for publication purposes only. The Italian version is valid for all legal purposes and for the resolution of any disputes.

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e-mail: reclutamento.pta@unipd.it

Padua

The Director-General

Alberto Scuttari

digital signature (ex Legislative Decree 82/2005)

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| Office Manager Maria Zanato | Department Manager Tommaso Meacci |
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