



## SELECTION ANNOUNCEMENT NO. 2023T49

**BY EXAMINATIONS, TO RECRUIT NO. 1 LEVEL I RESEARCH TECHNOLOGIST (FINANCIAL POSITION "EP1") ON A FULL-TIME FIXED-TERM CONTRACT, FOR NO. 36 MONTHS, PURSUANT TO ART. 24-BIS OF LAW NO. 240 OF 30.12.2010, AND TO THE NATIONAL COLLECTIVE BARGAINING AGREEMENT OF 19.04.2018, AT THE *CENTRO DI ATENEO DI STUDI E ATTIVITÀ SPAZIALI "GIUSEPPE COLOMBO" - CISAS.***

By implementing Art. 24-bis of Law no. 240 of 30.12.2010 and the National Collective Bargaining Agreement of 19.04.2018, the University of Padua plans to recruit Level I research technologist (financial position "EP1") by examinations on a full-time fixed-term contract, for no. 36 months, at the *Centro di Ateneo di Studi e Attività Spaziali "Giuseppe Colombo" - CISAS*, to provide technical and administrative support under the Project "*Development of Scientific Instrumentation and Robotic Systems for Space Exploration.*"

Specifically, the technologist will be called upon to carry out the following **activities**:

- design, development and testing of scientific instrumentation and robotic systems for space applications
- development of embedded software for avionics applications, for ground support equipment (GSE) and for hardware-in-the-loop test systems
- definition and support for the execution of electrical, functional, vibration and thermo-vacuum test campaigns on space systems and subsystems
- support to in-flight operations of space instruments: planning and optimization of operations, preparation of TC sequences and TM analysis
- development of dynamic models of space systems such as satellites, descent modules and on-board sensors, simulation of complex systems
- development and validation of control and sensor-fusion algorithms
- development of algorithms and codes for scientific analysis of mission data, interaction with scientific groups.

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

- knowledge, including through experience of:
  - defining functional requirements for payloads, coordination of hardware and software development activities, integration and testing activities (electrical, functional, vibration, thermo-vacuum,) of space systems and subsystems, knowledge of ECSS regulations
  - ESA standards and procedures for payload control
  - experience in pre-launch testing, commissioning, checkout, development of Flight Operation Procedures and software for planning and commanding
  - developing and testing embedded, real-time and mission-critical software for space/aerospace systems according to ECSS standards; knowledge of C/C++/Python languages and Linux/RTEMS/VxWorks operating systems
- ability to develop dynamic models of complex systems and sensors, simulator development
- excellent in-depth knowledge of numerical methods for filtering and batch/real-time statistical analysis of data

- knowledge of the English language - "B2" level.
- Ability to interact with the scientific team and problem solving skills.

### Admission requirements

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

- **academic qualifications:**

- a second-cycle degree (*Laurea Magistrale*) (ex D.M. 270/2004) in class: LM-20 - Aerospace and astronautic engineering, LM-32 - Computer systems engineering, LM-33 - Mechanical engineering or a second-cycle degree (*Laurea Specialistica*) (ex D.M. 509/1999) recognised as the equivalent by D.I. 09.07.2009 in class: 25/S - Aerospace and aeronautical engineering, 35/S - Computer engineering, 36/S - Mechanical engineering or a degree (*Diploma di Laurea V.O.*) (prior to D.M. 509/1999) recognised as the equivalent by D.I. 09.07.2009 in: *Ingegneria aerospaziale, Ingegneria industriale, Ingegneria informatica, Ingegneria meccanica*.

It is specified that:

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.**

Pursuant to decreto-legge (decree-law) no. 228 of 30 December 2021, **the Public Function Department will conclude the recognition procedure only with regard to the successful candidates, who have the obligation, under penalty of forfeiture, to notify the Italian Ministry for Universities and Research (MUR) of the publication of the ranking list within 15 days.**

The degree-equivalency application form is available at:

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

- specific professional and/or cultural qualification pertinent to the research:
  - **possession of a Ph.D. (ERC PE8 DOMAIN) together with work experience, at least two years, in the space field and, in particular, in planetary exploration. The aforementioned work experience must be understood, either as participation in projects involving the design and implementation of space instrumentation or as participation in projects in the terrestrial environment that are aimed at studying planetary analogs (in the terrestrial environment and also as prototype instrumentation).**

It is specified that:

Candidates **holding a foreign PhD** 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.**

Pursuant to decreto-legge (decree-law) no. 228 of 30 December 2021, **the Public Function Department will conclude the recognition procedure only with regard to the successful candidates, who have the obligation, under penalty of forfeiture, to notify the Italian Ministry for Universities and Research (MUR) of the publication of the ranking list within 15 days.**

The degree-equivalency application form is available at:

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

- 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 specific position.

#### **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.

Those who have been excluded from the exercise of active electoral rights, as well as those who have been dismissed or excluded from employment with a public administration due to persistent inadequate performance, pursuant to Article 2, paragraph 7 of D.P.R. (Presidential Decree) no. 487/1994, in accordance with sectoral regulations, or removed for the same reasons or for disciplinary reasons pursuant to legal or contractual regulations in force, or declared disqualified for having obtained the appointment or employment by producing false documents or documents affected by irremediable nullity, as well as those who have been convicted of offences constituting an impediment to employment in a public administration, are not eligible for selection.

#### **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 of the 15<sup>th</sup> day, 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 (2:00 p.m. of the fifteenth day).**

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. In case of access through SPID, no signature will be required when submitting the application. In case of accessing the system by another mode, 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 Padua 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.

For technical problems only, contact the following link at home page PICA CINECA [supporto](#).

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, a detailed statement they meet the aforementioned requirements, and the exact contact address for any correspondence.

Pursuant to Article 16 of Legge (Law) no. 68/1999 and Article 20 of Legge (Law) no. 104/1992, applicants must make an explicit request concerning the assistance they require and the possible need for additional time to complete the tests. To this end, candidates must enclose with their application to participate in the selection procedure a suitable certification issued by the appropriate Public Medical Board, to enable the Administration to prepare in good time the means and tools needed to ensure regular participation in the selection procedure.

Pursuant to Legge (Law) no. 170/2010, as amended and supplemented, candidates with specific learning disorders (SLD) may ask the Committee to have the written test replaced by an interview, or to make use of any technical aids to compensate for reading, writing and calculation difficulties, in order to take the aforementioned tests, as well as to make use of additional time not exceeding 50% of the time allocated for the test.

The request must be prepared following the instructions available in the online application procedure.

The adoption of the above measures will be determined at the sole discretion of the Selection Committee, based on the documentation provided by the candidate in the application.

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 the 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:
  - payload for space applications, design, development and qualification
  - in-flight operations of scientific instruments
  - space vehicle entry, descent and landing systems modelling, simulation, and methodologies for the reconstruction of trajectory and atmospheric profiles from onboard data.
- **The oral examination** will focus on the following topics:
  - hardware and software development, of integration and test activities (electrical, functional, vibration, thermo-vacuum,) of space systems and subsystems
  - development and testing of embedded, real-time and mission-critical software for space/aerospace systems.

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

Examinations will take place at the following times and venues. No further notice will be given:

- **the written test:** on **31<sup>th</sup> October 2023, at 9:30 a.m.**, at the “Aula Didattica” of Palazzo Storione, Galleria Storione n. 13, Padova
- **the oral examination:** on **6<sup>th</sup> November 2023, at 2:30 p.m.**, at “Aula Seminari” of Centro di Ateneo di Studi e Attività Spaziali “Giuseppe Colombo” - CISAS, Via Venezia n. 15, Padova.

Publication of this calendar is considered to be notification.

Candidates who are unable to comply with the aforementioned schedule due to pregnancy or breastfeeding will be entitled to participate in the examinations, also by holding asynchronous tests and, in any case, appropriate spaces will be made available to allow for breastfeeding.

Wherever possible, the candidates concerned will promptly notify the Director of the Student Services Office, so that the Administration can plan in good time how and when to ensure regular participation in the examinations.

Approved candidates must come on the date and at the time 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 Centro di Ateneo di Studi e Attività Spaziali “Giuseppe Colombo” - CISAS, Via Venezia n. 15, Padua, and posted on the University of Padua website at <https://www.unipd.it/selezione-2023T49>.

All Commission sessions during the oral examination are public. At the end of each daily examination session, 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 Centro di Ateneo di Studi e Attività Spaziali “Giuseppe Colombo” - CISAS, Via Venezia n. 15, Padova, and on the University of Padova website at <https://www.unipd.it/selezione-2023T49>.

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 categories of citizens who have a preference, merit being equal, are:

- a) recipients of military and civil valour medals, if they have left the service;
- b) amputees and invalids for service in the public and private sectors;
- c) orphans of the fallen and children of the mutilated, disabled and permanently incapacitated for work due to service in the public and private sectors, including the children of health professionals, social workers and

socio-medical workers who died as a result of the Cov-2 Sars infection contracted when exercising their activity;

- d) those who have performed meritorious service in any capacity whatsoever for not less than one year in the administration holding the competition, where they have no other preferential qualification by reason of their service;
- e) higher number of dependent children;
- f) invalids and civilian amputees who do not fall under (b);
- g) military volunteers of the Armed Forces who were not dishonourably discharged at the end of the regular or extended period of military service
- h) athletes who have sporting employment relationships with military sports groups and the civil corps of the State;
- i) people who have successfully completed the further improvement period at the process office pursuant to Article 50, paragraph 1-quater, of decreto-legge (Decree-Law) no. 90 of 24 June 2014, converted, with amendments, by legge (Law) no. 114 of 11 August 2014;
- l) people who have successfully completed the traineeship at the judicial offices pursuant to Article 37, paragraph 11, of decreto-legge (Decree-Law) no. 98 of 6 July 2011, converted, with amendments, by legge (Law) no. 111 of 15 July 2011, while not being part of the process office, pursuant to Article 50, paragraph 1-quinques, of decreto-legge (Decree-Law) no. 90 of 24 June 2014, converted, with amendments, by legge (Law) no. 114 of 11 August 2014;
- m) people who have successfully completed the internship at judicial offices pursuant to Article 73, paragraph 14, of decreto-legge (Decree-Law) no. 69 of 21 June 2013, converted, with amendments, by legge (Law) no. 98 of 9 August 2013;
- n) people who hold or have held collaboration assignments given by ANPAL Servizi S.p.A., in implementation of the provisions of Article 12, paragraph 3, of decreto-legge (Decree-Law) no. 4 of 28 January 2019, converted, with amendments, by legge (Law) no. 26 of 28 March 2019;
- o) minors.

Pursuant to Article 3, paragraph 4, of DPR (Presidential Decree) no. 487/1994, as amended by DPR (Presidential Decree) no. 82/2023, which states that notices of competition shall take into account the gender representativeness referred to in Article 6, as at 31.12.2022, the percentage of representativeness of the male gender is 42.9%, while that of the female gender is 57.1%, and therefore the gender differential is 14.2%, i.e. not more than 30%.

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

Pursuant to Article 35, paragraph 5-ter, of D.Lgs. (Legislative Decree) no. 165/2001, as amended by Article 1-bis, letter a, point no. 2 of D.L. (Decree-Law) no. 44/2023, candidates placed in the final ranking list within 20% of the places following the last of those advertised are considered suitable.

The overall ranking is effective immediately.

The winner is entitled to the gross annual salary for the "EP" category, financial position "EP1", as per the University section of the current National Collective Bargaining Agreement (C.C.N.L. *Comparto "Istruzione e*

*Ricerca*”), 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.

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<sup>th</sup> August 1990, the selection-procedure manager is Cristian Poletti - *Ufficio personale tecnico amministrativo*, Riviera Tito Livio, 6, Padua, 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.

Tel. 049 827 3155 - 3159 - 3494

e-mail: [reclutamento.pta@unipd.it](mailto:reclutamento.pta@unipd.it)

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.

Padua

The Director-General  
Alberto Scuttari  
*digital signature (ex Legislative Decree 82/2005)*

Selection-procedure Manager	Department Manager
Cristian Poletti	Tommaso Meacci