



UNIVERSITÀ
DI PISA



PhD INDUSTRIAL PROGRAMME IN HIGH PERFORMANCE SCIENTIFIC COMPUTING
ACADEMIC YEAR 2026/2027 (42ND CYCLE)
Coordinator professor Luca Heltai

Administrative headquarters: Department of Mathematics
(<https://www.dm.unipi.it/>)

SELECTION PROCEDURES

Total no. of positions with grant 2

HPSC01_B	Type of selection procedure Subject-specific PhD grants with separate ranking lists: no. of ranking lists 2		
	No. of available positions with grant 2 of which		
	No.	Funding organisation / Partner institution	Subject / Research project (if any)
	Positions with grant		
	1	National Institute of Geophysics and Volcanology (INGV)	Convergence of High-Performance Scientific Computing (HPSC) and Scientific Artificial Intelligence (SciAI) in Solid Earth Sciences (INGV)
	1	Eni S.p.A	Exploiting Tensor Processing Units and/or Reduced-Precision Arithmetic Available in Next-Generation AI GPUs for the Numerical Solution of the Wave Equation
NB: For the above-mentioned selection procedures, candidates who, on the closing date of the Call for applications, are employed under a subordinate employment contract with a public body, for a duration at least equal to that of the PhD programme, may choose whether to: <u>participate in the selection as a public employee, thereby automatically waiving the doctoral grant;</u> <u>participate in the selection for a position with grant, without declaring their status as a public employee at the application stage.</u> Applicants who are public employees, in the case referred to under point 1, must declare their status during the above-mentioned online application procedure by selecting the corresponding option in the dedicated field available on the “Alice” platform https://www.studenti.unipi.it. Such candidates must also submit a self-declaration certifying their employment with the relevant public body, in accordance with Annex 1 to the Call for applications. Any applicant who, when submitting the online application, declares that they wish to participate as a public employee shall automatically waive the grant, and the provisions governing the ranking list set out in Article 5 of the Call shall apply. This choice is irrevocable and <u>may not be changed at a later stage.</u>			

The information below applies to all the selection procedures indicated above

ADMISSION REQUIREMENTS (Article 3 of the Call for applications)

Master’s Degree (LM) /Second Degree (Specialistica-LS) (or Old system University Degree): **ALL**
or

equivalent academic qualification in accordance with *Ministerial Decree of 9 July 2009* **to be obtained by 31 October 2026. In the event that the degree has not yet been awarded by the deadline of the Call for applications, the candidate must attach a list of the examinations taken, including the corresponding marks.**

Important: In this regard, during the online application procedure for the selection, the candidate must attach a self-declaration concerning the degree already obtained, or to be obtained, drawn up in accordance with Presidential Decree no. 445/2000, as per Annex 2 to the Call for applications.

SELECTION METHODS AND CRITERIA (*Article 4 of the Call for applications*)

Curriculum vitae

The CV, duly signed and accompanied by a photocopy of a valid identity document, must be uploaded exclusively during the online application procedure for the selection, and must outline the candidate's educational background, as well as their professional and research experience. **Candidates are advised to submit any documentation deemed useful for the purposes of assessing the CV.**

The evaluation of applicants will be based on their academic curriculum, including university studies, scientific publications (if any), research experience, internships, and the assessment of a research proposal

Interview

The interview shall assess the candidate's knowledge, aptitude for research, willingness to undertake training pathways in Italy and abroad, and interest in further scientific study.

The interview is designed to assess the candidate's general knowledge and scientific background, including proficiency in the English language,

Videoconferencing YES **Interviews will only take position remotely**

Research Project:

to be assessed together with the CV and to be presented at the interview

The research project must be uploaded **during the online application procedure for registration.**

The research project, assessed together with the CV, is intended to highlight the candidate's ability to design a research proposal and to verify the consistency of its content with the PhD programme themes. The research project, which will be discussed during the interview, must be presented by the candidate in order to demonstrate its feasibility and sustainability.

The project submitted for the purposes of the selection does not constitute a constraint on future research activity and may be revised or redefined in agreement with the supervisors and the PhD Council.

The research proposal must be drafted in a clear and concise manner. It must not exceed **5,000 characters** (excluding the bibliography) or **2 pages** in length. It must include at least the following elements:

- background and scientific context of the research problem;
- research objectives;
- proposed methodology;
- expected results.

Candidates may include a brief bibliography. The bibliography is excluded from both the character limit and the maximum page limit.

	Minimum score	Maximum score
CV	24	40
Candidates who have obtained a score of at least 24 out of 40 points shall be admitted to the interview.		
Interview	36	60
Eligibility is achieved with a minimum score of 60 out of 100 points		

SCHEDULE OF THE TESTS

The tests may take place in the period **between 14 and 30 September 2026.**

The schedule of the tests, for each of the selections below, will be published **by 24 July 2026** at <https://www.unipi.it/bando-dottorato>, including the indication of the venue where they will be held.

RANKING LIST AND ENROLMENT

Article 5 of the Call for applications sets out:

- the procedures for drawing up the ranking list
- the date of publication of the ranking list
- the procedures and deadlines for enrolment
- the procedures and deadlines for subsequent admissions from the ranking list.

Important: Subsequent admissions from the ranking lists, after 6 October and until 31 December 2026, are permitted only for “open” grants (i.e. those without a specific research topic).

In the other selection procedures, as they involve subject-based grants, any unassigned positions at the end of the third round of admissions from the ranking list will be made available by means of a specific notice, to be issued by Rector’s Decree in November. Such notice will be reserved for eligible candidates suitably placed in the ranking lists of the selection procedures already completed and will be published at <https://www.unipi.it/didattica/corsi/dottorati/>.

With regard to the publication of the notice and the procedures for the reallocation of the grants, **no individual email communication will be sent to eligible candidates**, as all relevant information will be provided upon publication of the ranking lists.

INFORMATION ON THE TEACHING ACTIVITIES OF THE PROGRAMME

Educational project and objectives of the programme:

<https://www.unipi.it/didattica/corsi/dottorati/scienze-fisiche-chimiche-matematiche-e-biologiche/high-performance-scientific-computing/>

PhD programme website:

<https://www.dm.unipi.it/phd-hpsc/>

PhD programme regulations:

<https://www.dm.unipi.it/phd-hpsc/>