

PhD PROGRAMME IN SMART INDUSTRY
ACADEMIC YEAR 2026/2027 (42ND CYCLE)
in agreement with University of Firenze and with University of Siena

Coordinator professor *Enzo Pasquale Scilingo*

Administrative headquarters: Department of Information Engineering
(<https://www.unipi.it/dipartimento-di-ingegneria-dellinformazione-519999/>)

SELECTION PROCEDURES

Total no. of positions with grant 10

of which

No. of positions with grant 9

No. of positions reserved for holders of an employment contract 1

SMART01_B

Type of selection procedure

Single ranking list

No. of available positions with grant 9

of which

No.	Funding organisation / Partner institution	Subject / Research project (if any)
Positions with grant		
1	University of Firenze	
1	University of Siena	
2	Department of Information Engineering of the University of Pisa, Department of Excellence 2023/2027	Enabling ICT Technologies for Industry 5.0
1	Department of Civil and Industrial Engineering of the University of Pisa	Additive Manufacturing of complex components within BRIGHT Project - Building Route to an Innovative Generation of Hall Thrusters
2	Regione Toscana – with resources from the ESF Regional Programme 2021–2027 – in the framework of GiovaniSI (www.giovanisi.it), the project of Regione Toscana for youth autonomy, “Pegaso” doctoral grants (CUP I51J26000050006) - with the obligation to carry out a study and research stay abroad of at least 6 (six) months ;	
1	Regione Toscana – with resources from the ESF Regional Programme 2021–2027 – in the framework of GiovaniSI (www.giovanisi.it), the	Development and application of artificial intelligence-based tools for process and energy optimization

	project of Regione Toscana for youth autonomy, “Pegaso” doctoral grants (CUP I51J26000050006) - with the obligation to carry out a training/research experience in an application context, such as a company, a public research body, another (non-university) body/institution of at least 3 (three) months ; - with the obligation to carry out a study and research stay abroad of at least 6 (six) months ;	in paper production plants
1	Regione Toscana – with resources from the ESF Regional Programme 2021–2027 – in the framework of Giovani (www.giovanisi.it), the project of Regione Toscana for youth autonomy, “Pegaso” doctoral grants (CUP I51J26000050006) - with the obligation to carry out a training/research experience in an application context, such as a company, a public research body, another (non-university) body/institution of at least 3 (three) months ; - with the obligation to carry out a study and research stay abroad of at least 6 (six) months	Design of Advanced Sensors for Oil & Gas Environments: a Deep-Tech Approach to Predictive Monitoring, Safety and Sustainability in the Oil & Gas Industry
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: 1. <u>participate in the selection as a public employee, thereby automatically waiving the doctoral grant;</u> 2. <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>		
Type of selection procedure Ranking list reserved for employees of Orlando Pandolfi Studio (registered office in Carrara (Ms) P.zza Duomo 11) for the activation of an industrial-oriented PhD programme (agreement finalised on 2/04/2026)		
Positions reserved for candidates holding a formalised employment contract, of a duration at least equal to that of the programme, with public or private partner organisations affiliated with the University of Pisa (with continued payment of salary) – Article 3 of the Call for applications		
No.	Partner institution	Subject / Research project (if any)
1	Orlando Pandolfi Studio	Data-driven and visual analysis of industrial processes and spatial deformations based on multispectral data for Smart Industry

The information below applies to all the selection procedures indicated above

ADMISSION REQUIREMENTS (Article 3 of the Call for applications)

Second Degree (Specialistica-LS): to be obtained by 31 October 2026:

20/S (specialistiche in fisica)
23/S (specialistiche in informatica)
24/S (specialistiche in informatica per le discipline umanistiche)
25/S (specialistiche in ingegneria aerospaziale e astronautica)
26/S (specialistiche in ingegneria biomedica)
27/S (specialistiche in ingegneria chimica)
29/S (specialistiche in ingegneria dell'automazione)
30/S (specialistiche in ingegneria delle telecomunicazioni)
31/S (specialistiche in ingegneria elettrica)
32/S (specialistiche in ingegneria elettronica)
33/S (specialistiche in ingegneria energetica e nucleare)
34/S (specialistiche in ingegneria gestionale)
35/S (specialistiche in ingegneria informatica)
36/S (specialistiche in ingegneria meccanica)
37/S (specialistiche in ingegneria navale)
38/S (specialistiche in ingegneria per l'ambiente e il territorio)
45/S (specialistiche in matematica)
50/S (specialistiche in modellistica matematico-fisica per l'ingegneria)
61/S (specialistiche in scienza e ingegneria dei materiali)
74/S (specialistiche in scienze e gestione delle risorse rurali e forestali)
77/S (specialistiche in scienze e tecnologie agrarie)
79/S (specialistiche in scienze e tecnologie agrozootecniche)

- Master's Degree to be obtained by 31 October 2026:

LM-17 Fisica
LM-18 Informatica
LM-20 Ingegneria aerospaziale e astronautica
LM-21 Ingegneria biomedica
LM-22 Ingegneria chimica
LM-25 Ingegneria dell'automazione
LM-26 Ingegneria della sicurezza
LM-27 Ingegneria delle telecomunicazioni
LM-28 Ingegneria elettrica
LM-29 Ingegneria elettronica
LM-30 Ingegneria energetica e nucleare
LM-31 Ingegneria gestionale
LM-32 Ingegneria informatica
LM-33 Ingegneria meccanica
LM-34 Ingegneria navale
LM-35 Ingegneria per l'ambiente e il territorio
LM-40 Matematica
LM-44 Modellistica matematico-fisica per l'ingegneria
LM-53 Scienza e ingegneria dei materiali
LM-66 Sicurezza informatica
LM-69 Scienze e tecnologie agrarie
LM-73 Scienze e tecnologie forestali ed ambientali

- Master's degree to be obtained by 31 October 2026: in Ingegneria Industriale e dell'Informazione, oppure Matematica, Fisica, Informatica o Scienze Agrarie e Forestali

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.

Further requirements

In addition to the above-mentioned requirements, the beneficiaries of **“Pegaso” doctoral grants** – a.y. 2026/27, funded by Regione Toscana with resources from the ESF Regional Programme 2021–2027 within the framework of GiovaniSI (www.giovanisi.it – the Regione Toscana project for youth autonomy), must also:

- have reached no more than 35 years of age at the time of application to the PhD selection (up to and including the day of their 35th birthday);
- demonstrate an adequate knowledge of the English language (at least equivalent to level B2); the level of proficiency will be assessed by the Selection Committee during the selection procedure; moreover, the candidate must submit, prior to enrolment and acceptance of the Pegaso grant, a certificate attesting knowledge of English at a minimum level of B2;
- declare their willingness to undertake periods of study and research abroad for at least 6 months (at least 12 months for recipients of international grants) and acknowledge that failure to carry out the period abroad may result in the revocation by the Regione of the funding for the entire grant; this declaration does not apply to beneficiaries of subject-related grants for which no period abroad was envisaged at the project submission stage;
- (only for subject-based grant recipients) formally declare their willingness to undertake a period of at least 3 months of training/research in an applied setting – such as a company, a public research body, or another (non-university) institution/organisation – and acknowledge that failure to carry out such an experience may result in the revocation by the Regione of the funding for the entire grant;
- declare their willingness to attend courses aimed at developing soft skills, knowledge of the world of work and research, and methodologies for data collection, analysis and management (Data Science), which will be offered by the implementing body over the three-year PhD programme.

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.**

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.

Applicants must also demonstrate an adequate knowledge of the English language (at least equivalent to level B2).

Videoconferencing ☒

Candidates wishing to take the interview by videoconference must upload the VIDEO Annex to the Call for applications **exclusively during the online application procedure for the selection**. Requests received after the deadline of the Call for applications (**10 August 2026**) shall be submitted to the Selection Committee, which will assess whether to accept them in light of the technical time required to organise the interview by videoconference.

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**.

Together with the curriculum vitae, it will be assessed with reference to the candidate’s project-design skills and to the consistency and relevance of its contents with respect to the topics covered by the PhD programme. Its presentation during the interview will instead be aimed at highlighting its feasibility and demonstrating its practical viability.

The research project, with a maximum length of three pages plus references, must be written in English and must include: the objective of the research project; the methodology envisaged to achieve the objective; the expected impact.

	Minimum score	Maximum score
CV	42	60
Candidates who have obtained a score of at least 42 out of 60 points shall be admitted to the interview.		
Interview	28	40
Eligibility is achieved with a minimum score of 70 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-ingegneristiche-ed-informatiche/smart-industry/>

PhD programme website:

<https://smartindustry.unipi.it/>

PhD programme regulations:

<https://www.unipi.it/wp-content/uploads/regsmart.pdf>

“PEGASO” GRANTS – EUROPEAN UNION AND REGIONAL PROVISIONS

Article 15 of the Regional Notice provides that the public notices issued by the implementing body for admission to the PhD programmes funded under the regional “Pegaso” scheme must include the logos of the funding bodies (EU, State, Region – Giovanisi) and the ESF Regional Programme 2021–2027 logo, as well as a reference to the relevant EU, national and regional legislation, as set out below:

European Union and regional provisions:

- Council Regulation (EU, Euratom) no. 2093/2020 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027;
- Having regard to Regulation (EU) no. 2021/1057 of the European Parliament and of the Council of 24 June 2021 establishing the European Social Fund Plus (ESF+) and repealing Regulation (EU) no. 1296/2013;
- Having regard to Regulation (EU) no. 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund, the European Maritime, Fisheries and Aquaculture Fund, and the financial rules for those funds and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy, and in particular Article 23(4) thereof;
- Having regard to Regulation (EU) no. 679/2016 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation);
- Having regard to the Commission Implementing Decision C(2022)4787 final of 15 July 2022 approving the Partnership Agreement with the Italian Republic CCI 2021IT16FFPA001, relating to the 2021–2027 programming cycle;
- Recalling Commission Decision C(2022) no. 6089 of 19 August 2022 approving the regional programme “PR Toscana ESF+ 2021–2027” for support from the European Social Fund Plus under the “Investment for jobs and growth” goal for the Tuscany Region in Italy;
- Recalling Regional Government Decision (DGR) no. 1016 of 12 September 2022, “Acknowledgement of Commission Decision C(2022) no. 6089 of 19 August 2022 approving the regional programme ‘PR Toscana FSE+ 2021–2027’ for support from the European Social Fund Plus under the ‘Investment for jobs and growth’ goal for the Tuscany Region in Italy”;
- Recalling DGR 122/2023, as subsequently amended and supplemented, whereby the Implementation Measure for the ESF+ Regional Programme 2021–2027 was approved;
- Having regard to the selection criteria for operations to be admitted to co-financing under the European Social Fund Plus in the 2021–2027 programming period of Regione Toscana, approved by the Programme Monitoring Committee on 18 November 2022;
- Having regard to Decision no. 2 of 19 June 2023, as subsequently amended and supplemented, approving the Management and Control System for ESF+ Regional Programme 2021–2027;
- Having regard to Regional Government Resolution no. 610 of 5 June 2023 which, pursuant to Article 17(1) of Regional Law 32/2002, as subsequently amended and supplemented, approves “Regulation (EU) 2021/1060 – ESF+ Regional Programme 2021–2027. Manual for Beneficiaries – Arrangements for the management of operations subsidised under the ESF+ Regional Programme 2021–2027”;
- Having regard to the Regional Development Programme 2021–2025, adopted by Regional Government Resolution no. 1392 of 07/12/2022;
- Having regard to Article 64 of Regulation (EU) 2021/1060 and Article 16 of Regulation (EU) 2021/1057 concerning the eligibility of expenditure;
- Having regard to Presidential Decree no. 22 of 5/02/2018 containing the “Regulation on criteria for the eligibility of expenditure for programmes co-financed by the European Structural and Investment Funds (ESIF) for the 2014–2020 programming period”, as subsequently amended and supplemented, to which reference is made pending the adoption of the new national legislation on the eligibility of expenditure for the 2021–2027 period;
- Having regard to Regional Law no. 32 of 26 July 2002, “Consolidated text of Regione Toscana legislation on education, instruction, guidance, vocational training and employment”, as subsequently amended and supplemented, and the Decree of the President of the Regional Government no. 47/R of 8 August 2003, as subsequently amended and supplemented, on the Implementing Regulation of Regional Law no. 32 of 26 July 2002;
- Having regard to Decree-Law no. 34 of 30 April 2019 “Urgent measures for economic growth and for the resolution of specific crisis situations”, converted into Law no. 58/2019, which provides, for the entities referred to in Article 35, specific obligations to publish information relating to grants, subsidies, benefits, contributions or aid on their websites or equivalent digital portals and in the notes to the financial statements and any consolidated financial statements;
- Having regard to DGR 1321/2022 “Regional Strategy for smart specialisation (S3) for the EU programming period 2021–2027”;
- Having regard to DGR 1510/2023 “Smart specialisation strategy 2021–2027. Work Plan 2024–25”;
- Taking note that, within the framework of the Toscana ESF+ Regional Programme 2021–2027 and the related Detailed Implementation Plan (PAD) approved by DGR 122/2023, Axis 2 includes activity 2.f.2, “Undergraduate and postgraduate degree courses delivered in network form”;
- Recalling Regional Government Resolution no. 74 of 27 January 2025 approving the essential elements of the notice “ESF Regional Programme 2021–2027 – PhD programmes delivered in network form, Cycle XLI – Pegaso Grants 2025”, allocating Euro 6,000,000.00 for its implementation;
- Taking note that the contribution is subject to expenditure monitoring and reporting, to be carried out in accordance with the procedures and deadlines laid down by the ESF Regional Programme 2021–2027;
- Taking note of the amount allocated to Regione Toscana under ESF Regional Programme 2021–2027, approved by Commission Decision C(2022) no. 6089 of 19 August 2022, and under the Detailed Implementation Plan (PAD) of the ESF Regional Programme 2021–2027 adopted by Regional Government Resolution no. 122/2023, the corresponding revenue assessment shall be undertaken on the basis of periodic extracts and communication to the individual competent sectors in the 2025–27 management financial budget;
- Having regard to Regional Government Resolution no. 1 of 08/01/2025 approving the Technical Accompanying Document to the 2025–2027 Forecast Budget and the 2025–2027 Management Financial Budget;
- Taking note that the intervention has been included in the timetable of interventions to be implemented under ESF Regional Programme 2021–2027 in 2025.