

Call for applications for additional admission to the PhD programmes in Computer Science and Artificial Intelligence and Environmental and Energy Engineering Science of the University of Udine in the Academic Year 2022/2023, 38th cycle, under the funding of the “Innovation Ecosystems” project, iNEST (Announcement n. 3277 of December 30, 2021 - PNRR M4C2 Inv. 1.5 - ECS0000043 – CUP G23C22001130006).

DISCLAIMER:

The official and legally binding Call for Applications is in Italian only.
This document cannot be used for legal purposes and it is only meant to provide information in English on the Call for applications (University Chancellor’s Decree n. 1451 November 11, 2022).
Please refer to the official Call for Applications published on the official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine.
Any changes and integrations will be made available on the above mentioned above web pages. Therefore, no personal written communication shall be provided to applicants about examinations dates, competition results and deadlines regarding the enrollment.

ART. 1 – PhD PROGRAMMES

1. The University of Udine announces a Call for applications for positions with scholarship linked to fulfillment of specific research topics under the funding of the National Recovery and Resilience Plan (PNRR), as part of these PhD programmes activated by the University of Udine, 38th cycle:

- Computer Science and Artificial Intelligence (Table 1)
- Environmental and Energy Engineering Science (Table 2)

2. The PhD Programme positions listed in paragraph 1 last three years starting from January 1, 2023.

3. The doctorate positions with scholarship referred to in paragraph 1 are announced on the basis of the resources and according to the regulatory provisions referred to the Announcement n. 3277 of December 30, 2021 – PNRR M4C2 Inv. 1.5 – “Innovation Ecosystems” project (iNEST) ECS0000043 – CUP G23C22001130006. There are no positions without scholarship, therefore the PhD programme is automatically concluded in case of scholarship withdrawal.

4. The doctoral paths will guarantee the respect of the horizontal priorities and the DNSH principle (Do No Significant Harm) of the PNRR.

5. If limitations are introduced due to a sanitary or epidemiological emergency, the activities of the Ph. D. programmes could take place in a mixed modality, face to face and remotely. The methods of carrying out the activities will be communicated by the University of Udine when the programme will start.

6. In this document the titles referred to people, shown in male form only, refer indiscriminately to people of all genders.

ART. 2 – GENERAL PROVISIONS

1. This Call regulate the procedures and criteria to access to the PhD programmes listed in art. 1 with reference to the scholarships listed in Tables 1 and 2.

2. Tables 1 and 2 are annexed to this Call for Applications and are integral part of it. They indicate for each of the PhD programmes: administrative location and associated location(s) (if any); locations for training, teaching and research; coordinator; programme duration; curricula (if available); positions available and research topics; website of the PhD programme; admission requirements; documents and qualifications to be attached to the application for admission; composition of the Selection Committee; period abroad if provided (optional or mandatory); period at a third party if provided

(optional or mandatory); admission procedure (conduct of examinations; evaluation criteria; tests schedules; publication date of the list of admitted applicants to the examinations and the final ranking lists).

3. If additional funding is provided under the PNRR with reference to the actions listed in art. 1 paragraph 2, the available positions indicated in Tables (1-2), may be increased with an integration at the Call for Applications and its annexes as specified in paragraph 5, without prejudice to the submission deadline for the admission to the competition mentioned in art. 6.

4. Positions available may decrease as provided in art. 10 paragraph 2.

5. Any amendments and additions to this Call and its annexes are posted on the official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine.

6. Only the Italian Call for applications is equivalent to notification for all purposes, including for the purpose of notification of the examinations, if provided.

7. The submission of the application through the online procedure, as stated in art. 6, implies the acceptance by the applicant of the provisions contained in the Call for Applications and in the Internal Regulation of PhD Programmes available on the PhD website of the University of Udine.

8. Possible personal communications to applicants concerning this competition are sent only to the e-mail addresses provided during the registration process as stated in art. 6, paragraph 2.

9. The University assumes no liability for failure to receive messages due to incorrect contact details supplied by the applicant, for the failure or delay in notifying any change from the applicant and for postal or electronic problems in each phase of this competition.

Art. 3 – ADMISSION REQUIREMENTS

1. Applicants of any nationality may apply for the competition if they have one of the following academic degrees at the expiration date of the call:

a) “Laurea Specialistica” or “Laurea Magistrale” or “Laurea vecchio ordinamento¹” or second level academic degree comparable to them;

b) foreign degree, issued by a foreign official institution, comparable in duration and level² to the degrees referred to in letter a), and in the foreign system allows the admission to PhD programmes.

Tables 1 and 2 specify for each PhD programme the type of degree required for participation in the competition and any additional requirements.

2. Applicants can participate in the competition, if they obtain their degree referred to paragraph 1 by December 31, 2022. Applicants who do not obtain the degree by December 31, 2022, will be excluded. Winner applicants with the degree not yet obtained are admitted and enrolled with reserve. They must certify their graduation in accordance with the procedure indicated in art. 5 paragraph 5 no later than December 31, 2022.

The documentation must be submitted by filling in the form available on the website: https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42104

3. All applicants are admitted to the competition on the condition that they meet the requirements of the Call. The University reserves the right to carry out sample checks³ and it may exclude applicants at any time from the selection process if they fail to meet the requirements as set out in the present article, even after the PhD programmes have already begun.

¹ Degree awarded under the ante Decree of the Ministry no. 509 of November 3, 1999, modified with Decree of the Ministry no. 270 of October 22, 2004.

² Master of Science/Art

³ Under Article 71 of D.P.R. December 28, 2000, no. 445

Art. 4 – DEGREE OBTAINED ABROAD (art. 3 paragraph 1 letter b)

1. The suitability of the foreign degree is assessed by the Selection Committee (art. 7) for the only purpose of participating in the competition and the enrolment in the PhD programme in accordance with:

- the current legislation in Italy and in the country where the degree was issued;
- international treaties or agreements on recognition of the degrees for further studies.

The Selection Committee assesses the suitability of the foreign degree on the basis of the documentation attached during the online application for the admission to the competition (articles 5 and 6). The Selection Committee may, therefore, exclude the applicant whenever the documentation submitted does not provide sufficient evidence for the evaluation. Therefore applicants must attach all the documents in their possession relating to the degree held, in order to provide sufficient elements for the assessment to the Selection Committee.

2. Applicants with a degree obtained in a foreign university, if winners of the competition, must submit during the enrolment procedure (if they have not already submitted it during the online application), under penalty of exclusion from the PhD programme:

For foreign degrees issued in a UE country:

Diploma Supplement in English.

For foreign degrees issued in an EXTRA UE country, one of these options:

- Declaration of Local Value of the degree and the certificate regarding the degree with exams and grades. The certificate in a language different than Italian or English must be accompanied by a translation in one of the two languages mentioned (the translation must be legalized by the diplomatic-consular competent authority or certified by an Italian Court).

- "Statement of comparability - CIMEA" issued in accordance with the terms set on the website: www.cimea.it.

If the Diploma Supplement or the Declaration of Local Value/Statement of comparability is not available by the enrolment procedure, the applicant must demonstrate having made a request by that date and submit it as soon as possible.

Art. 5 – QUALIFICATIONS SUBJECT TO ASSESSMENT AND DOCUMENTS TO BE SUBMITTED

1. Applicants must submit the mandatory documents and qualifications specified for each PhD programme in Tables 1 and 2.

2. Tables 1 and 2 also specify optional documents and qualifications provided by each PhD programme.

3. For a correct submission of the application, applicants are invited to use the forms attached which are integral part of the Call.

4. Documents and qualifications referred to in paragraphs 1 and 2 must be submitted in Italian or English, under penalty of not evaluation. Documents and qualifications, originally in a different language, must be accompanied by a translation into Italian or English made by the applicant. Any translation into these two languages is the responsibility of the applicant. The translation of the thesis can be an extended abstract in place of the complete thesis.

5. Italian and EU applicants who present qualifications referred to states and facts attested by Public Administrations, must use a self-certification.

Non-EU citizens, legally residing in Italy, may self-certify only information that can be verified or certified by Italian public entities. They can also use a substitute statement of certification, when it is provided by an international agreement between Italy and the applicant's country.

Non-EU citizens other than those above mentioned must refer to the provisions of art. 3 paragraphs 3 and 4 of the d.P.R.445/2000⁴.

6. The only documents evaluated are those the applicant has submitted within the terms and the manners specified in art. 6 within the expiration date of the Call. Documents submitted in any other way are not be subjected to evaluation.

7. Failure to submit the mandatory documents specified in Tables 1 and 2 means the exclusion from the selection process.

Art. 6 – APPLICATION FOR ADMISSION

1. Entries to competitions begin on **Monday November 21, 2022 at 02:00 p.m. (Italian time)** and end on **Monday December 12, 2022 at 02:00 p.m. (Italian time)**.

2. **The application for admission must be completed, under penalty of exclusion, using the online procedure** that involves two stages:

- **Stage I – Registration at the University website** (<https://uniud.esse3.cineca.it>): this allows the applicant to obtain a user name and password (credentials) in order to continue with the next stage⁵;
- **Stage II – Filling out the online application** (<https://uniud.esse3.cineca.it>): the applicant must print out the application form at the end of Stage II, in order to retain it as proof of submitted application together with the receipt of the fees payment, as specified in paragraph 8 of this article.

3. The instructions for the registration and for the application submission are available on the PhD website of the University of Udine.

4. Documents, qualifications and publications as listed in art. 5, must be attached to the online application in electronic format (.pdf), except for the letters of reference. **Files and/or folders, compressed in RAR or ZIP format, cannot be larger than 5 MB.** The applicant can add, delete or modify the attached documents even after the conclusion of stage II, but before the expiry of the call, on **Monday December 12, 2022 at 02:00 p.m. (Italian time)**. The university administration assumes no liability if the documentation submitted is illegible as a result of damaged files or folders.

5. Every folder/file attached must be named as follows: surname of the applicant_PhD programme_document type (e.g.: McDONALD_Computer Science_Curriculum).

6. Letters of reference, if provided by the PhD programme (Tables 1-2), must be uploaded on the online process by the referees at the applicant's request. During the submission of the application, the applicant must enter the email address of the referees, who will receive an email notification with the instructions to proceed for uploading the letter. Applicant and referee receive a notification about the successful upload of the letter, which will be available only for the Area Servizi per la Ricerca – Ufficio Formazione per la Ricerca and for the Selection Committee. The applicant can make a reminder to the referee and replace his/her name with another by the expiry date of the call (**December 12, 2022 at 02:00 p.m., Italian time**).

The referee must upload the letter of reference before **December 12, 2022**.

7. The admission to the selection procedure is subject to the payment of euro 25.00 (as a contribution for participating in the competition). Applicants have to pay the fee by **Monday December 12, 2022**. Applicants who have not paid the above-mentioned contribution (euro 25.00) by the day before the date of the Selection Committee's preliminary meeting, will be excluded. The dates of the Selection Committee's preliminary meeting will be posted by November 30, 2022 on the

⁴ Under the D.P.R. December 28, 2000, n. 445 and subsequent amendments and additions.

⁵ If the applicant already owns the credentials to access the reserved area (e.g.: former student of University of Udine) this step should not be considered.

official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine.

8. The amount as paragraph 7 is not refundable for any reason and must be paid via PagoPA service using one of the following options:

- direct access from Esse3 to one of the payment methods available in PagoPA using the data contained in the “Avviso di pagamento” (notice of Payment) issued at the end of the online application (accessing to “Student Administration Office/Payments” in the personal area of Esse3);
- payment at bank branches and receivers authorized to pay via PagoPA showing the “Avviso di pagamento” (notice of Payment) issued at the end of the online application (accessing to “Student Administration Office/Payments” in the personal area of Esse3);
- from your account with online services (if activated by the bank) or with credit card or prepaid card with IBAN. For payments by credit or prepaid card refer to the circuit related to the card, NOT to the bank issuing the card. You need to print or save the “Avviso di pagamento” (notice of Payment) to have the data required to make the payment.

Applicants who are abroad and don't have an Italian bank account can **exceptionally** make the payment on the bank account of the University of Udine at INTESA SANPAOLO: **IT59A0306912344100000046097 SWIFT/BIC BCITITMM** reason for payment "PhD competition – Applicant's Name and Surname". Only in this case, the receipt of the payment must be attached to the online application.

The payment is subject to the fees applied by the payment service provider.

9. Applicants who wish to apply for several PhD programmes should submit several applications, attaching the required documents to each one and paying the fees for each one (paragraph 7). However, the applicant cannot apply for more than one curriculum in the same PhD programme.

10. Applicants with certified disabilities or specific learning disorders, may notify during the online application (refer to paragraph 2 of this article):

- their situation attaching the certificate attesting the disability or the specific learning disorder;
- aids to conduct the examinations.

Applicants with disabilities or learning disorder, residing in foreign countries, who intend to take advantage of the measures described above, must present a certificate attesting to the state of disability or the learning disorder issued in their country of residence. The certificate has to be accompanied by a sworn translation in Italian or English language. The university bodies in charge to check the certifications verify that foreign certificate attests a condition of disability or specific learning disorder recognized by Italian legislation.

The different ways of supporting the examinations will be defined by the Selection Committee after checking the documentation submitted. In particular, for students with specific learning disorder, an additional time of 30 per cent more than the time defined for the admission test, will be granted. In case of particular gravity, additional aids may be provided.

Further information can be obtained from Direzione didattica e Servizi agli Studenti (DIDS) – Servizio studenti con disabili o dsa, tel. +39 0432 556804 - email: servizi.disabili@uniud.it, dsa@uniud.it

11. The university administration assumes no liability for information loss due to an error that has not committed, for inaccurate data given by the applicant relating to residence, mailing and email addresses and for failure or delay in notifying their change.

12. Applicants are advised not to wait until the last days before the deadline of the on line procedure. The University assumes no liability for any malfunctions due to technical problems and/or overloading of the communication line and/or application systems.

Art. 7 – SELECTION COMMITTEE

1. The Selection Committee of each PhD programme is specified in Tables 1 and 2.

2. Each Selection Committee, in the first meeting, appoints its own internal President and Secretary.

3. Before the evaluation of the qualifications and before the start of the examinations, the Selection Committees define the evaluation criteria and the scores assigned to the qualifications and to the examinations, taking into account the specifications set out in Tables 1 and 2.
4. The Selection Committee meetings can be held remotely.
5. The Selection Committee expresses the assessment of suitability with the aim of awarding scholarships indicated in art. 10, paragraph 2.
6. The Selection Committee's tasks finish with the drawing up of the reports and final ranking lists.

Art. 8 – GENERAL COMPETITION

1. The applicants' selection foresees the evaluation of the qualifications and the conduct of the examinations, in the manner and on the dates specified in Tables 1 e 2. Any changes or additions to the examinations schedule are posted only on the official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine.

2. Evaluation of qualifications and examinations are held according to the following general provisions:

- a. the maximum score for overall qualifications and examinations is 100 (100/100). The examinations of the PhD programmes with widely different curricula may be diversified;
- b. the maximum score for qualifications is 30 (30/100), the minimum score to be admitted to the first examination (written or oral) is stated in each table;
- c. the score assigned for the examinations is 70 points (70/100). Applicants are suitable if they obtain a score equal to or greater than 49 in the examinations;
- d. the final ranking list is unique and is prepared, for only eligible applicants, by adding up the scores obtained in the evaluation of the qualifications and in the examinations.

3. Applicants must show a valid identity document for admission to the examinations.

4. Applicants unable to attend the oral examination in presence at the University of Udine, due to a permanent abroad residency at the date of the examination or for valid and well-documented reasons, may request to the Selection Committee to take the oral examination remotely. This request may also be submitted to the Selection Committee later, but in any case, before the date set for the oral test. The request have to be sent using the form available on the website https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42104. Details of the remotely oral examination are communicated to the applicants at the e-mail address entered during the registration procedure referred to art. 6 paragraph 2. The applicant must be available during the day and the timetable notified. For identification purposes, and under penalty of exclusion from the selection process, each applicant must identify itself before the interview begins, exhibiting the same identity document attached to the online application. The failure to communicate the personal address, the connection failure, the unavailability of the applicant on the day or in the established timetable or the failure exhibition of the identity document are grounds for the exclusion from the selection process. Such grounds for exclusion are not valid if the applicant, with a valid identity document, is present on the day fixed for the oral examination, with the aim to take the oral examination personally.

The University accepts no responsibility in case of technical problems that do not ensure the proper conduct of the oral examination.

5. The University reserves the right to manage the oral examination remotely if restrictions on mobility and aggregation are introduced due to health and epidemiological emergency. The University will make this procedure known on the official register (<https://www.uniud.it/it/albo-ufficiale>) and in the PhD website of the University of Udine. In this case, the provisions of the above paragraph 4 shall be applied, as they are compatible.

6. Oral examinations are public, including those which are conducted remotely.

Art. 9 – FINAL RANKING LIST

1. The final ranking lists are published on the official register (<https://www.uniud.it/albo-ufficiale>) and on the PhD website of the University of Udine within the dates detailed for each PhD programme in Tables 1 and 2.

2. The university does not send out any communication to the applicants.

Art. 10 – ADMISSION TO THE PhD PROGRAMME

1. Applicants are admitted to each PhD programme according to the final ranking list order and in accordance with the provisions contained in this article.

2. The positions with scholarship are awarded to eligible applicants as stated below: according to the final ranking list and the number of positions available, if the candidate has achieved the suitability assessment established by the Commission regarding the suitability of his project and qualifications with the research topic of interest and with the criteria set out in the provisions listed in art. 1 paragraph 2.

2.1 The non-allocation of scholarships involves a reduction in the number of the positions with scholarship.

2.2 In case of equal final score and equal requirements, the preference criteria to award positions with scholarship is the economic condition of the applicant's family nucleus⁶.

3. In the case of useful placement in more final ranking lists referred to different PhD programmes, the applicant must enrol in only one PhD programme.

Art. 11 – ENROLMENT

1. **Successful applicants must enrol using the appropriate online procedure, in the terms and manner which will be communicated by email, under penalty of exclusion (art. 2 paragraph 7).**

2. Enrolment to the PhD programme is subject to the payment of the amount specified in art. 14 under penalty of exclusion from the programme.

3. The amount as paragraph 2 is not refundable for any reason and the payment must be made via PagoPA service using one of the following options:

- direct access from Esse3 to one of the payment methods available in PagoPA using the data contained in the "Avviso di pagamento" (notice of Payment) issued at the end of the online application (accessing to "Student Administration Office/Payments" in the personal area of Esse3);

- payment at bank branches and receivers authorized to pay via PagoPA showing the "Avviso di pagamento" (notice of Payment) issued at the end of the online application (accessing to "Student Administration Office/Payments" in the personal area of Esse3);

- from your account with online services (if activated by the bank) or with credit card or prepaid card with IBAN. For payments by credit or prepaid card refer to the circuit related to the card, NOT to the bank issuing the card. You need to print or save the "Avviso di pagamento" (notice of Payment) to have the data required to make the payment.

Applicants who are abroad and don't have an Italian bank account can **exceptionally** make the payment on the bank account of the University of Udine at INTESA SANPAOLO: **IT59A0306912344100000046097 SWIFT/BIC BCITITMM** reason for payment "Enrolment in PhD programme".

⁶ Current legislation about the right to study, ISEE.

4. Enrollment will be completed by the University of Udine only upon formalization of the relationship between Hub and Spoke and between Spoke and Spoke-affiliated entities.

5. Non UE Citizens must comply with the rules on visas and residence permits. A copy of the residence permit or – pending the release – the receipt of the application for the residence permit must be submitted to Area Servizi per la Ricerca – Ufficio Formazione per la Ricerca, via Mantica, 31 – 33100 Udine.

6. The university administration assumes no liability for loss of communications due to any errors that cannot be attributed to it.

Art. 12 – REPLACEMENTS

1. Applicants who do not enrol in the terms communicated pursuant to art. 11 are considered to have withdrawn. The positions that have become available, are assigned to other applicants according to the final ranking list, taking into account art. 10.

2. The list of replacement applicants is posted on the official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine.

3. The replacement applicants must enrol in the terms and manner which will be communicated by email (art. 2 paragraph 7), under penalty of exclusion from the programme.

4. Any further replacements positions will be communicated directly to the relevant applicants.

Art. 13 – SCHOLARSHIPS

1. Scholarships are linked to specific research topics (Tables 1 and 2).

2. Scholarships are awarded in accordance with art.1 and art 10.

3. The scholarships have a duration of three years, subject to the provisions of art. 20 p. 2 and art. 25 of the Internal Regulations for the PhD Programmes. Scholarships are renewed annually on condition that the PhD student has completed the program of planned activities, as verified by the Teaching Board.

4. The annual gross amount of the scholarship is specified in Tables 1 and 2 and is subject to the social security tax (INPS a gestione separata). The scholarship is paid on monthly basis in the following month. The amount of the scholarship is increased for research activities abroad by a maximum of 50% for a total period specified in Tables 1 and 2, unless additional financial resources are available. In any case, the increase is only due to periods of continuous stay and longer than 30 days.

5. The scholarship cannot be allocated to those who have already received a scholarship to attend another PhD programme or an equivalent programme.

6. The scholarship cannot be combined with research grants or other scholarships awarded for any purpose, except for those awarded by national or foreign institutions useful to integrate the abroad research activity of the PhD students. Further incompatibilities are defined by the Internal Regulation for the PhD programmes.

7. In addition to the rights and duties provided for by the relevant legislation (art. 17), in line with the provisions of the regulatory provisions (art. 1 paragraph 2), the winner accepting the scholarship:

- undertakes to carry out the planned period abroad and at the third party as specified in Tables 1 and 2, aware that the failure in carrying out this period results in the revocation of the scholarship.

- undertakes to submit, in the manner which will be communicated by the University of Udine and in line with the regulatory provisions listed in art. 1 paragraph 2, the research activity report, which also specifies the time commitment (divided into months at a third party, on site, abroad).
 - undertakes to ensure the compliance with the obligations regarding communication and information provided for by art. 34 of Regulation (EU) 2021/241, indicating in the project documentation that the Program is funded under the PNRR, with explicit reference to the funding from the European Union and the NextGenerationEU initiative (eg using the phrase "funded from the European Union - NextGenerationEU"), reporting in the project documentation the emblem of the European Union and providing adequate dissemination and promotion of the Program, even online, both web and social, in line with the provisions of the PNRR Communication Strategy;
 - is aware that the modification of the activities, the project goals and the expected results, if not previously authorized by the MUR, entails the revocation of the scholarship;
 - is aware that any negative judgement of the Teaching Board and the consequent non-admission to the following year of the PhD programme, the failure to obtain the degree and the waiver to the PhD programme results in the revocation of the scholarship;
 - is aware that he must comply with the principle "do not significant harm (DNSH)" to environmental objectives, pursuant to article 17 of Regulation (EU) 2020/852 and ensure consistency with the PNRR positively assessed by the ECOFIN Council Decision of July 13, 2021.
- The University of Udine may therefore take action against the beneficiary for the return of the amounts received in the event of revocation or waiver of the scholarship.

Art. 14 – ACADEMIC FEES

1. For the Academic Year 2022/2023 is foreseen the payment of maximum amount of euro 276.00:

- university contribution, euro 100.00;
- regional tax for the right to university study, from euro 120.00 to euro 160.00 (economic condition of the applicant's family nucleus⁷);
- duty stamp, euro 16.00.

The amount will be requested at the moment of the enrolment and any exemption will be applied in accordance with the current legislation.

2. However, the university administration reserves the right to adopt different regulations for the following academic years.

Art. 15 – PERSONAL DATA

1. The personal data collected under the procedure referred to in art. 6 are necessary for the proper management of the selection procedure, for any subsequent career management and for purposes related to the management of the services provided to students during the university PhD programme. The University of Udine is the "Data Controller". At any time, you can request access, corrections and, according to the University institutional purposes, the cancellation and limitation of the processing or oppose the processing of your data. You can always submit a complaint to the Italian Authority for data protection. The complete information is available on the University of Udine website in the section "privacy" accessible from this link: <https://www.uniud.it/it/pagine-speciali/guida/privacy>

Art. 16 – HEAD OF PROCEDURE

1. The officer in charge of the proceedings is Dr. Sandra Salvador, Head of Area Servizi per la Ricerca of the University of Udine.

The PhD Office of the University of Udine is the Area Servizi per la Ricerca – Ufficio Formazione per la Ricerca, via Mantica n. 31 - 33100 Udine.

2. To request information, fill in the following forms available on the website of the University of Udine:

⁷ Current legislation about the right to study, ISEE.

Information about the Call:

- https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42104

Information about Esse3:

- https://helpdesk.uniud.it/SubmitSR.jsp?type=req&accountId=universityofudine&populateSR_id=42094

Art. 17 – REFERENCE RULES

1. For matters not covered by this Call, please refer to the National legislation in the field of doctoral research mentioned in the introduction, to the Internal Regulations for the PhD programmes and to the Rules of Procedure relating to patents, the regulatory provisions listed in art. 1 paragraph 2 available on the website dedicated to the research doctorate of the University of Udine.

TABLE 1 – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

THE PhD PROGRAMME	
Administrative Location	University of Udine - Department of Mathematics, Computer Science and Physics (DMIF) – via delle Scienze 206, 33100 Udine, Italy (+39 0432 558400).
Associated Location	Fondazione Bruno Kessler – 77 via Santa Croce, 38122 Trento (TN), Italy.
Location for Training, teaching and research activity	Teaching and other training activities will take place primarily at the administrative programme location or in other locations of the University of Udine. The research program will be developed according to the provisions of section “Research Topics description”.
Coordinator	Federico Fontana – University of Udine (coordinatore.iai@liste.uniud.it)
Programme duration	3 years
Curriculum	-
Programme website	https://www.uniud.it/it/ricerca/lavorare-nella-ricerca/dottorato-ricerca/inostricorsi/area-physical-science-and-engineering/informatica-e-intelligenza-artificiale/il-dottorato https://www.dmif.uniud.it/dottorato/iai/ https://phd.fbk.eu/https://phd.fbk.eu/

ADMISSION REQUIREMENTS	
Required degree	Italian Laurea (before DM 509/99) or Italian Laurea Specialistica/Magistrale (ex DM 509/1999 and Decree DM 270/04). Foreign degrees and titles: refer to art. 3 and 4 of the Call.
Knowledge of the following foreign language	English

DOCUMENTS AND TITLES TO BE ATTACHED TO THE APPLICATION FOR ADMISSION	
Compulsory documents (Art. 5 of the Call)	<ol style="list-style-type: none"> 1. Certification or self-certification (refer to art. 5 paragraph 5 of the Call) of the academic title needed for admission to the PhD programme (with candidate’s grade and highest possible grade); 2. Certification or self-certification of the list of the exams (with candidate’s grades, average grade, highest possible grade) passed during the Laurea Specialistica/Magistrale programmes or the Italian programmes ante D.M. 509/99, or during the foreign academic programmes; 3. Curriculum vitae et studiorum, dated and signed; 4. Copy of a valid identity document (citizens of countries not belonging to the European Union upload a copy of a valid passport, comprehensive of the pages containing the holder’s photo, personal details, passport number, date and place of issue, date of expiry); 5. Extended abstract (between 15.000 and 25.000 characters, spaces included) of the thesis, in Italian or English language, signed by the thesis Supervisor or self-certified; 6. Research project, dated and signed, referred to the aforementioned research topics and to the scholarship research programs specified in this Table, with specific reference on the Teaching Board skills described in https://www.dmif.uniud.it/dottorato/iai/collegio-docenti/ (between 5.000 and 10.000 characters, spaces included, in English language); 7. Motivation letter from the Applicant explaining the reasons for admission to the PhD programme, dated and signed (between 1.500 and 2.500 characters, spaces included).
Optional documents (Art. 5 of the Call)	<ol style="list-style-type: none"> 1. Publications (max 3); 2. Recommendation letters (max 2) written by university professors, scientific researchers or other experts in the specific research topics (art. 6 of the Call); 3. Certification or self-certification of the academic title and list of the exams (with candidate’s grades, average grade, highest possible grade) passed during the Italian first level or equivalent (bachelor).
All titles must be presented exclusively in PDF format, dated and signed by the candidate.	

SELECTION COMMITTEE	
Appointed Members	Carla Piazza – Full Professor – University of Udine Massimo Vecchio – Head of Research Unit – Bruno Kessler Foundation Federico Fontana – Associate Professor – University of Udine
Alternate Members	Luca Di Gaspero – Associate Professor – University of Udine Fabio Buttussi – Assistant Professor – University of Udine

ADMISSION	
GENERAL COMPETITION (art. 8 of the Call for Applications)	

TABLE 1 – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

Positions available: 1				
Detailed description	N	Funding	Annual gross amount	Research Topic
Positions WITH SCHOLARSHIP: 1	1	D.D. 3277 of 30 December 2021 (PNRR Mission 4, Component 2, Investment 1.5) - Interconnected Nord-Est Innovation Ecosystem (iNEST) ECS00000043 CUP G23C22001130006	€ 16,243.00	Research Topic 1.1 – Machine learning and Deep Learning for advanced manufacturing technologies

Competition procedure and schedule		
<p>Titles evaluation and oral examination.</p> <p>For the evaluation of applicants' attitude for scientific research and their basic skills before the course program, the Selection Committee can attribute up to 100 points to each applicant: at most 30 points to the titles and at most 70 points to the oral examination. The applicant is admitted to the oral examination if he/she scores at least 18 points for the titles. The oral examination is passed by scoring at least 49 points. The applicant is eligible for the PhD programme if he/she passes the oral examination. Only for eligible applicants, the points attained in in the oral examination will be added to the points of the titles.</p> <p>DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: within December 16, 2022.</p> <p>DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within December 22, 2022.</p>		
Foreign language that can be used for examination	Italian or English	
Evaluation of the titles	Curriculum vitae et studiorum, academic title, exams and master thesis (or its abstract)	Max 18 points
	Research project, scientific publications, Applicant's motivation letter and Referees' recommendation letters	Max 12 points
Oral examination	Starting score bonus	At most 2/3 of the total score obtained from the evaluation of the titles
	Interview about titles, previous career and research project also aimed at understanding the Applicant's knowledge about fundamental topics in computer science and artificial intelligence, as well as his or her full eligibility to receive, if preferred, a scholarship funded by external institutions. Reading and understanding a short scientific text in English.	Max 50 points
Calendar of the oral examination	Date	December 21, 2022
	Time	9:30 AM
	Place	Department of Mathematics, Computer Science and Physics, (DMIF) "Sala riunioni" – via delle Scienze 206, 33100 Udine https://www.dmif.uniud.it/il-dipartimento/sedi/
	The oral examination may take more than one day. Applicants must exhibit a valid personal ID for admission to the oral examination.	

Research Topics Description
<p>Research topic 1.1 - Machine learning and deep learning for advanced manufacturing technologies <i>DD 3277 of December 30, 2021 (PNRR Mission 4, Component 2, Investment 1.5) - Interconnected Nord-Est Innovation Ecosystem (iNEST)</i> <i>Green and digital transition for advanced manufacturing technologies: machine learning and deep learning</i></p> <p><u>Coherence of the proposed research with the PNRR areas of interest:</u> the proposed research stems from one PNRR-funded ecosystem (iNEST).</p> <p><u>Expected aims and results, proposed research activities, methodologies and contents:</u> the main goals of the project are the design, development, realization, and experimental validation of machine learning, deep learning, and data analytics models, methodologies, and tools, and their application to industrial processes of advanced manufacturing. The practical effectiveness of the developed models and tools will be verified on typical contexts such as, for instance, those of the supervision and continuous learning of industrial processes, the automatic quality control of digital production lines, and the predictive maintenance. The expected results from the research activity are scientific publications in top-level journals and conferences in the field, and the development of system prototypes.</p> <p><u>Period abroad:</u> 6 months (optional).</p> <p><u>Foreign Hosting Institution Data:</u> if the period abroad is activated, the foreign hosting institution will be defined in due PhD activity programme.</p>



TABLE 1 – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

Contact Professor/Researcher: Gian Luca Foresti.
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TABLE 2 – PhD Programme in ENVIRONMENTAL AND ENERGY ENGINEERING SCIENCE

THE PhD PROGRAMME	
Administrative location	University of Udine - Polytechnic Department of Engineering and Architecture (DPIA) - via delle Scienze 206, 33100 Udine, ITALY (tel. +39 0432 558253).
Associated location	-
Location for training, teaching and research activity	Teaching and other training activities will take place primarily at the administrative programme location or in other locations of the University of Udine. The research program will be developed according to the provisions of section "Research Topics description".
Coordinator	Prof. Cristian Marchioli (cristian.marchioli@uniud.it)
Programme duration	3 years
Curriculum	-
Course website	https://www.uniud.it/it/ricerca/lavorare-nella-ricerca/dottorato-ricerca/inostricorsi/area-physical-science-and-engineering/scienze-dellingegneria-energetica-e-ambientale/il-dottorato https://phd.diegm.uniud.it/ees-phd-activities/

ADMISSION REQUIREMENTS	
Required degree	Italian Laurea (before DM 509/99) or Italian Laurea specialistica/magistrale (ex DM 509/1999 and DM 270/04). Foreign degrees and titles: refer to art. 3 and 4 of the Call.
Knowledge of the following foreign language	English

DOCUMENTS AND QUALIFICATIONS TO BE ATTACHED TO THE APPLICATION FOR ADMISSION	
Compulsory documents (art. 5 of the Call)	<ol style="list-style-type: none"> 1. Certification or self-certification (refer to art. 5 paragraph 5 of the Call) of the academic title needed for admission to the PhD programme and list of the exams (with grades) passed during the Italian first level (bachelor) and the Laurea Specialistica/Magistrale programmes or during the Italian programmes before D.M. 509/99 or during the foreign academic programmes; 2. Curriculum vitae et studiorum, dated and signed; 3. Copy of a valid identity document (citizens of countries not belonging to the European Union a copy of a valid passport, comprehensive of the pages containing the holder's photo, personal details, passport number, date and place of issue, date of expiry); 4. A research project, dated and signed, developed in accordance with the topic of interest, which highlights the contribution that the candidate can provide to the development of the topic itself (approximate limit 10.000 characters, spaces included, in English language).
Optional documents (art. 5 of the Call)	<ol style="list-style-type: none"> 1. Master thesis ("Tesi di Laurea") associated to the degree/title providing access to the PhD programme. Applicants who are not graduated on the expiration date of this Call can submit an extended abstract in place of the complete thesis, in Italian or English language, signed by themselves and by their thesis Supervisor (approximate limit 10.000 characters, spaces included); 2. Motivational letter, dated and signed, by which the applicant explains the reasons for admission to the PhD programme (approximate limit 2.500 characters, spaces included); 3. Publications (max 2); 4. Letters of reference (max 2), from university professors, scientific researchers or other experts in the field (art. 6 of the Call).

SELECTION COMMITTEE	
Appointed members	D'Agaro Paola – Associate Professor – University of Udine Cristian Marchioli – Associate Professor – University of Udine Alessandro Trovarelli – Full Professor – University of Udine
Substitute members	Sara Colussi – Associate Professor – University of Udine Damiana Chinese – Associate Professor – University of Udine

ADMISSION

GENERAL COMPETITION (art. 8 of the Call for Applications)

Positions available: 1					
Detailed description		N.	Funding	Annual gross amount	Research Topic
Positions	WITH SCHOLARSHIP: 1	1	DD 3277 del 30 dicembre 2021 (NRRP "National Recovery and Resilience Plan" Mission 4 Component 1 Investment/Sub-	€ 16,243.00	Research Topic 1.1 - Decarbonisation and CO2 valorisation processes and technologies

TABLE 2 – PhD Programme in ENVIRONMENTAL AND ENERGY ENGINEERING SCIENCE

			investment 1.5) Interconnected Nord-Est Innovation Ecosystem (iNEST) ECS00000043 CUP G23C22001130006		
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Competition procedure and test schedule		
<p>Evaluation of titles and oral examination. For the evaluation of applicants' attitude for scientific research and their basic skills to tackle the course program, the Selection Committee can attribute up to 100 points to each applicant: max 30 points to the titles and max 70 points to the oral examination. The applicant is admitted to the oral examination if his/her titles receive at least 21 points. The oral examination is passed with at least 49 points. The applicant is eligible to the PhD programme if he/she passes the oral examination. Only for eligible applicants, the points attained in the oral examination will be added to the points of the titles. DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: within December 16, 2022. DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within December 22, 2022.</p>		
Foreign language that can be used for examination	Italian or English	
Evaluation Criteria of qualifications <i>During the preliminary meeting the Selection Committee may establish sub-criteria for the evaluation</i>	Curriculum studiorum	10
	Curriculum vitae	2
	Research Project	6
	Scientific publications	2
	Thesis/Abstract	3
	Letters of reference	2
	Motivational letter for admission to the PhD programme	5
Oral examination	Interview based on technical, motivational and scientific discussion.	
Calendar of the oral examination	Date	December 20, 2022
	Time	10:30 AM
	Place	Polytechnic Department of Engineering and Architecture (DPIA), Auditorium ex-DCFA – via del Cottonificio 108 , 33100 Udine
	Based on the number of applicants, the oral examination may take place in more than one day. Applicants must exhibit a valid ID for admission to the oral examination.	

Research Topics description
<p>Research Topic 1.1: Decarbonisation and CO2 valorisation processes and technologies <i>DD 3277 del 30 dicembre 2021 (NRRP "National Recovery and Resilience Plan" Mission 4 Component 1 Investment/Sub-investment 1.5) Interconnected Nord-Est Innovation Ecosystem (iNEST)</i></p> <p>In the field of CO2 decarbonisation and valorisation processes and technologies, the candidate will have to develop one of the two indicated sub-topics: Sub-topic 1: Development of bi-functional materials for the capture/adsorption and catalytic conversion of CO2 to high value-added products. The materials will be developed for integration into the production chain, with a view to decarbonising industrial processes. Sub-topic 2: Numerical-experimental analysis of heat exchange in metal foams and micro-structured geometries, in non-stationary thermal regime, for use in CO2 adsorption and hydrogenation systems for e-fuel production. Development of high-performance heat exchangers based on these technologies and study of process integration in industrial-scale plants with comparative environmental impact analysis.</p> <p><u>Period abroad: 6 months (optional)</u></p>