



Call for Applications for the admission to the PhD programmes of the University of Udine in the Academic Year 2022/2023, 38th cycle

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. 508 of May 18, 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 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 sets up the following PhD programmes:

- Law and Innovation in the European Legal Space (Table A)
- Computer Science and Artificial Intelligence (Table B)
- Industrial and Information Engineering (Table C)
- Environmental and Energy Engineering Science (Table D)
- Agricultural Sciences and Biotechnology (Table E)

2. The PhD Programmes last three years and are starting on November 1, 2022.

3. The activation of the PhD programmes is subject to the verification of the accreditation requirements by ANVUR, as required by the Decree of the Ministry of Education, of University and of Research n. 226 December 14, 2021. In the event that the accreditation should not be granted or revoked, the examination tests of the programme concerned are not going to be carried out and a notice will be given to all interested parties.

4. 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.

ART. 2 – GENERAL PROVISIONS

1. This Call governs the procedures and criteria to access to the PhD programmes listed in art. 1.

2. Tables A-E are annexed to this Call for Applications and are integral part of it. They indicate for each of the activated PhD programmes: the administrative location and associated location(s) (if any); locations for training, teaching and research; the coordinator; programme duration; curricula (if available); research topics (if specified); proposed research program (if specified); the website of the programmes; admission requirements; documents and qualifications to be attached to the application for admission; the composition of the Selection Committee; admission procedure (available positions, with and without scholarships, and eventual reserved positions for specific applicants' categories; type and amount of scholarships, period abroad and referred research programs; conduct of examinations; evaluation criteria; tests schedules; publication date of the list of admitted applicants to the examinations and the final ranking lists).

3. In the presence of additional funding from public and private institutions, the available positions, indicated in the PhD Tables (A-E), 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 with scholarship might have reductions as provided in art. 11 paragraph 2 and art. 14 paragraph 7.
5. Any amendments and additions to this Call and its attachments are published 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 their e-mail addresses provided during the registration process as stated in art. 6, paragraph 2.
9. The University assumes no liability for the 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 A-E 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 October 31, 2022. Applicants who do not obtain the degree by October 31, 2022, will be excluded. A score less than 95/110 implies the exclusion only for the PhD Programme in Law and Innovation in the European Legal Space. If applicants with the degree not yet obtained appear to be winners, they will be admitted and enrolled with reserve. They must certify their graduation in accordance with the procedure indicated in art. 5 paragraph 5 no later than October 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.

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;
 - treaties or international agreements on recognition of the degrees for further studies.

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



The Selection Committee assesses the suitability of the foreign degree on the basis of the documentation attached through 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 the 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 A-E.

2. Tables A-E 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 A-E means the exclusion from the selection process.

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



Art. 6 – APPLICATION FOR ADMISSION

1. Entries to competitions begin on **Friday May 20, 2022 at 02:00 p.m. (Italian time)** and end on **Wednesday July 20, 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 submit the application 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 **Wednesday July 20, 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 (e.g.: McDONALD_Legal Science_Curriculum).

6. Letters of reference, if provided by the PhD programme (Tables A-E), 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 (**Wednesday July 20, 2022 at 02:00 p.m. Italian time**).

The referee must upload the letter of reference before **July 22, 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 **Wednesday July 20, 2022**. Applicants who will not have 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 July 4, 2022 on the 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

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.



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 current 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 A-E.
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 A-E.
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. 11, 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 A-E. 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 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 – COMPETITION RESERVED FOR: APPLICANTS WITH DEGREE OBTAINED IN A FOREIGN UNIVERSITY, APPLICANTS HOLDING FOREIGN PhD GRANTS OR APPLICANTS HOLDING INTERNATIONAL MOBILITY PhD GRANTS

1. Applicants with a degree obtained in a foreign university or holders of a foreign 3-years PhD grant from other countries or holders of an international 3-years mobility grant may choose to compete for the positions reserved for them, if the individual PhD programme provides it (Tables A-E). In this case, they will be only assessed on the basis of their qualifications.



2. During the online procedure applicants, as paragraph 1, must choose “Competition reserved” (for applicants graduated abroad or for holders of foreign 3-years PhD grants/international 3-years mobility grants).
3. The final ranking list of reserved competition is different from the final ranking list of the general competition (art. 8).
4. The evaluation of qualifications takes place according to the following general provisions:
 - the maximum score is 100 (100/100);
 - applicants with a score lower than 70 (70/100) are not suitable.
5. If there are no eligible applicants, the positions reserved for applicants with a degree obtained in a foreign university, are added to the general ranking list (art. 8) of the same PhD programme.

Art. 10 – FINAL RANKING LIST

1. The final ranking list referring to art. 8 and 9 are published on the official register (<https://www.uniud.it/it/albo-ufficiale>) and on the PhD website of the University of Udine within the dates detailed for each PhD programme in Tables A-E.
2. The university does not send out any communication to the applicants.

Art. 11 – 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:
 - a) Scholarships referred to specific research programs funded by "external institution" or by associated locations are awarded according to the final ranking list and the number of positions available. Applicant is suitable if he has expressed interest during the oral examination and if the Selection Committee expresses the assessment about the adequacy of applicant's qualifications and curriculum with the research topics and the scholarship features;
 - b) PhD scholarships funded by the University of Udine or by associated locations, not referred to specific research programs, are awarded according to the final ranking list and the number of positions available.
 - 2.1 If the suitable applicant is in a position useful for both types of scholarships, the Selection Committee specifies an order of priority to assign the scholarships taking into account the evaluation.
 - 2.2 The non-allocation of scholarships in point a) and b) involves a reduction in the number of the positions with scholarship.
 - 2.3 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. The positions without scholarships are awarded to eligible applicants as stated below:
 - a) positions without scholarship “referred to specific curricula” according to the final ranking list and the number of available positions, taking into account the curricula selected by the applicant;
 - b) positions without scholarship “with no specification” according to the final ranking list and the number of available positions.The allocation of positions without scholarships in letter a) precedes, according to the final ranking list, those in letter b).
 - 3.1. In case of equal final score in the final ranking list, the preference criteria to award positions without scholarship is the youngest applicant; in case of equal final score and equal age, the priority is given to the applicant with the highest degree mark.

⁶ Current legislation about the right to study, ISEE.



4. Applicants in art. 9, paragraph 1, if eligible, are admitted to each PhD programme according to their position on the final ranking list and the number of available reserved positions.

5. 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. 12 – ENROLMENT

1. **Successful applicants (with or without scholarship) must enrol using the appropriate online procedure, from Monday October 10, 2022 at 2:00 pm (Italian time) to Monday October 17, 2022 at 2:00 pm (Italian time) under penalty of exclusion.** Log in at <https://uniud.esse3.cineca.it> to access the reserved area (use the same registration credentials, art. 6 paragraph 2, stage I) and select "Enrolment".

2. Enrolment to the PhD programme is subject to the payment of the amount specified in art. 15, by **October 17, 2022**, 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 current 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".

4. Applicants must attach in electronic format the following documents in order to complete the enrolment:

- a passport photo (.jpeg format);
- a copy of a valid identity document (.pdf format);
- a copy of the Tax Identification Number, if available (.pdf format);
- the receipt of payment according to art. 15 (only if the payment is made on the bank account);
- the form of bank details (.pdf format);
- documents as art. 4, for applicants with degree obtained abroad (.pdf format);
- other documents if required by the University of Udine (.pdf format).

5. The amount paid is not refundable for any reason.

6. Admitted applicants without scholarship must enrol in the programme by the deadline as paragraph 1, if they are interested in any replacements for positions with scholarship as a result of a waiver.

7. 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.



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

Art. 13 – REPLACEMENTS

1. Applicants who do not enrol **within October 17, 2022** 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. 11.

2. The list of replacement applicants is posted by **October 19, 2022** 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 as specified in art. 12 **no later than Monday October 24, 2022 at 2:00 pm (Italian time)**, under penalty of exclusion from the programme.

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

Art. 14 – SCHOLARSHIPS

1. Scholarships are regular or linked to specific research programs or to specific financial funds.

2. Scholarships are awarded in accordance with art.11. The scholarship begins from November 1, 2022.

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 A-E 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 A-E, 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. Scholarships funded by “external institutions” and associated locations are awarded upon the successful completion of the conditions set out in the act that regulates its funding or the issuing of the decree granting the funds.

Art. 15 – 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.

⁷ Current legislation about the right to study, ISEE.



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. 16 – 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 the home page www.uniud.it.

Direct link: <https://www.uniud.it/it/it/pagine-speciali/guida/privacy>

Art. 17 – 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:

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. 18 – 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 available on the web page of the University of Udine dedicated to the PhD programmes.



TABLE A – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

THE PHD PROGRAMME	
Administrative location	University of Udine, Department of Legal Science (DISG), via Treppo 18, 33100 Udine, ITALY (tel. +39 0432 249520)
Associated location	University of Trieste (Department of Legal, Language, Interpreting and Translation studies) - piazzale Europa 1, 34127 Trieste, 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 mainly developed, with reference to the scholarship (see art. 11 of the Call) and/or to the supervisor assigned, at one of these locations: administrative location, associated location, financial supporter's location (if the financial supporter is an external institution).
Coordinator	Prof.ssa Laura Montanari (laura.montanari@uniud.it)
Programme duration	3 years
Curricula	1. Private and Economic Area: (IUS/01 Private Law, IUS/02 Comparative Private Law, IUS/03 Agrarian Law, IUS/04 Commercial Law, IUS/06 Maritime Law, IUS/07 Labour Law, IUS/18 Roman Law) 2. Public Area: (IUS/08 Constitutional Law, IUS/10 Administrative Law, IUS/21 Comparative Public Law, IUS/13 International Law, IUS/14 European Law, IUS/12 Tax Law, IUS/15 Civil Procedure; IUS/17 Criminal Law, IUS/16 Criminal Procedure)
Research topics	Research topics covered under the scientific domains (IUS/) within each Curricula of the Ph.D. programme.
Research programs	The research programs are determined by the Teaching Board in the field of subjects referred to one or more scientific domains included in the curricula of the Ph.D. programme.
Programme website	https://www.uniud.it/it/ricerca/lavorare-nella-ricerca/dottorato-ricerca/inostricorsi/area-social-science-and-humanities/diritto-per-linnovazione-dello-spazio-giuridico-europeo/il-dottorato/diritto-per-linnovazione-nello-spazio-giuridico-europeo https://disg.uniud.it/ricerca/dottorato-in-diritto-per-linnovazione-nello-spazio-giuridico-europeo

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)	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 mark degree. Applicants with qualification not yet obtained must submit certification or self-certification (as art. 5 paragraph 5 of the Call) of the academic degree needed for admission to the PhD programme and list of exams (list of exams: single score, average score and maximum score); 2. 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); In the application (see art. 6 of the Call) applicants must choose irrevocably the scientific domains (SSD) on which the examination tests will concern: IUS/04 Commercial Law, IUS/07 Labour Law, IUS/08 Constitutional Law, IUS/12 Tax Law, IUS/13 International Law, IUS/14 European Law, IUS/15 Civil Procedure, IUS/16 Criminal Procedure. Applicants who compete for reserved position (see art. 9 of the Call) must submit: 3. Curriculum vitae et studiorum, dated and signed.
Optional documents (art. 5 of the Call)	Applicants who compete for reserved position (see art. 9 of the Call) may submit: 1. Scientific publications; 2. Master thesis ("Tesi di Laurea") associated to the degree/title providing access to the PhD programme.

SELECTION COMMITTEE	
Appointed members	Vittorio Giorgi – Full Professor – University of Udine Marina Brollo – Full Professor – University of Udine Ludovico Mazarroli – Full Professor – University of Udine Dario Stevanato – Full Professor – University of Trieste Stefano Amadeo – Full Professor – University of Trieste Lotario Benedetto Dittrich – Full Professor – University of Trieste Natalia Rombi – Assistant Professor – University of Udine
Substitute members	Paolo Cuomo – Associate Professor – University of Udine



TABLE A – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

<p>Valeria Fili – Full Professor – University of Udine Dimitri Giroto – Associate Professor – University of Udine Mario Nussi – Full Professor – University of Udine Elisabetta Bergamini – Full Professor – University of Udine Alessandra Frassinetti – Associate Professor – University of Trieste Andrea Scella – Full Professor – University of Udine</p>
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ADMISSION

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

Positions available: 9

<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research program</i>
Positions WITH SCHOLARSHIP: 7	4	Univ. Udine	€ 16,243.00	Max 6 months optional	Research program in line with the Curricula of the programme
	3	Associated Institution: Univ. Trieste	€ 16,243.00	Max 6 months optional	Research program in line with the Curricula of the programme
Positions WITHOUT SCHOLARSHIP: 2	2	-	-	-	Research program in line with the Curricula of the programme

Competition procedure and test schedule

Evaluation of titles, written examination and oral examination.

For the evaluation of applicants' attitude to scientific research and their basic ability to follow the course program, the Selection Committee can attribute up to 100 points to each applicant:

- max 30 points for the evaluation of the Graduation Mark or average score of the exams (see details below);
- max 35 points for the written examination;
- max 35 point for the oral examination.

Applicant is admitted to the written examination if his/her titles receive at least 21 points for the evaluation of the Graduation Mark (minimum mark to be admitted to the selection process is: 95/110) or the average score of the exams regarding academic programmes needed for admission to PhD programme (minimum average score 25/30). No other titles will be evaluated. To be admitted to the oral examination the minimum score of the written examination is 14. Applicants obtain the eligibility for the PhD programme with an evaluation of at least 49 points in the examinations (written + oral). Only for eligible applicants, the points attained in both examinations will be added to the points of the titles.

Enrolment in the PhD programme for winner applicants with not yet obtained degree will be possible only if the degree mark obtained is equal or greater than 95/110 (see art. 3 paragraph 2 of the Call).

Please note that in case of impossibility to carry out in-class activities due to a situation of public health emergency, the Commission will conduct oral examinations remotely, to which consequently 70 points will be attributed. In this latter case, candidates will receive a communication at least ten days before the public competition will take place, exception made for emergency interventions that can be adopted at a later date.

DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE WRITTEN EXAMINATION: within August 31, 2022.

DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: on September 14, 2022.

DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 2022.

Foreign language that can be used for examinations	Italian or English	
Evaluation Criteria of qualifications <i>During the preliminary meeting the Selection Committee may establish sub-criteria for the evaluation</i>	<p>Only the graduation mark will be assessed. No other titles will be evaluated. In the event that the applicant certifies or self-certifies more degrees allowing the admission to the PhD programme, the Selection Committee will take into account only one degree grade, choosing where possible the highest one.</p> <p>Graduation mark:</p> <p>from 95 to 99 from 100 to 101 from 102 to 104 105 106 107 108 109 110 and 110 cum laude</p> <p>For applicants with not yet obtained degree only the average of the exams regarding the academic title needed to access to the PhD programme will be evaluated:</p> <p>from 25 to 25,99 from 26 to 26,99 from 27 to 27,99 from 28 to 28,99 from 29 to 29,99 30 and 30 cum laude</p>	<p>21 points 23 points 24 points 25 points 26 points 27 points 28 points 29 points 30 points</p> <p>21 points 24 points 26 points 28 points 29 points 30 points</p>



TABLE A – PhD Programme in LAW AND INNOVATION IN THE EUROPEAN LEGAL SPACE

Written examination	In the written test, the Selection Committee will identify three topics for each of the following scientific domains (SSD): IUS/04 Commercial Law, IUS/07 Labour Law, IUS/08 Constitutional Law, IUS/12 Tax Law, IUS/13 International Law, IUS/14 European Law, IUS/15 Civil Procedure, IUS/16 Criminal Procedure. For each triplet of topics referred to the mentioned SSD a draw will be made, in such a way as to identify one topic for each SSD. Each applicant must carry out the subject of the SSD specified in the application form. The written tests of the applicants will be evaluated according to the following criteria: knowledge of the topic; critical presentation skills; suitable use of legal language.	
	Date	September 14, 2022
	Time	9.30 AM
	Place	University of Udine, Department of Legal Science (DISG), via Treppo 18, 33100 Udine, ITALY
Applicants must exhibit a valid identification document for admission to the written test.		
Oral examination	The oral examination could be carried out in Italian or in English. It will consist of a discussion about general topics referred to the following scientific domains (SSD): IUS/04 Commercial Law, IUS/07 Labour Law, IUS/08 Constitutional Law, IUS/12 Tax Law, IUS/13 International Law, IUS/14 European Law, IUS/15 Civil Procedure, IUS/16 Criminal Procedure. The Selection Committee will ask the applicant detailed questions related to the SSD indicated in the application form. The oral examination will be evaluated according to the following criteria: degree of knowledge of the topics; critical presentation skills; suitable use of legal language. The oral examination will also assess the knowledge of English language.	
Calendar of the oral examination	Date	September 15, 2022
	Time	9.30 AM
	Place	University of Udine, Department of Legal Science (DISG), via Treppo 18, 33100 Udine, ITALY
	Based on the number of applicants, the oral examination may take place in more than one day. Applicants must exhibit a valid identification document for admission to the oral examination.	

COMPETITION FOR RESERVED POSITIONS (art. 9 of the Call for Applications)

Positions available: 1

<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research programme</i>
Positions WITHOUT SCHOLARSHIP for applicants with a qualification obtained in a foreign university:	1	-	-	-	Research program in line with the Curricula of the programme.

Competition procedure and test schedule

The selection is based on the evaluation of the titles. The Selection Committee can attribute up to 100 points to each applicant. Applicants obtain the eligibility with a score not less than 70. The Selection Committee may contact applicants for an interview (also in a remote modality) for further information on the submitted documents. The interview does not give any additional score.

DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 2022.

Criteria for evaluation of qualifications <i>During the preliminary meeting the Selection Committee may establish sub-criteria for the evaluation</i>	Curriculum vitae et studiorum	60
	Scientific publications	30
	Thesis	10



TABLE B – 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 mainly developed, with reference to the scholarship (see art. 11 of the Call) and/or to the supervisor assigned, at one of these locations: administrative location, associated location, financial supporter's location (if the financial supporter is an external institution).
Coordinator	Federico Fontana – University of Udine (coordinatore.iai@liste.uniud.it)
Programme duration	3 years
Curriculum	-
Research topics	<ul style="list-style-type: none"> - Algorithms - Acoustic scene analysis and Machine listening - Artificial intelligence in agrifood - Automatic planning and scheduling - Autonomous systems - Blockchain and Digital ledger technologies - Computational biology and Bioinformatics - Computational intelligence and Optimization - Computer vision - Crowdsourcing and Human-in-the-loop AI - Cyber-security - Data science and Big data analytics - 3D digitalization with Artificial intelligence - Distributed systems: models and applications - Formal methods and Automatic verification - Human-Computer interaction, Auditory-tactile interfaces - Knowledge representation and Automatic reasoning - Information retrieval - Internet of things: platforms and technologies - Logics in computer science - Machine learning and Deep learning - Medical informatics, Tele-medicine and e-Health - Methodologies, languages and techniques for problem solving in artificial intelligence - Natural language processing - Predictive monitoring, diagnostics and maintenance - Social systems and Recommendation systems - Software engineering - Virtual reality, Serious games.
Research programs	Decided by the Teaching Board within the PhD programme Research topics.
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) and officially certified list of the exams (with candidate's grades, average grade, highest possible grade) passed during the Italian first level (bachelor) and the Laurea Specialistica/Magistrale programmes or during the Italian programmes ante 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. 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



TABLE B – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

	<p>must submit an extended abstract in place of the complete thesis, in Italian or English language, signed by the thesis Supervisor (between 15.000 and 25.000 characters, spaces included);</p> <p>5. 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);</p> <p>6. 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).</p>
Optional documents (Art. 5 of the Call)	<p>1. Publications (max 3);</p> <p>2. Recommendation letters (max 2) written by university professors, scientific researchers or other experts in the specific research topics (art. 6 of the Call).</p>
All titles must be presented exclusively in PDF format, dated and signed by the candidate.	

SELECTION COMMITTEE	
Appointed Members	<p>Luca Chittaro – Full Professor – University of Udine Alessandro Cimatti – Head of Research unit – Bruno Kessler Foundation Stefano Mizzaro – Full Professor – University of Udine Riccardo Spizzo – Head of Medical unit – Centro di Riferimento Oncologico – Aviano (PN) Niki Martinel – Associate Professor – University of Udine Dario Della Monica – Assistant professor – University of Udine</p>
Alternate Members	<p>Alberto Policriti – Full professor – University of Udine Massimo Vecchio – Head of Research unit – Bruno Kessler Foundation Federico Fontana – Associate professor – University of Udine</p>

ADMISSION

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

Positions available: 14					
<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research program</i>
Positions WITH SCHOLARSHIP: 11	4	University of Udine	€ 16,243.00	max 6 months optional*	In line with the research topics of the PhD programme
	3	Associated Institution: Fondazione Bruno Kessler	€ 16,243.00	max 18 months optional	<ul style="list-style-type: none"> - Reconfigurable and trustworthy pandemic simulation - Reverse Engineering via Specification Mining - Condition monitoring and predictive maintenance of complex industrial systems: Model-based reasoning meets Data Science - Planning and scheduling with time and resource constraints for flexible manufacturing - Meta-learning for efficient 3D representations - Boosting Digital Heritage (DH) with advanced AI methods
	2	External Institution: Centro di Riferimento Oncologico with legal venue in Aviano (PN)	€ 16,243.00	max 6 months optional	Artificial Intelligence and Data Analysis for Personalized Oncology
	2	University of Udine – Project PSA - HERES	€ 16,243.00	max 6 months optional	<ul style="list-style-type: none"> - Organization, modeling and digital storage of heritage documents - Deep Learning for Digital Humanities
Positions WITHOUT SCHOLARSHIP: 3	3	-	-	-	In line with the research topics of the PhD programme

* Aalborg University Copenhagen, Copenhagen (Denmark), provides one Nordforsk scholarship amounting to € 23014,92 (gross amount) to fund an additional 12-month mobility research referred to "Nordic SMC – Nordic Sound and Music Computing Network" project on the topic "Algorithms for audio-tactile rendering in the Internet of Things" at the Multisensory Experience Lab in that University.

Competition procedure and schedule

Titles evaluation and oral examination.
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



TABLE B – PhD Programme in COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE

<p>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. DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: within September 9, 2022. DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 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	September 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 identification document for admission to the oral examination.	



TABLE C – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

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	Institut National Polytechnique de Grenoble (France)
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 mainly developed, depending on the scholarship (see art. 11 of the Call) and/or on the supervisor assigned, at one of these locations: administrative location, associated location, financial supporter's location (if the financial supporter is an external institution).
Coordinator	Prof. David Esseni (david.esseni@uniud.it)
Programme duration	3 years
Curricula	<ol style="list-style-type: none"> 1. New management paradigms and fabrication technologies for competitive enterprises with low environmental impact; 2. Information and communication technology for the inclusive society; 3. Design of innovative thermo-electro-mechanical systems and development of advanced methods for the assessment of structural damage and reliability for energy saving; 4. Mechanical technologies and electronic devices for domotics, medical diagnostic and safety.
Research topics	<p>- <i>Curriculum 1 - New management paradigms and fabrication technologies for competitive enterprises with low environmental impact</i></p> <ol style="list-style-type: none"> 1. Lean management, agile project management, operations management, production planning and control, supply chain management, purchasing and supplier management, innovation management, new product development, global manufacturing, complexity management, performance measurement systems; 2. System and machinery efficiency for industrial production; 3. Cognitive features of products development in view of CAD-PLM technologies; 4. Characteristics and applicability of emerging prototyping methodologies (augmented reality, functional mock-up, interaction design, etc.); 5. Smart logistics: computation models and algorithms; 6. New technologies for the manufacturing of innovative materials; 7. Systems for monitoring and control of machine tools; 8. Methodologies for the design of energy and production efficient automatic systems Approaches to system and product innovation; 9. Robotic systems for the industrial sustainability 10. Robotic systems for production and energy efficiency <p>- <i>Curriculum 2 - Information and communication technology for the inclusive society</i></p> <ol style="list-style-type: none"> 1. Nano-electronic devices (MOSFETs, Steep Slope, etc.) for energy efficient and high performance electronics. Non volatile Memories for massive 3D integration (Flash, charge trap); 2. Advanced electron devices based on innovative materials and architectures in the Beyond CMOS and More than Moore domains: graphene, 2D crystals, III-V compound semiconductor devices; 3. Semi-classical (BTE) and quantum mechanical (NEGF) simulation of nanoelectronics devices; 4. Integrated circuit design for energy efficient communications, energy conversion and management; 5. Innovative communication paradigms and systems: systems with multiple antennae, distributed communication systems, HW and SW architectures for telecommunications; 6. Multimedia signals processing and analysis: video and image encoding, video streaming based on peer-to-peer networks, joint source/channel encoding, compressive sensing; 7. Test and development of metaheuristic algorithms for combinatorial problems; 8. Pervasive computing, cloud computing, overlay networking, distributed computing in miscellaneous networks of computers; 9. Artificial vision system, virtual sound, machine learning; 10. Wireless communication systems and networks, signal processing for communication, physical substrate algorithms, transmission system algorithms. 11. Data and Information Fusion <p><i>Curriculum 3 – Design of innovative thermo-electro-mechanical systems and development of advanced methods for the assessment of structural damage and reliability for energy saving</i></p> <ol style="list-style-type: none"> 1. Energy harvesting systems for self powered, smart, distributed sensors; 2. Electro-mechanical devices for innovative production and storage energy systems; 3. New paradigms, systems, technologies for surface and air transportation vehicles with low energy consumption; 4. Integrated power electronics for industrial plants and machinery; 5. Electric drivers and converters for distributed electric generation and co-generation systems (photovoltaic, wind, etc.); 6. On board electronics: terrestrial and satellite localisation and navigation systems; communication networks and systems;



TABLE C – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

	<p>7. Green mechatronics: mechatronics for energy saving; 8. Design methodologies for materials handling systems characterised by low environmental impact; 9. Holistic design of lightweight structures for low emissions and low energy consumption vehicles; 10. Design of energy efficiency industrial plants; 11. Stress and strain analysis of materials and structures subjected to time-dependant deformation processes; 12. Methods for structural integrity design and verification; 13. Developments of damage-tolerant design methods; 14. Multi-physics analyses for the evaluation of the stress/strain state in materials and engineering structures; 15. Micromechanical damaging processes in materials; 16. Behaviour characterisation and modelling of materials processed by advanced manufacturing techniques; 17. Modeling and control of mechanical and mechatronic systems; 18. Modeling and control of vibrations in mechanical systems; 19. Numerical modeling for the simulation of electromagnetic devices and fields.</p> <p><i>Curriculum 4 – Mechanical technologies and electronic devices for domotics, medical diagnostic and safety</i></p> <p>1. Smart systems and technologies for home, working and leisure environments 2. Systems for safety at work, on the road, at home; systems for the management of home assistance activities; 3. Sensors, devices and instrumentation for medical care and tests and for the support of the elderly; systems for the planning and support of hospital activities; 4. Innovative paradigms for the interaction of domotics, surgery and security devices; 5. Passive and active control of noise and vibration for industrial, home and surface-air transport vehicles applications; 6. Devices and instrumentation for the detection of biomedical parameters: nanosensors 7. Robots for elderly and disable people assistance; 8. Robots for surgery applications; 9. Large scale tri-dimensional image modelling, automatic synthesis of binocular video flows from monocular sources; 10. Geophysics; seismic data acquisition, vulcanology, geostatics, seismic risk evaluation.</p>
Research programs	Research programs are selected by the Teaching Board among the topics offered by the curricula.
Programme website	https://www.uniud.it/it/ricerca/lavorare-nella-ricerca/dottorato-ricerca/inostricorsi/area-physical-science-and-engineering/ingegneria-industriale-e-dellinformazione/il-dottorato https://phd.diegm.uniud.it/ie-phd/

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)	<p>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 programmess 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).</p>
Optional documents (art. 5 of the Call)	<p>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: 25.000 characters, including spaces); 2. Motivational letter by which the applicant explains the reasons for admission to the PhD programme, dated and signed (approximate limit: 2.500 characters, including spaces); 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).</p>



TABLE C – PhD Programme INDUSTRIAL AND INFORMATION ENGINEERING

SELECTION COMMITTEE					
Appointed members	Francesco De Bona – Full Professor – University of Udine Andrea Tonello – Associate Professor – University of Udine Barbara Motyl – Adjoint Professor – University of Udine				
Substitute members	Stefano Filippi – Full Professor – University of Udine Roberto Rinaldo – Full Professor – University of Udine David Esseni – Full Professor – University of Udine				
ADMISSION					
GENERAL COMPETITION (art. 8 of the Call for Applications)					
Positions available: 5					
<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research program</i>
Positions WITH SCHOLARSHIP: 4	4	Univ. Udine	€ 16,243.00	max 6 months optional	Research program in line with research topics.
Positions WITHOUT SCHOLARSHIP: 1	1	-	-	-	Research program in line with research topics.
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 16 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.</p> <p>DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: within September 5, 2022. DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 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 vitae et studiorum				15
	Scientific publications				5
	Thesis/Abstract				2
	Letters of reference				4
	Motivational letter for admission to the PhD programme				4
Oral examination	<p>The oral examination consists of an individual interview of about 15 minutes aiming to assess the applicant flair to undertake a research doctorate and to carry out the research tasks in the areas of interest for the doctorate.</p> <p>The interview will be assessed considering the following criteria:</p> <p>a) technical and scientific competence in the topics of the doctorate; b) knowledge of the state of the art for the doctorate curricula; c) mastery of English language.</p>				
Calendar of the oral examination	Date	September 16, 2022			
	Time	09:30 AM			
	How to conduct the examination	The oral examination will be held online.			
	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.				



TABLE D – 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 mainly developed, with reference to the scholarship (see art. 11 of the Call) and/or to the supervisor assigned, at one of these locations: administrative location, financial supporter's location (if the financial supporter is an external institution).
Coordinator	Prof. Cristian Marchioli (cristian.marchioli@uniud.it)
Programme duration	3 years
Curriculum	-
Research topics	<ul style="list-style-type: none"> - Energy efficiency and sustainability of machines, processes and plants; - Materials for energy and/or environmental applications; - Catalysis Science and Technology; - Energy transport, conversion, storage and distribution; - Safety engineering and emergency management; - Chemical technologies and processes for energy and environment; - Computational transport phenomena; - UNESCO Chair - Safety for Disaster Risk Reduction and Resilience. <p>The PhD Programme cooperates with the UNESCO Chair in Intersectoral Safety for Disaster Risk Reduction and Resilience.</p>
Research programs	Research programs will be decided by Teaching Board of the Ph.D. programme within the research topics.
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/eees-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. Research project, dated and signed, developed under the topics listed in this table (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	Francesco Andreatta – Associate Professor – University of Udine Damiana Chinese – Associate Professor – University of Udine Daniele Goi – Full Professor – University of Udine



TABLE D – PhD Programme in ENVIRONMENTAL AND ENERGY ENGINEERING SCIENCE

	Cristian Marchioli – Associate Professor – University of Udine Alessandro Trovarelli – Full Professor – University of Udine
Substitute members	Giovanni Cortella – Associate Professor – University of Udine Andrea Melchior – Associate Professor – University of Udine

ADMISSION

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

Positions available: 6

<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research program</i>
Positions WITH SCHOLARSHIP: 6	4	Univ. of Udine	€ 16,243.00	max 6 months optional	Research program in line with research topics.
	1	External Institution: Comune di Udine with legal venue in Udine*	€ 16,243.00	max 6 months optional	Science and technology for environmental and territorial resilience (as part of the UNESCO Chair activity). <i>The description of the proposed research program can be found on the PhD website.</i>
	1	External Institution: Livenza Tagliamento Acque Spa with legal venue in Portogruaro (VE)	€ 16,243.00	max 6 months optional	Environmental and spatial resilience related to water availability and artificial recharge of groundwater aquifers through high quality surface water. <i>The description of the proposed research program can be found on the PhD website.</i>
Positions WITHOUT SCHOLARSHIP: 1	1	-	-	-	Research program in line with research topics.

*Applicants for the scholarship “Science and technology for environmental and territorial resilience” (funded by Comune di Udine) must also meet the following requirements:

- be born and be domiciled in a municipality included in the territorial area of the province of Udine;
- have an economic condition with an ISEE value of their family unit (ISEE - University 2022) not exceeding € 30,000.00.

Competition procedure and test schedule

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 September 12, 2022. DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 2022.		
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	September 23, 2022
	Time	09:30 AM
	Place	Polytechnic Department of Engineering and Architecture (DPIA), Auditorium ex-DCFA – via del Cotonificio 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.	



TABLE E – PhD programme AGRICULTURAL SCIENCES AND BIOTECHNOLOGY

THE PhD PROGRAMME	
Administrative location	University of Udine - Department of Agricultural, Food, Environmental and Animal Sciences (DI4A) – via delle Scienze n. 206, 33100 Udine, ITALY (tel. +39 0432 558600)
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 mainly developed, with reference to the scholarship (see art. 11 of the Call) and/or to the supervisor assigned, at one of these locations: administrative location, financial supporter's location (if the financial supporter is an external institution).
Coordinator	Prof. Francesco Nazzi (francesco.nazzi@uniud.it)
Programme duration	3 years
Curricula	A. Biology and plant production; B. Biology and livestock science; C. Biology of pathogens and plant protection.
Research programs	<i>Curriculum Biology and plant production</i> A1. Improving sustainability of horticultural crops through biostimulants based on algal extracts (Supervisor: L. Dalla Costa) A2. Functional analysis of RNA editing for plant breeding applications (Supervisor: E. De Paoli) A3. Spring phenology's molecular control in grapevine (Supervisor: R. Falchi) A4. Spatially-explicit modelling of cropping systems to support agricultural policy-making in the Friuli Venezia Giulia region (Supervisor: E. Marraccini) A5. Interactions among processes involved in nitrogen acquisition and abiotic stresses, such as nutritional deficiencies and water stress (Supervisor: L. Zanin) <i>Curriculum Biology and livestock science</i> B1. A One-health approach: from feed to functionalized food (Supervisor: T. Peric) B2. Impact of Microplastics and Nanoplastics on ruminants reproduction (Supervisor: G. Stradaoli) B3. Edible insects as a green strategy for detoxification of contaminated substrates (Supervisor: F. Tulli) <i>Curriculum Biology of pathogens and plant protection</i> C1. Investigations over epidemiological traits of grapevine yellows and the interactions of the associated phytoplasmas with their hosts (Supervisor: M. Martini) C2. Exploiting biodiversity to enhance grapevine pest control and other ecosystem services (Supervisor: F. Pavan)
Programme website	https://www.uniud.it/it/ricerca/lavorare-nella-ricerca/dottorato-ricerca/inostricorsi/area-life-science/scienze-e-biotecnologie-agrarie/il-dottorato https://www.uniud.it/it/ateneo-uniud/ateneo-uniud-organizzazione/dipartimenti/di4a/content/didattica/dottorati-di-ricerca/copy_of_PHD%20Schoole%20ASB/PhD%20School%20Agricultural%20Science%20and%20Biotechnology

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 Laurea Specialistica/Magistrale programme 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. Research project, dated and signed, focused on the first research program selected by the applicant among the ones listed above (approximate length of the research project, in English, spaces included: 10.000 characters); 5. A statement concerning the choice of research program(s).
Optional documents (art. 5 of the Call)	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,



TABLE E – PhD programme AGRICULTURAL SCIENCES AND BIOTECHNOLOGY

	<p>signed by themselves and by their thesis Supervisor (approximate limit: 25.000 characters, spaces included);</p> <p>2. Publications (max 2);</p> <p>3. Letters of reference (max 2), from university professors, scientific researchers or other experts in the field (art. 6 of the Call).</p>
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SELECTION COMMITTEE	
Appointed members	<p>Luisa Dalla Costa – Assistant Professor – University of Udine</p> <p>Emanuele De Paoli – Assistant Professor – University of Udine</p> <p>Rachele Falchi – Assistant Professor – University of Udine</p> <p>Elisa Marraccini – Associate Professor – University of Udine</p> <p>Francesco Pavan – Assistant Professor – University of Udine</p> <p>Tanja Peric – Assistant Professor – University of Udine</p> <p>Giuseppe Stradaoli – Full Professor – University of Udine</p> <p>Nicola Tomasi – Associate Professor – University of Udine</p>
Substitute members	<p>Marta Martini – Associate Professor – University of Udine</p> <p>Francesca Tulli – Associate Professor – University of Udine</p>

ADMISSION

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

Positions available: 4					
<i>Detailed description</i>	<i>N.</i>	<i>Funding</i>	<i>Annual gross amount</i>	<i>Period abroad</i>	<i>Research program</i>
Positions WITH SCHOLARSHIP: 4	4	Univ. Udine	€ 16,243.00	max 6 months optional	A1, A2, A3, A4, A5, B1, B2, B3, C1, C2 (one scholarship for each research program)
Positions WITHOUT SCHOLARSHIP: 0	0	-	-	-	-

Competition procedure and test schedule

<p>Evaluation of titles and oral examination.</p> <p>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.</p> <p>DATE FOR THE PUBLICATION OF ADMITTED APPLICANTS TO THE ORAL EXAMINATION: within September 2, 2022.</p> <p>DATE FOR THE PUBLICATION OF THE FINAL RANKING LIST: within September 30, 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 vitae et studiorum	10
	Research project	10
	Scientific publications	2
	Thesis/Abstract	6
	Letters of reference	2
Oral examination	The oral examination is based on a discussion on the scientific titles submitted and includes an evaluation of English language knowledge.	
Calendar of the oral examination	Date	September 14, 2022
	Time	9:00 AM
	Place	Department of Agricultural, Food, Environmental and Animal Sciences (DI4A), Cereals room – via delle Scienze n. 206, 33100 Udine, ITALY
	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	