

AREA POST LAUREA

Ufficio master e Dottorati

Centro Congressi Campus Ecotekne S.P. 6, Lecce- Monteroni Tel. +39 832 - 299041 — 299210 - 299232 - 299238 master.dottorati@unisalento.it

Public call for applications for the competitive selection procedure for admission to the 37th Cycle Ph.D. Research Course with administrative seat at the *Università del Salento* (University of Salento)

This translation cannot be used for legal purposes and is only meant to provide information in English on the call for applications

Applications for the competitive selection procedure must be made within and **not after 13:00** (Italian time) on 8th July 2021.

There is no contribution to participate in the competition.

(approved by Rector's decree. n. 330, on 8th June 2021)

Article 1) Implementation

The call for applications for the competitive selection procedure for admission to the three-year Doctoral (Ph.D.) Research Course, accredited by the Italian Ministry of Education, Universities and Research (MIUR) with the approval of Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR) with administrative seat at the University of Salento is now open.

The detailed description of each Course (the PhD course description) is attached to this call for applications and is to be considered a part of it.

The curricula for the three-year Ph.D. research Courses to be included in the call for applications are the following:

- Diritti e Sostenibilità (Law and Sustainability, see attachment A);
- Filosofia: Forme e Storia dei Saperi Filosofici (Philosophy: Forms and History of Philosophical Knowledge, see attachment B);
- Fisica e Nanoscienze (Physics and Nanosciences, see attachment C):
- Human and Social Sciences (see attachment D);
- Ingegneria dei Materiali e delle Strutture e Nanotecnologie (Material, Structure and Nanotechnology engineering, see attachment E);
- Ingegneria dei Sistemi complessi (Engineering of complex systems, see attachment F);
- Lingue, Letterature, Culture e loro applicazioni (Languages, Literatures and Cultures and their applications, see attachment G);
- Matematica e Informatica (Mathematics and IT, see attachment H);
- Nanotecnologie (Nanotecnology, see attachment I);
- Scienze del Patrimonio Culturale (Sciences for Cultural Heritage, see attachment L);
- Scienze e Tecnologie Biologiche ed Ambientali (Biological and environmental sciences and technologies, see attachment M);



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- "Digital Transformation and Sustainability. Firms and public Administrations in the global Economy" (All. N).

Article 2) Admission Requirements

Admission to the competitive selection procedure to one (or more) of the Ph.D. research Courses listed in article 1 is open to all the citizens, without age or citizenship limitations, who enjoy civil and political rights in their state of residence or origin and who, within the expiry date of this public call for applications, as specified in the following paragraph, hold a degree awarded in accordance with Italian Law n. 341/90, a specialist degree obtained in accordance with DM (ministerial decree) n. 509/99 or a master's degree awarded in accordance with DM (ministerial decree) no. 270/04, or an equivalent foreign degree recognized as equivalent on the basis of international agreements or approved in advance by the Academic Board, for the purpose of the admission to the Ph.D. research course, and on the basis of national legislation.

It is possible to apply for more than one curriculum (see article 1 for a list of the curricula).

The detailed notes for each Ph.D. research course (Ph.D. research course descriptions), in attachment to this call for applications (Attachments A-N) contain specific information relative to each course and indication of the **specific types of degree required for admission to the competitive selection procedure**.

Provided that they make an application by the deadline specified in article 3 below, eligible Applicants also include, those who will be awarded one of the aforementioned degrees by **October 31st**, **2021** (or by a different date that the MIUR (Ministry of Education, Universities and Research) may eventually establish in the case of extension of the same due to the delay in the start of the course activation procedures for the 37th cycle).

Once they have got their degrees, Applicants must immediately submit by email all the required information (name of institution which awarded the degree, date of issue, type of degree, final mark) either by means of self-certification or by means of a substitute declaration as specified by DPR (presidential decree) no. 445/00 (in the case of EU Applicants) or a certificate (for Applicants from outside the EU) accompanied by a copy of a valid identity document to the following addresses amministrazione.centrale@cert-unile.it and master.dottorati@unisalento.it.

Applicants who expect to get their degree by 31st October 2021 will be admitted conditionally to the competitive selection procedure (or within a different date possibly extended by the MIUR- Ministry of Education, Universities and Research).

For the places announced and reserved for employees of affiliated public and private bodies, those awarded postions must be employees of the same Body on the date of acceptance of the post at the end of the Rectoral measure approving the ranking.

Even if successful in their application, Applicants will lose any eventual right to register on the Ph.D. research course if they do not present the required documentation and certificates by, and no later than 31st October 2021.

Detailed information on the individual Ph.D. research courses (Ph.D. research course descriptions) – included in the appendix to this public call for applications (attachments A-N) – specifies the positions on the courses Applicants may compete for, the grants and scholarships available, and, where foreseen, any positions reserved for specific research themes, financed with grants / scholarships funded under certain Courses / projects or under agreements with external bodies which foresee mandatory research on a precise theme which has already been specified in the attached Ph.D. research course descriptions and the positions reserved for employees of certain entities / companies or academic staff at the Al Akhawayn University of Morocco.



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Positions on **Courses with grants/scholarships subject to a specific research theme**, for the purposes of this call for applications, are <u>those positions</u>, <u>specified in the Ph.D. research course descriptions</u>, <u>which</u>, <u>by their particular nature</u>, <u>cannot be assigned purely and simply on the basis of assessment of the Applicant in the general competitive selection procedure but require further specific assessment beyond that of the general assessment.</u>

An Applicant who wishes to apply to more than one course must submit different online applications to participate in each separate competitive selection procedure.

In addition to applying for positions on Courses with general themes, Applicants can participate in the **competitive selection procedure for positions on Courses with grants/scholarships subject to <u>only one specific research theme</u> from among those published for each Ph.D. research course.**

This choice must be clearly indicated in the online application by specifying the type of grant / scholarship for the specific chosen research area together with the general field of study.

The Applicant who presents an application for a position with a grant/scholarship subject to a specific research theme (i.e. for a position with an apprenticeship contract), expresses his / her preference for the assignment of the specific position (positions) with grant/scholarship (grants/scholarships).

The choice made by the Applicant is binding and irrevocable and entails the obligation on the part of the same Applicant, in the event that he / she is the Winning Applicant, to accept the position with a scholarship subject to a specific research theme.

Applicants who do not apply for positions on a Course with a grant/scholarship subject to a specific research theme (i.e. for a position with an apprenticeship contract), take part exclusively in the competitive selection procedure for general research positions (with or without a grant/scholarship). Applicants who wish to apply for positions with a grant/scholarship subject to a specific research theme, will have to carry out research on that same theme, if the grant/scholarship is awarded, and in full accordance with the terms of the agreement stipulated with the external funding bodies, and accepting any obligations set out in the same agreement.

Grants/scholarships subject to a specific research theme may amount to a different sum than the standard one established for general research theme scholarships by D.M. (ministerial decree) no. 40/2018.

Indication of any different amount of the published grants/scholarships is contained in the Ph.D. research course descriptions of the individual Ph.D. research courses attached to this call for applications.

Aptitude or experience regarding the research theme chosen must be declared when submitting the application for participation in the competitive selection procedure and will be evaluated by the Admissions Board during an interview.

The course descriptions of the PhD Research courses attached to the Public call for applications provide places reserved exclusively for lecturer of the Al Akhawayn University in Ifrane (Morocco).

Only lecturers of the Al Akhawayn University in Ifrane (Morocco) will be able to apply for reserved positions.

The PhD research course in Biological and Environmental Sciences and Technologies also includes one position reserved for foreign students within Departments of Excellence (topic n. 1).



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Each PhD course also provides for n. 1 place reserved exclusively for lectureres of the Al Akhawayn University in Ifrane (Morocco) who will apply exclusively for the reserved ranking that concerns them.

Article 3) Application Procedure

Applications for the competitive selection procedure must be made <u>within and not after 13:00</u> (Italian time) on 8th July 2021.

The application shall be made, under penalty of exclusion, **exclusively online**, by following the appropriate procedure made available at: https://studenti.unisalento.it
To access the procedure, you must:

- a) Log on to the said website https://studenti.unisalento.it and select, in the top right corner, in the MENU tab, your chosen language (Italian or English).
- b) If the Applicant has not already registered, complete the registration process, clicking on "REGISTRAZIONE" in the "AREA RISERVATA", or access using your credentials;
- c) The applicant who has already registered on Esse3 can directly access the above mentioned website (accessing from "Authentication procedure LOGIN") and log in with the credentials he/she already have.
 - On the other hand, foreign applicants will be able to access the website https://studenti.unisalento.it through "Registration for foreign candidates"/ "Registrazione per candidati stranieri" without having to activate the SPID.
 - All other applicants must activate SPID level 2.
 - The information needed to activate SPID can be found at https://www.spid.gov.it/richiedi-spid;
- d) Go to the portal (authentication LOGIN) on the banner "Accedi al Portale degli studenti" and click on "REGISTRAR'S OFFICE/ADMISSION TEST/ISCRIZIONE CONCORSI/DOTTORATO DI RICERCA".
 - Choose the Doctorate Course on which you intend to apply and, after carefully reading this call for application and its attachments, complete the on-line application form, entering all the required data. The procedure described in this paragraph **is obligatory** in order to be admitted to the competitive selection procedure.
- e) Complete the online application form and attach all required documents in pdf, jpeg or tiff formats.

It should be noted that for competitive selection procedures that include positions with a general research theme and places with a specific research theme, the choice of the type of position for which you intend to apply must be made in the drop-down MENU under "ADMINISTRATIVE CATEGORY".

The online procedure for the submission of the application for participation in the competitive selection procedure will be available at https://studenti.unisalento.it from 15:00 (Italian time) on 10 June 2021.

ITALIAN TAX CODE (CODICE FISCALE) FOR FOREIGN APPLICANTS

N.B. For first time users, the system will require mandatory indication of their Italian tax code (codice fiscale).

International students who do not have an Italian tax code will be directed to the following link: www.codicefiscale.com where he or she can obtain one, simply by inserting the name of the country



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or state in which he or she was born (e.g. someone who was born in Paris should simply put "France").

APPLICATION PROCESS

Applicants are kindly requested to rigorously follow in detail all the following instructions:

- > The files required by the electronic procedure must be attached in pdf, jpg and tiff formats. These files must be inserted in the relevant section of the online procedure and must be named in the following manner:
- identity card: CI_Applicant's name (eg. CI_JACKSON)
- curriculum vitae: CV_ Applicant's surname (e.g. CV_JACKSON)
- self-certification of exams: ESAMI_Applicant's surname (e.g. ESAMI_JACKSON)
- other qualifications: TITOLO_1_Applicant's surname; TITOLO_2_Applicant's surname; TITOLO_3_Applicant's surname; etc;
- research project: PROGETTO_PHD in_Applicant's surname;
- account for interview: ACCOUNT_INTERVIEW_ Applicant's surname (e.g. ACCOUNT INTERVIEW JACKSON);
- co-tutor (only for the Ph.D. research course in "Filosofia: Forme e Storia dei saperi filosofici" for which one is expressly required): cotutor_Applicant's surname (e.g. COTUTOR_JACKSON);
- curriculum and lines of research (only for the Ph.D. research course in "Human and Social Sciences"): lines researc Applicant's surname.
- letter of presentation (for the doctoral course in "Physics and Nanosciences": letter_presentation_Applicant's surname;

In the section related to the insertion of TITLES under "TYPOLOGY", the system asks to choose from a drop-down menu among various items (e.g. C.V., CARTA DI IDENTITA'/IDENTITY CARD, Progetto di ricerca/Research Project, Autocert. Esami/Self-certification of exams, Altri titoli/Other qualifications, etc.).

For each TYPOLOGY OF TITLE entered, the applicant must fill in the TITLE section.

The applicant must include the following information in that section:

- for the TITLE related to the "CARTA DI IDENTITA'/IDENTITY CARD" it will be necessary to insert "CI_surname applicant" (eg. CI_JACKSON);
- for the TITLE related to the C.V. it will be necessary to insert "CV_surname applicant" (e.g. ESAMI_JACKSON);
- for the TITLE related to the "Progetto di ricerca/Research Project" it will be necessary to insert "Research Project_surname applicant" (e.g. Research Project_JACKSON);
- for the TITLE related to the "Autocertificazione Esami/Self Certification Exams" it will be necessary to insert "Exams_surname applicant";
- for the TITLE related to the "Autocertificazione Esami/Self Certification Exams" it will be necessary to insert "title 1_surname applicant", "title 2_surname applicant", etc.
- for the TITLE related to the co-tutor (for the courses that provide it) it will be necessary to insert "co-tutor _surname applicant".

Compliance with the above instructions will allow the Admissions Board to review the uploaded documents swiftly. It will also reduce the risk of dispersion of IT documents with objects that are too long during the transfer of data from the online platform.



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The University of Salento declines any responsibility in those cases in which the Applicant proceeds to the transmission of the documents without following the instructions above in the naming of the attached files.

COMPLETING THE ONLINE REGISTRATION PROCEDURE

The online registration procedure terminates with the printing out from the student portal of the receipt of the application for admission to the completive selection procedure.

Once the Applicant has printed out the "admission test application", upon completion of the online procedure, he or she can consider that his or her application to participate in the competitive selection procedure has been correctly completed.

With the online submission of the application the Applicant:

- assumes personal responsibility, pursuant to article 46 and 47 of DPR (presidential decree) 445/2000, regarding the declarations he or she has made and the files attached to the online application, in full awareness of the criminal penalties deriving from false statements and / or false declarations;
- examines the methods of processing of his or her personal data.

N.B. Applicants are invited to submit their application to participate in the competitive selection procedure well in advance of the date (and time) of the deadline for submission of the application to avoid problems of various kinds that could jeopardize the successful outcome of the application transmission procedure.

Indeed, near the expiry time, because of overload due to the high number of users who are completing the online procedure, the system may be subject to slowing down.

It is possible to apply for more than one Ph.D. research course; in which case, the Applicant will have to complete more than one online application for each competitive selection procedure for which he / she intends to participate.

Each candidate may submit only one research project for each PhD course for which he / she is applying.

If the Applicant foresees that they will obtain a qualification by October 31st 2021, he / she must expressly indicate this fact in the application by filling in the section regarding qualifications for admission with the insertion of the "titolo in ipotesi" ("hypothetical qualification"). In such a case, the Applicant will be admitted to the competitive selection procedure "con riserva" (conditionally). In order to be constantly updated on news regarding this call for applications, the Applicant can subscribe to the RSS feed associated with the web page of the competitive selection procedure, by clicking on the icon labelled "Sottoscrivi Rss" ("Subscribe to RSS feed") on the page of the call for applications on the University of Salento website and adding it to his or her own RSS reader.

Article 4) Documents to be submitted

Together with the application for participation in the competitive selection procedure, completed online, the Applicant should attach the files containing:



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- 1. a valid identity document.
- 2. a curriculum vitae containing, among other things, reference to <u>a telephone number and an email address</u> that may be used for all subsequent official communications related to the competitive selection procedure (e.g. <u>notifications in the event of Applicants dropping out and those below them in the rankings being moved up</u>, or the awarding of extra grants/scholarships for innovative Ph.D. research projects) and subsequently, in the event of a successful application for admission to the Ph.D. research course, the official notification on the part of the relevant office and the Coordinator;
- 3. information relating to the Applicant's completed studies (self-certification or photocopy of a transcript of records indicating the exams taken and the marks obtained on the occasion of the attainment of a three-year, specialist, or Master's degree or a degree of the *Vecchio Ordinamento* -- an Italian degree of the format before the Bologna Process reforms), with the indication of the relative **average** of marks and of **the total duration of the Ph.D. research course in question**; students who have not yet completed their degree will be assessed on the basis of the average marks obtained in the exams up to the moment of submission of the application for participation in the competitive selection process;
- 4. documentation certifying that the Applicant meets the qualifications / experience / activities indicated by the individual Ph.D. research course descriptions attached to this call for applications, which the Applicant possesses and desires to be evaluated by the Admissions Board;
- 5. your research project (which must be presented together with the application for participation in the competitive selection procedure for all the PhD research courses). These candidates will be evaluated, as far as the first test is concerned, on the research project presented and therefore will not take the written test. Each candidate may submit only one research project for each PhD course for which he / she is applying.
- the form with the mail account to with the admissions board of the competitive selection procedure send an invitation to the interview which will be carried out through MICROSOFT TEAMS.

The online application is to be considered, for all legal purposes, as an act of self-certification of personal data, of the declared qualifications and the statements made as well as of the attached research project (where one is required) and therefore, with the presentation of the online application, the Applicant assumes personal responsibility, pursuant to articles 46 and 47 of DPR (presidential decree) 445/2000, regarding the declarations he or she has made and the files attached to the online application, in full awareness of the criminal penalties deriving from false statements and / or false declarations.

Article 5) Supplementation/correction of the application

The application form may be corrected /supplemented exclusively by electronic means within the deadline for submitting the electronic application indicated in the previous art. 3.

In order to modify/supplement the application, the applicant must access again the website studenti.unisalento.it and click on "MENU" by selecting "ADMISSION TEST/CONCORSI". So he/she may select the competition for which he/she wants to modify the application from "LISTA CONCORSI A CUI SI E' ISCRITTI". Then it must click on "PROCEED WITH ADMISSION" and finally on "COMPLETA IL PROCESSO SELEZIONATO" at the bottom of the page.



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Thus the applicant may access again the submitted application and proceed to replace, delete or add further documents. At the end of the modifications, the applicant will have to transmit the new application form that will automatically replace the previous one already sent.

The new application generated by the system will permanently cancel the previous one, so it is recommended to check the correctness and completeness of the documents attached to the last application submitted.

Article 6) Applicants with a qualification awarded by a university outside Italy

Applicants who are in possession of a degree awarded by a university outside Italy which has not yet been declared as equivalent to an Italian degree on the basis of international agreements, must accompany the application form with the following documents:

- Certification of the foreign qualification, together with a translation into Italian or English to be included in the "altri titoli" (other qualifications) of the online application; it must include explicit indication of the university exams taken and grades obtained.

The Admissions Board appointed for admission to the Ph.D. research course will, on the basis of the documentation attached by the Applicant, ascertain the eligibility of the foreign qualification for admission to the Course, "in accordance with current legislation in Italy and in the country where it was awarded and with international treaties or agreements concerning the recognition of qualifications for further education."

In case of admission to the Ph.D., successful Applicants in possession of such qualifications awarded outside Italy must submit, within sixty (60) days from the date of registration, the following documentation:

- certificates and diplomas translated and legalized by the competent Italian diplomatic or consular representation abroad;
- declaration of value of the foreign qualification issued by the competent Italian diplomatic or consular representatives abroad.

Article 7) Responsibility

The University of Salento does not accept any liability in the event of loss of communications due to: incorrect information about the residence or the address of the Applicant; an Applicant's failure or delay in notifying it of a change of address; or technical problems attributable to the email address indicated by the Applicant.

Disabled Applicants, recognized under Italian Law no. 104 of 5 February 1992, must explicitly request in their application form the required support, in relation to their disability, as well as give notification of the possible need for additional time for the completion of the admissions tests.

Article 8) Exclusion

The following applications will be automatically excluded:



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- a) applications made and / or received in a manner or timing not in accordance with that specified in article 3 above of this call for applications;
- applications from Applicants who do not possess the specific qualifications indicated in the Ph.D. research course descriptions in the appendix to the call for applications or who do not obtain them by the deadline of 31st October 2021;
- d) applications that lack a copy of a valid identity document, which must be uploaded when submitting the online application form.

Any supplementations or corrections to the application not made according to the provisions of Article 5 of this call for applications or made after the deadline has passed, will not be considered valid.

Failure to provide a curriculum vitae or failure to indicate the university exams taken (with relative average marks) or other qualifications assessed by the Admissions Board, indicated in the relevant Ph.D. research course descriptions, will prevent the Admissions Board from being able to assign any mark under the heading "TITOLI" (qualifications).

In the case of those Applicants who, on the date of application for admission to the competitive selection procedure, are not yet in possession of the degree required to take part in the competitive selection procedure, the Admissions Board may decide to evaluate this qualification, as an alternative to the final degree mark, on the basis of the average mark of the exams sustained in the second level degree course, on the basis of a correspondence criterion that shall be established beforehand

Likewise, the Admissions Board must establish correspondence criterion in advance with regard to the evaluation of the degree mark obtained abroad by an Applicant.

Candidates are required to verify admission to the interview on the date established for the presentation of the results of the research project and in the case of admission to the interview, they are required to connect on the day and at the time indicated to do the interview via the MICROSOFT TEAMS platform.

During the interview, the candidate must guarantee the use of a webcam to allow his / her selection to be identified by the Admissions board and must connect in the manner prescribed by the Commission for the oral examination.

For identification purposes, and under penalty of exclusion from the selective procedure, each candidate is required, before the interview begins, to allow the Commission to identify him, showing the same Identity document already sent, in copy, as an attachment to the application.

Failure to connect, the unavailability of the candidate on the day and time established, or the failure to show a valid identity document are all grounds for exclusion from the selective procedure.

As regards, Applicants excluded from the competitive selection procedure for the reasons referred to in the previous paragraph, the administration will proceed, compatibly with the timing of the competitive selection procedure, to give them written notice, by email, to the address indicated by them in the curriculum vitae that they attached to the application form.

Article 9) Procedure for competitive selection of Applicants



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The competitive selection of Applicants will be carried out according to the timetable which will be published on the University of Salento website for each of the competitive selection procedures (see attachments A-N), at the following link "Bandi e Concorsi/Concorsi/Ricerca/Bandi per Dottorati di Ricerca".

If impediments of any kind do not permit the respect of the examination schedule as indicated in the previous paragraph, the University of Salento will publish a notice with all the necessary changes, within three days prior to the date set for the test.

This notice will be published exclusively on the website of the University of Salento at www.unisalento.it in the "News" section and the dedicated section "Dottorati di Ricerca / Bandi per Dottorati di Ricerca".

Both will be considered as official notification to Applicants.

Assessment of applications will be carried out by a single Admissions Board for each Ph.D. research course that will be appointed by the Rector of the University of Salento and composed of between three and five members, proposed by the Ph.D. research course's Academic Board, from among professors and researchers in the relevant Ph.D. research course's subject area.

No member of the Academic Board will be able to take part in Admissions Boards for the same Ph.D. research course in two subsequent academic cycles, nor will he or she be able to be subsequently part of final exam adjudicating boards that evaluate the thesis Ph.D. students for whom they were on the Admissions Board.

By means of the decree appointing the Admissions Board, the Rector also appoints two professors proposed by the relevant Ph.D. research course's Academic Board as substitutes for the effective members in the event of one or more of them being incapacitated or absent.

In the case of doctorates established as a result of international inter-university cooperation agreements, the Admissions Board and the admission procedures are defined in accordance with those same agreements.

The Ph.D. research course Academic Board can propose, in addition to the components indicated above, no more than two experts, including those from abroad, chosen from public and private research bodies and institutions

In such a case, the experts enter the Admissions Board as full members.

In the event of incapacitation, withdrawal or absence of one or more effective members of the Admissions Board, at any stage of the competitive selection procedure, the coordinator shall make the necessary replacements, based on the names of the substitutes specified in the Rector's decree nominating the Admissions Board, taking into account, where possible, the scientific affinity between the member being replaced and his or her substitute.

Pursuant to Article 16. of the Code of Ethics "Obligations of effectiveness in comparative evaluations", as also stated in DR. (Rector's decree) 1323 (19/11/2012) of the University of the Salento:

- "... 1. In all comparative evaluations for the award of scholarships, Ph.D., post-Ph.D. or research grants or specialization contracts as well as in competitive selection procedures for research positions and in all the procedures of recruitment, transfer or recruitment of full and associate professors and in the conferment of teaching courses, the members of adjudicating board, belonging to the University staff regardless of their role, must state that they have read Chapter II of the Code, indicating any cases where these same articles have not been applied..
- 2. All the teaching staff is committed to ensure that scientific and professional collaborations between themselves and their employees are not based on commonality of personal interests that give rise to the suspicion that any comparative assessments of the Applicants are not carried out



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on the basis of objective findings, but instead by virtue of personal acquaintance with any member of the adjudicating board ... ".

The competitive selection procedure to the Ph.D. research course and the corresponding marks that may be awarded are indicated in the Ph.D. research course descriptions (attachments A to N of this call for applications).

The competitive selection procedure will aim to determine not only the knowledge acquired with reference to the research areas of the Ph.D. research course, but also to determine the scientific maturity, flexibility, and resourcefulness of the Applicant in the face of possibly new areas of research.

The competitive selection procedure will be carried out, pursuant to article 12 of the University Regulations on Ph.D. research courses, by:

- a) the assessment of qualifications (curriculum, university training course, professional experience and research);
- b) the assessment of a written test or a research project, depending on the provisions of the individual Ph.D. research course descriptions.
- c) an interview (viva voce) aimed at verifying the Applicant's knowledge and aptitude in research regarding the themes of the Ph.D. research course.

Applicants are admitted to the interview only if they obtain a mark of at least 30/100 in the assessment of the written exam or research project outlined in letter b) of the preceding paragraph.

The communication of the results of the assessment of the first stage (written test or research project) will be as specified in the Ph.D. research course descriptions, attached to this call for applications, and which is an integral part of said (attachments. A to N).

In the event that a Applicant has submitted an application for a position on a Ph.D. research course with a grant/scholarship subject to a specific research theme, as well as for a position on a general Ph.D. research course, the interview will be both on the general issues as well as on the specific theme and will therefore be carried out separately but at the same location and on the same date.

The first two tests (assessment of the research project or written test and assessment of qualifications) and their marks will be common to both types of positions (general and specific research themes).

The third test (interview) will be carried out separately, preferably at the same location and on the same date, for the position on a Ph.D. research course with a general research theme and for a Ph.D. research course on a specific research theme indicated by the Applicant, according to the procedures described in the preceding paragraph and will give rise to distinct and separate marks.

The Applicant will pass the interview stage only if he or she achieves a mark of at least 30/100. Failing this, the he or she will not be admitted to the final rankings and consequently will not be in competition for the allocation of positions.

For positions reserved for employees of entities, companies or lecturers at the Al Akhawayn University of Morocco, <u>candidates will participate only in the selection for the restricted thematic ranking and not for the general thematic ranking</u>.

At the end of the various selection tests, the Admissions Board will draw up a separate list for each type of position (general research positions on the one hand, and positions subject to a specific research theme on the other) totalling for each type the marks awarded to each Applicant in the three different stages of the competitive selection procedure (i.e. research project or written exam, qualifications and interview).

Applicants who have opted to compete for positions on both general Ph.D. research Courses and on Ph.D. research course with a grant/scholarship subject to a specific research theme and have completed all the stages of the competitive selection



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procedure successfully will be included, subject to the conditions referred to in the previous paragraph, in the two separate rankings with the relative marks.

Applicants who have not obtained a grade of at least 60/100 in the ranking for the positions on a general Ph.D. research Course shall not be included in the rankings for the positions on Ph.D. research courses with a specific research theme.

In the event that the same Applicant is the Winning Applicant, at the same time, of a position on a Ph.D. research course with a general themes with a grant/scholarship and a position on a Ph.D. research course with a grant/scholarship subject to a specific research theme, then the University of Salento will proceed to give him/her the position on the Ph.D. research course with the specific research theme.

The Winning Applicant for a position on a Ph.D. research course with a general theme who is already enrolled on the Course will be required to accept the position on a Ph.D. research course with a specific theme with a grant/scholarship, if those above him or her in the ranking renounce the offered position. Grants/Scholarships for specific research themes will not be awarded if there are no Winning Applicants for the relevant Ph.D. research course with a specific theme.

Positions on Ph.D. research courses with a general theme, with or without a grant, and positions on a Ph.D. research course with a grant/scholarship subject to a specific research theme will be awarded by Rector's decree to Applicants who are at the top their rankings up to the number of positions available for each Course, based on the principles and according to the procedures described above.

For those Ph.D. research courses that provide positions (with or without scholarship) reserved for Applicants who have graduated abroad, in the event that nobody who graduated abroad qualifies, the University of Salento will proceed, pursuant to the combined provisions of the article 8, paragraph 2, penultimate period of the D.M. (ministerial decree) no. 45/2013 and paragraphs 4 and with paragraph 1 of the same article 8 to assign the reserved place to the ordinary ranking of suitable Applicants.

If two or more Applicants are awarded the same final mark, the youngest Applicant has precedence in accordance with article 2, paragraph 9, of Italian Law no. 191/98.

Where a grant must also be awarded, however, the following criterion is applied: article 7, fourth paragraph, of D.M. n. 224/99, namely the assessment of the Applicant's financial situation.

In case of a tie, therefore, the scholarship will be awarded to the Winning Applicant in possession of a lower ISEE (level of income).

The rankings will be approved by the Rector by decree and published at www.unisalento.it in the "Dottorati di Ricerca" (Ph.D.) section via the link "Bandi e Concorsi" (Calls and Competitive Selection), as well as the in online section of the "Albo" (official register), which will be considered as official notification to Applicants.

This Administration will not send individual messages to interested parties considering the publication of the rankings in the forms and in the manner described above.

Article 10) Innovative Ph.D. research courses and regional grants

The number of positions and scholarships published with the aforementioned provision may be the subject of a subsequent extension due to the University's participation in competitive bids or public calls for tenders announced by public or private bodies, including:

a) public notice announced by MIUR (Ministry of Education, Universities and Research) directorial decree concerning "Dottorati di ricerca innovativi a caratterizzazione industriale"



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(Innovative Ph.D.s of an industrial character) aimed at the promotion of Ph.D. training initiatives with high relevance to industry and the involvement of companies, through the funding of Ph.D. grants/scholarships in the *Programma Operativo Nazionale Ricerca e Innovazione* (PON RI) (National Operational Course for Research and Innovation) 2014-2020 - Priority axis I "Investments in Human Capital" - Action I.1 which provides for this possibility, for the academic year. 2021/2022 - 37th cycle.

The award of the relative scholarships will be made using the general ranking of the competitive selection procedure in the order of the same according to criteria that will be specified later in compliance with the call and ministerial regulations.

- b) Call of the Sanpalo Onlus Foundation for "Dottorati e/o Progetti di ricerca in materia umanistica" (Ph.D. and/or research projects in in the humanities) for the financing of scholarships to the amount of € 70,000, to be assigned, in the event of financing, to Applicants in possession of the requirements stipulated in the call for applications issued by the aforementioned Foundation).
- c) "Apulia Region" call for PhD positions regional public (Avviso Pubblico n. 1 POC/2021 "Dottorati di ricerca in Puglia XXXVII ciclo") which finances additional scholarships for PhD courses.

The procedures for the allocation of the related scholarships will be made on the basis of the rules contained in the same calls, using the rankings of the competitive selection procedure for the 37th cycle of the Ph.D. research courses referred to in this call for applications.

Article 11) Enrollment on the Ph.D. research course

All Applicants admitted to the Ph.D. research course are required, under penalty of forfeiture, to proceed with online registration to the same, within 15 days of the date of publication of the rankings on the University website www.unisalento.it in the section dedicated to "Dottorati di Ricerca" (Ph.D.) via the link *Bandi e Concorsi* (Calls and Competitive Selection), and in the online *Albo* (Official register), following the procedures that will be indicated in a special document that will be published together with the decree approving the workings of the Admissions Board.

Winning Applicants will not be contacted individually

To enrol on the course all Winning Applicants (including Winners of grants/scholarships) will have to pay, within the peremptory term of 15 days, in a single payment the Puglian (Apulian) regional tax for "diritto allo studio" (Right to Education), at the time of enrolment or in the second year of the Course

Winner Applicants who fail to register for the first year within the time limits indicated above will be considered to have tacitly renounced their position.

The University of Salento at any time of the procedure and also after the start of the Ph.D. research course, may carry out targeted and random checks, under article DPR 71 (presidential decree) no. 445 of 28 December 2000, regarding the information and declarations produced by the Applicants, regarding the validity of the documents attached by the Applicants to the online application and it may also request the original of the aforementioned documents.

The University of Salento can decide at any time, with appropriate motivation, to exclude Applicants from the competitive selection procedure due to an absence of the requisites required by the call for applications.

Article 12) Renunciations and Scrolling of the Rankings



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In the event of renunciation or withdrawal by the Winning Applicant for a position (with or without grant) the position that has become available will be assigned by the Director of the Graduate School according to the order of the rankings approved by Rector's decree.

In such a case, the new Winning Applicant who has been moved up in the rankings will have a period of five days from individual notification to proceed with the acceptance of his/her position.

Where the forfeiture or renunciation of the position on the Ph.D. research course occurs at a date after the beginning of the first year of the Course, but no later than 31st December of the same year, except in the event of additional positions with grants/scholarships being financed by external bodies or deriving from the participation of the University of Salento in competitive selection procedures (e.g. innovative Ph.D. research courses) for which it will be exceptionally possible to proceed even after this deadline depending on the timing of the publication of the relative rankings.

Article 13) Grants, rights and obligations of Ph.D. students

Successful Applicants must declare in their application:

- that they have not previously received any other grants/scholarships for the attendance of a Ph.D. research course;
- that they will undertake not to cumulate the amount of the grant/scholarship with any other grant/scholarship for any reason whatsoever, except with those explicitly granted, in addition to the Ph.D. research course grant/scholarship, by national or international institutions to allow training or research abroad or anywhere else away from the seat of the Ph.D. research course;

Scholarships will last one year and shall be renewed provided that the student has completed the course of activities for the previous year, subject to the obligation to disburse the grant/scholarship after passing the evaluation to be carried out by the Academic Board by September 31th of each academic year.

The confirmation of the grant/scholarship for the years subsequent to the first is done by formal resolution of the Academic Board of the Ph.D. research course in question.

A negative judgment on the part of the Academic Board will result in the forfeiture of the doctorate. The amount of the grant is determined by the Ministry of Education, Universities and Research (MIUR) decree of January 25, n. 40/2018.

This amount may be adjusted with any increase envisaged by law and by ministerial norms and regulations on the subject. The duration of the scholarship is equal to that of the Ph.D. research course (three years).

For positions with scholarships financed under specific European Union and international collaboration projects activated within the framework of Ph.D. research courses, the basic amount of the ministerial scholarship can be increased in order to guarantee organizational methods that take into account the characteristics of the individual projects, in accordance with the combined provisions of articles 8, paragraph 5, of DM (ministerial decree) 8 February 2013, no. 45 and of article 11, paragraph 2, of the Ph.D. research courses regulations of the University of Salento issued by D.R. (Rector's decree) n. 509/2019.

<u>Grants/Scholarships of a different amount than the basic one, where foreseen, are preventively identified in the Ph.D. research course descriptions attached to this call for applications.</u>

The grant is paid by means of monthly payments, in arrears.



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The amount of the scholarship is increased by 50% for any periods of residence abroad, from a minimum of 20 consecutive days to a maximum of 18 months, except as provided for in the case of special agreements.

The Ph.D. research course has a duration of three years.

Students are required to attend the courses and carry out the teaching, study and research activities envisaged by the Academic Board and to present, at the end of each year of said course, to the Academic Board, a report on the research activity carried out and the results achieved, in the terms and in the manner established by the Academic Board itself and on the basis of the indications contained in the operational indications issued by the Rector with protocol no. 42975, on 03/27/2020.

The evaluation of the Ph.D. students' activities must be carried out by the Academic Board at least once a year, generally within 30 days from the end of the Ph.D. research course year.

The presentation of the thesis for the final exam must take place within the deadline set by article 19 of the Ph.D. regulations currently in force. The Academic Board will submit the thesis to the assessors only in the event of a positive judgment granted to the candidate's course of studies and the achievement of the necessary ECTS in the three years of the course.

For anything not specified in this article about the rights and duties of Ph.D. students and the institution of the interruption, suspension, revocation or withdrawal from the Course, please refer to the provisions article 22 of the regulations in force regarding Ph.D. research courses issued by Rector's decree no. 509/2019.

Article 14) Exemption from contribution for accessing and attending the Course

All students enrolled in Ph.D. research courses are exempt from the payment of fees for access and attendance of the said courses, in accordance with the provisions of article 11, paragraph 11, of the University Regulations in force regarding Ph.D. research courses.

Art . 15) Regional tax for the Right to Education

All students enrolled in the Course of study will have to annually pay the amount of the regional tax for the Right to Education in accordance with the amounts set annually by the Puglia region Right to Education agency (ADISU) pursuant to art. 11 of Italian Regional Law (Puglia) 45/2012. The amounts to be paid will vary on account of the student's ISEE (level of income) values at the time of enrolment:

Regional right-to-study	ISEE (level of income) values	
tax		
€ 120,00	Students with ISEE equal or inferior to € 19.000,00	
€ 140,00	Students with ISEE between € 19.001,00 and € 38.000,00	
€ 160,00	Students with ISEE equal or superior to € 38.001,00	

In case of failure to indicate their ISEE value, the student will be liable to the highest level of regional tax (€ 160,00).



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The amount of the regional tax for the Right to Education and the values for the ISEE bands may be subject to change according to regional regulations.

In such a case, further details will be communicated.

Article 16) Exemption for Ph.D. students with disabilities

Specific forms of total or partial exemption from the payment of taxes and / or contributions for disabled students are envisaged, both with a degree of disability, following the Italian scale of diability, equal to or greater than 66%, and with disability between 31% and 65%.

Students with a recognized disability equal to or greater than 66% are exempt from paying taxes and contributions.

Students with disabilities between 31% and 65% benefit from a partial exemption from the registration fee with linear application until it is zeroed for percentages greater than or equal to 65%.

Art. 17 - Intellectual property of research results and publications

Without prejudice to the Italian copyright law (Legislative Decree 633/1941 and subsequent modifications), The intellectual and industrial property rights regarding the results achieved by the PhD student, including, by way of example and not limited to, software, industrial inventions, whether patentable or not, know-how, models, data and data collections, are regulated in accordance with the current legislation and the University regulations and, possibly, on the basis of what is established in the individual agreements with the universities, companies or entities involved.

Article 18) Procedure for attaining a "Dottorato di ricerca" (Doctor of Philosophy – Ph.D.)

The procedures relating to the presentation of the Ph.D. thesis and the appointment of the Evaluators and Final Examination Board are contained in the guidelines for the conferment of the title of "Dottorato di ricerca" (Doctor of Philosophy – Ph.D.) attached to the D.R. (Rector's decree) n. 105, on 02/21/2017.

The timing of the presentation of the doctoral thesis is instead fixed by article 19, third paragraph of the current Ph.D. research course regulations issued by Rector's decree n. 509/2019.

The procedures relating to the composition of the board for the final exam, its composition and the methods of carrying out the final exam are contained in articles 19 and 20 of the aforementioned university Ph.D. research course regulations.

Article 19) Final Thesis



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Ph.D. theses must be in digital format in order to allow their filing, as required by law at the National Libraries of Rome and Florence and at the University of Salento open-access institutional archive if it is already active and available.

The conferment of the certificate of attainment of the title of "Dottorato di Ricerca" (Doctor of Philosophy – Ph.D.) is dependent on the depositing, by the interested party, of the final thesis in the University of Salento open-access institutional archive which will guarantee its preservation and availability for public consultation and which will deposit the said thesis, as required by law, at the National Libraries of Rome and Florence.

Article 20) Accessibility of Ph.D. theses

Accessibility to the Ph.D. thesis in the University of Salento open-access institutional archive may be subject to restrictions, for the following reasons:

- a) parts of the thesis have already been submitted to a publisher or are awaiting publication;
- b) the thesis contains sensitive content data (article 4 of decree n. 196, June 30, 2003)
- c) the thesis is financed by external entities that have rights over it and over its publication;
- d) parts of the thesis have been discussed at a date that is earlier than the discussion and thus subject to patent protection;

In the cases referred to in letter b), the thesis will only be made available if it is possible to make the data anonymous.

As for the other cases, there could be a 12-month suspension of free access, but only after the Academic Board has expressed its approval and following a reasoned request on the part of the student countersigned by his/her tutor.

The suspension of free access can be extended, with a similar procedure, for a further 6 months. Any request for a longer suspension period, in any case not exceeding three years, in exceptional and duly justified cases will be evaluated by the Rector.

At the end of the suspension period, the thesis will however be made freely available for consultation.

Article 21) Reference Regulations

Those matters which are not covered by this call for applications are subject to the rules laid down in the University Regulations for the establishment and organization of Ph.D. research courses (DR. Rectors decree no. 509/2019).

The following applies to public employees enrolled in the Ph.D. research courses: article 2, paragraph 1, of Italian Law no. 476/84 as recently amended with Italian Law n. 240/2010.

This call for applications contains an English translation that cannot be used for legal purposes and is exclusively designed to assist foreign Applicants.

Article 22) Privacy policy

Article 13 of Italian Law no. 196 (30 June 2003) establishes that the personal data provided by the Applicants to the University of Salento at the time of application shall be used exclusively for institutional purposes and for the completion of any inherent procedures conducted by the persons carrying out the competitive selection procedure, also by the Admissions Board (at the University of Salento, Ufficio Master e Dottorati), even with the use of computerized procedures, in the manner



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and within the limits required for the above purposes, even in the event of any communication to third parties pursuant to current national and EU legislation. Providing such information is necessary to assess the Applicants' eligibility and qualifications and failiure to do so may preclude such an assessment.

Applicants are entitled to various rights under article 7 of the Italian Law no. n. 196/03, in particular, the right to access their personal information, to request correction, supplementation and cancellation if such information is incomplete, incorrect or collected in violation of the law, and to oppose their processing for legitimate reasons by directing requests to the Rector of the University of Salento, Viale Gallipoli, 49 - 73100 Lecce.

Article 23) Responsible parties for the application and competitive selection procedure

The *Master and Dottorati* Office at the *Università del Salento* is responsible for any procedural aspect related to this call for applications.

The person in charge of the administrative procedure and data processing is indicated in the attached sheets (A - N).

One can also contact the *Ufficio Master e Dottorati* at the following telephone numbers ++39 (0)832/9210-9228-9041-9210; e-mail addresses: master.dottorati@unisalento.it;

Foreign applicants can request information on the admission procedures to the PhD competition to the WELCOME OFFICE (welcome.office@unisalento.it).

Article 24) Final Provisions

This call for applications will also be advertised by electronic means on the site www.unisalento.it in the "News" section and in the "Dottorati di Ricerca / Bandi per Dottorati di Ricerca" section, as well as on the European Euraxess website and on the Italian Ministry of Education, Universities and Research (MIUR) website.

The Rector (Prof. Fabio POLLICE)



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Allegato (Annex)

SUBJECT:	*	ection procedure for the PhD nterview via MICROSOFT TEA		,,,	- 37 th cycle.
To the person	responsible for	the admissions procedure			
		, resident in he competitive selection pr , approved by D.R (rector's de		mail mission to the F	, having PhD Course in
		INDICAT	ES		
the follow clearly and le	-	t for the interview via a vide	o call using the "	Microsoft TEAMS	" system (write



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All. F)

CORSO DI DOTTORATO IN "INGEGNERIA DEI SISTEMI COMPLESSI"

(Phd Course in "Engineering of complex systems")

Dipartimento proponente	Ingegneria dell'Innovazione
Department	Engineering for Innovation
Coordinatore	Prof. Giulio Avanzini - tel. 0832/297798
Coordinator	Mail: giulio.avanzini@unisalento.it
<u>Durata</u>	3 anni
Total duration	3 years
Posti e borse di studio	Numero complessivo di posti 25
Positions and scholarships	Posti a tematica generale 8
	- di cui con borsa di studio su fondi di Ateneo - senza borsa di studio 4
	Posti riservati a dipendenti di imprese impegnati in attività di elevata qualificazione (dottorato industriale) o a docenti di istituti e centri di ricerca pubblici impegnati in attività di elevata qualificazione (con mantenimento di stipendio) 2
	Convenzioni con: - A.S.L. Lecce per dipendenti 1 - Università Al Akhawayn, Ifrane (Marocco) riservata a docenti di tale Ateneo 1
	Posti a tematica vincolata: 15
	Costituiscono posti a tematica vincolata i seguenti: - posti Centro Interdipartimentale I-STORE 5 - posti finanziati su fondi dipartimentali per l'aerea delle Tecnologie Meccaniche 2 - posto finanziato su progetto InnoCyPES 1 - posti finanziati su convenzione con Ditte esterne per attività presso Collaborative hOlistic Research Environment (CORE)-Lab 4 - posti finanziati su convenzione con Ditte esterne per l'area dell'Ingegneria Energetica e dell'Ambiente 2



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- posto finanziato su convenzione INGV

Il valore delle borse di studio su convenzione o progetto corrisponde all'importo indicato dal DM n. 40/2018 ed è quindi equivalente a quello delle borse bandite sui fondi d'Ateneo, con le eccezioni:

- della borsa finanziata sul progetto InnoCyPES, per la quale sono riportati in calce alla presente scheda requisiti specifici e valore incrementato della borsa
- e delle seguenti borse finanziate da enti pubblici/aziende private: CNR ISASI, CO.M.MEDIA srl, DEEP COSULTING, GEMATICA srl, IIT e READY2USE srl il cui importo è complessivamente pari ad € 65.649,74 (comprensivo dei ratei di borsa di studio, dell'INPS e delle spese di funzionamento).

I candidati interessati alle posizioni a tematica vincolata (raggruppati in 6 aree tematiche) dovranno dichiarare nella domanda il loro eventuale interesse per una sola delle 6 aree indicate.

Analogamente, i docenti in servizio presso l'Università di Ifrane o i dipendenti della A.S.L. Lecce dovranno candidarsi alla posizione riservata alla loro compagnia/istituzione e parteciperanno solo per tale posizione (e non per la graduatoria a tematica generale).

I candidati che concorrono per posizioni a tematica vincolata verranno inseriti sia nella graduatoria generale che in una graduatoria separata, relativa all'area tematica prescelta. L'assegnazione delle singole borse tematiche verrà effettuata dal Collegio dei Docenti fra i candidati idonei collocati in posizione utile nella graduatoria separata per l'area tematica indicata.

Non è possibile essere selezionati per una borsa a tematica vincolata, se non la si indica esplicitamente nella domanda selezionando l'apposita opzione che ne consente la partecipazione.

I candidati dichiarati vincitori delle borse tematiche escono dalla graduatoria generale, che verrà poi utilizzata per assegnare le borse FUR, e si impegnano a rispettare le regole previste dalla convenzione tra Università del Salento ed ente finanziatore.

<u>L'accesso a posizioni a tematica vincolata è comunque condizionato al raggiungimento del punteggio minimo per l'ammissione al corso</u>.



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Altri posti con borsa potranno essere assegnati

al Corso in caso di valutazione positiva delle proposte sottomesse dalla Scuola di Dottorato dell'Università del Salento in risposta al bando della Regione Puglia (Avviso Pubblico n. 1 POC/2021 "Dottorati di ricerca in Puglia XXXVII ciclo") e all'eventuale bando ministeriale MUR per i Dottorati Innovativi a caratterizzazione Industriale.

Area tematica 1

N. 5 posti con borsa finanziate per il Centro di Ricerca I-STORE

Le posizioni di dottorato con borsa per il XXXVII ciclo prevedono lo svolgimento delle attività di ricerca in collaborazione con il centro di ricerca interdisciplinare sulle Tecnologie Abilitanti la IoT per Ambienti Intelligenti, Sicuri e Sostenibili (I-STORE).

a) Sistemi ICT Innovativi di supporto alla guida sicura in ambito automotive (IIT)

Definizione e sperimentazione di soluzioni ICT innovative e intelligenti per rilevare dati fisiologici e biometrici del guidatore elaborandoli attraverso una correlazione con i dati raccolti dallo stesso veicolo relativi alla meccanica, performance veicolo e stile di guida attraverso tecniche di intelligenza artificiale. Elementi fondamentali dell'attività di ricerca sono sensoristica avanzata, Intelligenza Artificiale e Edge Computing applicati in ambito IoT.

b) Soluzioni Innovative a basso consumo abilitanti la Personal IoT in ambito Healthcare (IIT)

Soluzioni ICT innovative basate su protocolli di comunicazione efficienti e scalabili, in grado di connettere un insieme di sensori distribuiti sul corpo umano attraverso una rete wireless a bassissimo consumo (es. BLE, BLE-MESH, UWB, ecc.) ad un nodo gateway secondo un approccio basato sull'Edge. Elementi fondamentali dell'attività di ricerca sono sensoristica avanzata, protocolli di comunicazione ottimizzati in termini di consumo di potenza e ritardi di trasmissione, Intelligenza Artificiale e Edge Computing applicati in ambito in IoT.

c) Applicazione delle tecniche di Intelligenza Artificiale su entità virtuali per l'analisi predittiva (Gematica)

Soluzioni Innovative basate su tecnologie abilitanti la IoT e tecniche di Intelligenza Artificiale applicate ai sistemi di manutenzione predittiva in ambito come quello industriale, delle infrastrutture civili e dell'healthcare. Elementi fondamentali dell'attività di ricerca sono l'adozione del modello Digital Twin, l'utilizzo di tecnologie abilitanti la IoT,



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un approccio basato sul Edge Computing e le tecniche di Intelligenza Artificiale.

d) Soluzioni Innovative Sicure Distribuite per la condivisione dati di dispositivi IoT (Commedia)

Soluzioni innovative basate sull'utilizzo delle Distributed Ledger Technologies (DLT) e con un approccio Edge/Fog Computing. Ambiti applicativi di interesse sono quelli che utilizzano dispositivi IoT low cost e low power. Alcuni scenari applicativi di interesse sono sistemi di e-democracy, car/bike sharing, supply chain, monitoraggio ambientale. Elementi fondamentali dell'attività di ricerca sono DLT, protocolli di comunicazione ottimizzati, Edge/Fog Computing e Intelligenza Artificiale applicati in ambito in IoT.

e) Tecniche di Deep Learning applicate alla detection ed al riconoscimento automatico di patologie nel settore del medical imaging (CNR-ISASI)

Il deep learning è fortemente caratterizzato dalla necessità di disporre di grandi volumi di dati, soprattutto annotati nella maggior parte dei task (supervised learning), un'attività intensiva condotta dall'uomo. L'uso di queste tecnologie pone le basi per la medicina personalizzata. L'obbiettivo del dottorato è quello di spingere la ricerca verso lo studio di nuovi modelli computazionali self-supervised, per la detection ed il riconoscimento automatico di patologie nel settore del medical imaging.

Area tematica 2

N. 2 posti su tematiche di ricerca nelle Tecnologie Meccaniche:

a) Machine learning e progettazione per l'additive manufacturing

L'attività di ricerca si propone di migliorare le conoscenze legate ai seguenti aspetti:

Monitoraggio e controllo di processi in situ;

Proprietà meccaniche di *lattice structures*;

Progetto per l'Additive Manufacturing (DFAM);

Progettazione integrata termofluidodinamica e tecnologica; Integrazione progettuale tra prestazioni del componente e tecnologia produttiva.

b) Studio e sviluppo di sistemi innovativi intelligenti per il monitoraggio di utensili

L'attività di ricerca si propone di migliorare le conoscenze legate ai seguenti aspetti:

Studio e sviluppo di sistemi di sensori innovativi che permettano di monitorare sia lo stato dell'utensile che la qualità del componente lavorato;

Studio e sviluppo di strumenti innovativi di analisi dei dati di processo basati sull'Intelligenza Artificiale (Machine



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Learning/Deep Learning) utili per il miglioramento delle condizioni di processo.

Area tematica 3

N. 1 posto su progetto InnoCyPES (H2020 Marie Sklodowska-Curie Innovative Training Network European Training Network)

Gestione ed integrazione di dati su larga scala

La necessità di fusione e integrazione di più fonti di dati caratterizzate da una proprietà frammentata dei dati sta guidando approcci innovativi alla gestione e integrazione dei dati distribuiti su larga scala per evitare dati incoerenti e imprecisi. L'obiettivo è studiare, progettare e implementare una soluzione completamente decentralizzata per fornire una gestione efficiente delle informazioni aggiornate dinamicamente e il supporto per le query distribuite.

N.B.: i requisiti aggiuntivi sono riportati in calce alla scheda.

Area tematica 4

N. 4 posti per attività presso Collaborative hOlistic Research Environment (CORE)-Lab su convenzione con Ditte esterne

a) Framework per valutazione e roadmapping di tecnologie, prodotti e competenze (Leonardo S.p.A.) Definizione ed applicazione di un framework per la valutazione della situazione corrente necessità/sviluppi futuri. Saranno inoltre previste attività di: standardizzazione dei processi di valutazione roadmapping di tecnologie, prodotti e competenze; sviluppo di metodologie coerenti per la definizione del Core vs Non Core; sviluppo di una ontologia che integri tassonomie di valutazione per livelli tecnologici, prodotti e famiglie di prodotto e sistema professionale dell'ingegneria.

b) Security and Privacy in RPA and IPA (Società Readv2Use)

L'attività di ricerca consisterà nello studiare, progettare ed implementare metodologie, sistemi e software sicuri per Robotic Process Automaticon (RPA) e Intelligent Process Automation (IPA). Il candidato dovrà studiare e progettare tecniche e strumenti per rendere i sistemi RPA ed IPA resilienti e affidabili, sulla base delle proprietà dei dati che si desidera preservare.

c) e d) Security and Privacy in 5G (Società Deep Consulting; 2 borse)

L'attività di ricerca per le 2 posizioni consisterà nel descrivere, valutare e prevenire minacce alla sicurezza delle infrastrutture, protocolli di scambio dati e applicazioni progettate e realizzate per la tecnologia 5G (5th Generation)



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ovvero l'insieme di tecnologie di telefonia mobile e cellulare, i cui standard definiscono la 5ª generazione della telefonia. A tal fine, si richiede al candidato di studiare e progettare tecniche utili per individuare attacchi, vulnerabilità e minacce che potrebbero compromettere la privacy e la sicurezza dei sistemi basati su tecnologia 5G.

Area tematica 5

N. 2 posti convenzione con Ditte esterne per tematiche di ricerca su Energia e Ambiente

a) Analisi e *sviluppo* di processi nel settore ambientale (SEIenergy)

Analisi, progettazione e sintesi di processi chimici per acquisire conoscenze nell'ambito dello studio di materiali inorganici per il settore ambientale e per la sintesi di processing routes nell'ambito dell'economia circolare.

b) Sviluppo di modelli per la gestione di risorse energetiche in aree urbane estese in una prospettiva di circular economy (Circular Research Foundation) Insieme a competenze di bilanci di materia ed energia, il dottorando svilupperà competenze di modellazione e utilizzando simulazione. i nuovi linguaggi programmazione (Python); dovrà sviluppare capacità in materia di analisi e sintesi di processi chimici, competenze in materia di modellazione e simulazione di processi, skills nella modellazione ibrida (modelli del primo ordine integrati con algoritmi di Machine Learning) relativamente a unità di processo tipiche nel settore ambientale o per la sintesi di processing routes nell'ambito dell'economia circolare.

Area tematica 6N. 1 posto su Convenzione con INGV

Sviluppo di nuovi algoritmi di nowcasting e forecasting per lo space weather

Studio e modellizzazione della dinamica del plasma ionosferico e delle irregolarità di densità elettronica su scala globale, per migliorare la capacità di nowcasting e forecasting a lungo termine della risposta ionosferica a eventi di space weather. La modellizzazione si basa su tecniche innovative di machine learning come strategia per estendere l'orizzonte temporale della previsione ionosferica, un prerequisito per accrescere le conoscenze dei fenomeni di space weather nello spazio vicino alla Terra.

N. 2 posti riservati a dipendenti di imprese impegnati in attività di elevata qualificazione (dottorato industriale) o a docenti di istituti e centri di ricerca impegnati in attività di elevata qualificazione

1 posizione riservata a dipendenti dell'A.S.L. Lecce



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1 posizione riservata a docenti dell'Università A Akhawayn, Ifrane (Marocco)	Al
ENGLISH VERSION	
Number of positions 2	5
<u>General positions</u>	8
	4 4
Positions reserved to personnel from highl	•
	<u>r</u> 2
Agreements with - Università Al Akhawayn, Ifrane (Marocco) - A.S.L. Lecce	1 1
Positions with a pre-defined topic:	5
- Scholarships of the I-STORE research centre - Scholarships for research in the area of Mechanica	5 al
technologies	2
 Scholarship for InnoCyPES research program Scholarships funded by external companies for research at the Collaborative hOlistic Research 	
Environment (CORE)-Lab	4
- Scholarships funded by external companies for research in Energy Systems and Environment)r 2
- Scholarship funded by INGV	1
Scholarships funded by private companies or projections funds are equivalent to those funded on University	ty
resources, equal to the minimum required by the current regulation of the Italian Ministry fo	ie or
Education, with the only exception:	"
- of the scholarship funded in the framework of th InnoCyPES research program (details o	ne on
requirements and value of the scholarship ar reported at the end of this document);	-
- of the scholarship funded by CNR ISAS	
CO.M.MEDIA srl, DEEP COSULTING, GEMATICA sr	Ί,



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IIT e READY2USE srl for which the value of the scolarship is € 65.649,74 (gross of social security contributions paid by the recipients).

Scholarships with a pre-defined topic are grouped into 6 research areas. The interested candidates must apply to <u>only one</u> of the 6 research areas, explicitly indicating this option on their application form. The Ph.D. Board will assign the specific research theme and the associated scholarship to the candidates of the separate short list for the area.

Candidates from Ifrane University and A.S.L. Lecce should also apply to the reserved positions for their company/institution.

The candidates to specific positions will also be evaluated within the general list, but a separate shortlist will be defined by the selection committee for each research area of positions with a pre-selected topic.

It is not possible to be shortlisted for scholarships with a pre-defined topic, if the interest for the research area is not explicitly stated in the application form by selecting the corresponding option, within the application procedure.

The PhD candidates selected for one of the research areas grouping positions with pre-defined topics are taken out of the general list. They will comply with rules and requirements stated in the agreement between the University of Salento and the funding company. The thresholds for admission to the Ph.D. course are applied to all candidates, including the candidates applying to reserved positions.

An increased number of funded positions may become available in case of a positive evaluation of the Ph.D. course within the call of the Italian Ministry of University and Research for Innovative Industrial Ph.D. Courses and/or the Apulia Region call (Avviso Pubblico n. 1 POC/2021 "Dottorati di ricerca in Puglia XXXVII ciclo").

<u>Research Area No. 1</u> <u>N. 5 positions funded for the Research Center</u> I-STORE

The research activities expected from the following funded PhD positions for the XXXVII cycle will be carried out in



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collaboration with the interdisciplinary research center on "Iot-aware Smart Technologies fOr Reliable, sustainable, safe and security Environments" (I-STORE)

a) Innovative ICT systems to support safe driving in the automotive domain (IIT)

Define and experiment innovative and intelligent ICT solutions to detect driver physiological and biometric data and correlate them through Artificial Intelligence Techniques to the data related to the vehicle, like mechanics, vehicle performance and driving style. Fundamental elements of the research activity will be advanced sensors, Artificial Intelligence and Edge Computing applied in the IoT domain.

b) Innovative low-powered solutions enabling Personal IoT in Healthcare (IIT)

Define and experiment innovative ICT solutions based on efficient and scalable communication protocols, able to connect a set of wearable sensors that are distributed on human body through a very low consumption wireless network (eg. BLE, BLE-MESH, UWB, etc.) to a gateway node according to the Edge-based approach. Fundamental elements of the research activity will be advanced sensors, communication protocols optimized in terms of power consumption and transmission delays, Artificial Intelligence and Edge Computing applied in the IoT domain.

c) Application of Artificial Intelligence techniques on virtual entities for predictive analysis (Gematica)

Define and experiment innovative ICT solutions based on IoT-enabling technologies and Artificial Intelligence techniques applied to predictive maintenance systems in areas such as industrial, civil infrastructure and healthcare. Fundamental elements of the research activity will be the adoption of Digital Twin models, the exploitation of IoT-enabling technologies, approaches based on Edge Computing and Artificial Intelligence techniques.

d) Innovative Secure Distributed Solutions for data sharing among IoT devices (Commedia)

Innovative solutions based on Distributed Ledger Technologies (DLT) and Edge/Fog Computing paradigm. The main application areas will be the one related to low cost and low power IoT devices. Application scenarios will cover e-democracy systems, car/bike sharing, supply chain, environmental monitoring. Fundamental elements of the research activity will be the DLT, optimized communication protocols, Edge/Fog Computing and Artificial Intelligence applied in the IoT field.

e) Deep Learning techniques applied to the detection and automatic recognition of pathologies in the medical imaging sector (CNR-ISASI)



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The main characteristic of Deep Learning is the necessity of large amount of data, specifically annotated in most tasks (supervised learning), an intensive activity conducted by human. The use of these technologies constitutes the foundations for personalized medicine. The goal of the doctorate is the exploitation of new self-supervised computational models for the detection and automatic recognition of pathologies in the medical imaging sector.

Research Area No. 2

N. 2 positions funded for research in the area of Mechanical Technologies

a) Machine learning for additive manufacturing and design for additive manufacturing

The aim of the research activity is to improve knowledge related to the following aspects:

In-Situ Process Monitoring and Control;

Mechanical properties of lattice structures;

Design for Additive Manufacturing (DFAM);

Integrated termo-fluid-dynamic and technological design; Optimal design for component performance and production technology.

b) Study and development of innovative intelligent systems for tool condition monitoring

The aim of the research activity is to improve knowledge related to the following aspects:

Study and development of innovative sensors systems able to monitor both tools status and workpiece quality level; Study and development of innovative Process data analytics based on Artificial Intelligence approaches (Machine Learning/Deep Learning) able to improve process operative conditions.

Research Area No. 3 N. 1 position funded on InnoCyPES research program

Large scale data management and integration

The need for fusion and integration of multiple data sources characterized by fragmented data ownership is driving innovative approaches to large scale distributed data management and integration to avoid inconsistent and inaccurate data. The aim is to investigate, design and implement a fully decentralized solution to provide efficient management of dynamically updated information and support for distributed queries.

Note: <u>Additional requirements for this position are reported at the end of this document.</u>



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Research Area No. 4

N. 4 positions funded by external companies for research at the Collaborative hOlistic Research Environment (CORE)-Lab

a) Framework for technologies, products and competences assessment and roadmapping (Leonardo S.p.A.)

Framework definition and application, for enabling a complete integration of the evaluation of the current situation and the future needs/developments. Related research activities are: evaluation and road mapping processes standardization for Technologies, Products and Competences; development of coherent methodologies for the definition of Core vs Non Core; development of an Ontology integrating Technology Assessment, Products and Product Families and Engineering Professional Families taxonomies.

b) Security and Privacy in RPA and IPA (Ready2Use)

The research activity will consist in studying, designing and implementing secure Robotic Process Automation (RPA) and Intelligent Process Automation (IPA) methodologies, systems and software.

The candidate will have to study and design techniques and tools to make RPA and IPA systems as resilient and reliable as possible, based on well-defined sets of criteria and properties of data to be preserved.

c) and d) Security and Privacy in 5G (Deep Consulting, 2 positions)

The research activity for the 2 positions will consist in describing, evaluating and preventing threats to the security of infrastructures, data exchange protocols and applications designed and implemented for 5G (5th Generation) technology, i.e. the set of mobile and cellular technologies whose standards define the fifth generation of telephony. The candidate will study and design techniques to identify attacks, vulnerabilities and threats that could compromise the privacy and security of systems based on 5G technology.

Research Area No. 5

N. 2 funded by external companies for research in Energy Systems and Environment

a) Analysis and development of processes in the environmental sector (SEIenergy)



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Analysis, design and synthesis of chemical processes for developing knowledge on materials for the environmental sector and synthesis of processing routes in the framework of circular economy.

b) Models development for management of energy resources in extended urban areas in a circular economy view (Circular Research Foundation)

The student will advance knowledge on material and energy balance, with modeling and simulation tools developed in modern programming languages (e.g. python) with hybrid approaches which include low-level modeling integrated with Machine Learning algorithms with applications in typical environmental scenarios and for the synthesis of processing routes in circular economy.

Research Area No. 6 N. 1 position funded by INGV

Development of new nowcasting and forecasting algorithms for Space Weather

Study and modeling of ionospheric plasma dynamics and electron density irregularities on a global scale, to improve the capability of nowcasting and long-term forecasting of the ionospheric response to Space Weather events. The modeling approach is developed through innovative machine learning techniques as a strategy to extend the time horizon of ionospheric forecasting, a fundamental requirement to increase the knowledge of Space Weather phenomena in near-Earth space.

<u>Positions reserved to personnel from highly qualified 2 companies (industrial Ph.D.) or research institutions</u>

1 position reserved to staff from A.S.L. Lecce

1 position reserved to lecturer from Al Akhawayn University, Ifrane (Morocco)

Tematiche di ricerca

Research themes

Negli ultimi anni la complessità dei prodotti è aumentata esponenzialmente in tutti i campi dell'ingegneria, al fine di migliorare caratteristiche e/o funzioni di prodotti esistenti (e.g. il crescente impiego di elettronica in ambito automotive), per creare prodotti innovativi (dispositivi e sensori organizzati in reti, velivoli autonomi, smart materials, etc.) o nuovi sistemi di produzione e/o distribuzione di beni e servizi (smart grids, smart factories, smart cities, ecc.). Il Corso di Dottorato sviluppa le competenze necessarie alla gestione di un tale livello di complessità per la progettazione e l'analisi di prodotti o sistemi che non



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nascono più dalla giustapposizione di saperi, ma dall'interazione di culture tecnico-scientifiche diverse in ambiti multidisciplinari.

Lo spettro di competenze all'interno del Collegio, i cui membri vantano contatti sia con realtà produttive del territorio che con grandi compagnie nazionali e multinazionali, nonché collaborazioni con enti di ricerca nazionali ed esteri, consente di affrontare molteplici problemi complessi di natura funzionale, progettuale e produttiva.

Viene quindi formato personale con un alto livello di qualificazione, una solida preparazione in diverse branche dell'ingegneria e delle scienze di base e una chiara conoscenza dei problemi legati all'innovazione scientifica e tecnologica. Durante il triennio l'allievo segue corsi di formazione generale e applicativi e svolge una ricerca autonoma, calata in un ambito ampio, inter- e multi-disciplinare, maturando competenze individuali da spendere in contesti articolati e complessi per lo sviluppo di soluzioni originali ad alto tasso di innovazione tecnologica.

In the last few years, system complexity has been growing exponentially, with the objective of improving characteristics and functions of existing products (e.g. automotive industry increasingly relying on ICT), delivering new products and services (distributed systems of sensors, possibly operating in networks, UAV's, smart materials, etc.), and novel systems for production and distribution of goods and services (smart grids, smart factories, smart cities, etc.). The Ph.D. course aims at developing those capabilities necessary for managing this deep level of interaction between diverse technical backgrounds. The design process no longer hinges on a sequential process, with different technical aspects considered one at the time. Nowadays, new opportunities for innovation are created by the interaction between different fields.

A wide spectrum of diverse know-hows within the Ph.D. program Committee, contacts with industries and a network of national and international collaborations with universities and research centers allows challenging our Ph.D. students on various problems of different nature in different technical frameworks, related to basic research, design, and production.



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At the end of the program a highly qualified expert will
be formed, with a solid background, derived from the
courses that he/she will be exposed to during the three
years program. The courses cover engineering
disciplines and applied sciences. In the end, a good
understanding of problems and challenges that
characterize scientific and technological innovation is
expected. The candidate will develop an autonomous
research pattern in a wider multidisciplinary context,
within which he/she will be able to apply his/her
expertise, in order to develop original and
technologically innovative solutions to old and new
problems.
- Laurea quinquennale (ante DM 509/1999) o Laurea
Specialistica/Magistrale (ex DM 509/1999 e DM
270/2004) nelle seguenti discipline:
LM-4 Architettura e ingegneria edile-architettura
LM-4 c.u. Architettura e ingegneria edile-architettura
(quinquennale)
LM-6 Biologia
LM-7 Biotecnologie agrarie

Requisiti di partecipazione

Requirements for admission

LM-7 Biotecnologie agrarie

LM-8 Biotecnologie industriali

LM-16 Finanza

LM-17 Fisica

LM-18 Informatica

LM-20 Ingegneria aerospaziale e astronautica

LM-21 Ingegneria biomedica

LM-22 Ingegneria chimica

LM-23 Ingegneria civile

LM-24 Ingegneria dei sistemi edilizi

LM-25 Ingegneria dell'automazione

LM-26 Ingegneria della sicurezza

LM-27 Ingegneria delle telecomunicazioni

LM-28 Ingegneria elettrica

LM-29 Ingegneria elettronica

LM-30 Ingegneria energetica e nucleare

LM-31 Ingegneria gestionale

LM-32 Ingegneria informatica

LM-33 Ingegneria meccanica

LM-34 Ingegneria navale

LM-35 Ingegneria per l'ambiente e il territorio

LM-40 Matematica

LM-44 Modellistica matematico-fisica per l'ingegneria

LM-53 Scienza e ingegneria dei materiali

LM-56 Scienze dell'economia

LM-58 Scienze dell'universo

LM-60 Scienze della natura

LM-66 Sicurezza informatica



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LM-70 Scienze e tecnologie alimentari

LM-71 Scienze e tecnologie della chimica industriale

LM-72 Scienze e tecnologie della navigazione

LM-73 Scienze e tecnologie forestali ed ambientali

LM-74 Scienze e tecnologie geologiche

LM-75 Scienze e tecnologie per l'ambiente e il territorio

LM-76 Scienze economiche per l'ambiente e la cultura

LM-77 Scienze economico-aziendali

LM-82 Scienze statistiche

LM-83 Scienze statistiche attuariali e finanziarie

LM-91 Tecniche e metodi per la società dell'informazione

3/S (specialistiche in architettura del paesaggio)

4/S (specialistiche in architettura e ingegneria edile)

6/S (specialistiche in biologia)

7/S (specialistiche in biotecnologie agrarie)

8/S (specialistiche in biotecnologie industriali)

9/S (specialistiche in biotecnologie mediche, veterinarie e farmaceutiche)

19/S (specialistiche in finanza)

20/S (specialistiche in fisica)

23/S (specialistiche in informatica)

24/S (specialistiche in informatica per le discipline umanistiche)

25/S (specialistiche in ingegneria aerospaziale e astronautica)

26/S (specialistiche in ingegneria biomedica)

27/S (specialistiche in ingegneria chimica)

28/S (specialistiche in ingegneria civile)

29/S (specialistiche in ingegneria dell'automazione)

30/S (specialistiche in ingegneria delle telecomunicazioni)

31/S (specialistiche in ingegneria elettrica)

32/S (specialistiche in ingegneria elettronica)

33/S (specialistiche in ingegneria energetica e nucleare)

34/S (specialistiche in ingegneria gestionale)

35/S (specialistiche in ingegneria informatica)

36/S (specialistiche in ingegneria meccanica)

37/S (specialistiche in ingegneria navale)

38/S (specialistiche in ingegneria per l'ambiente e il territorio)

45/S (specialistiche in matematica)

48/S (specialistiche in metodi per l'analisi valutativa dei sistemi complessi)

50/S (specialistiche in modellistica matematico-fisica per l'ingegneria)

54/S (specialistiche in pianificazione territoriale urbanistica e ambientale)



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master.dottorati@unisalento.it 61/S (specialistiche in scienza e ingegneria dei materiali) 62/S (specialistiche in scienze chimiche) 64/S (specialistiche in scienze dell'economia) 66/S (specialistiche in scienze dell'universo) 68/S (specialistiche in scienze della natura) 80/S (specialistiche in scienze e tecnologie dei sistemi di navigazione) 81/S (specialistiche in scienze e tecnologie della chimica industriale) 82/S (specialistiche in scienze e tecnologie per l'ambiente e il territorio) 83/S (specialistiche in scienze economiche per l'ambiente e la cultura) 84/S (specialistiche in scienze economico-aziendali) 100/S (specialistiche in tecniche e metodi per la società dell'informazione) 103/S (specialistiche in teorie e metodi del disegno industriale) - Altro titolo dichiarato equivalente o equipollente ai sensi della normativa vigente per la partecipazione ai pubblici concorsi. - Titolo analogo conseguito presso Università straniere legalmente riconosciute. For foreign students: Degree equivalent to a Master in Engineering or Master of Science, equivalent to one of the Master Degree titles listed above recognized under the Italian rule of law. Valutazione titoli, progetto di ricerca e colloquio Valutazione dei titoli (max 10/100): - max 6 punti per il curriculum studiorum (saranno valutati i seguenti elementi: esami e voti, incluso voto di laurea, se disponibile, durata del percorso formativo); - max 2 punti per percorsi formativi post-laurea, master e altri titoli conseguiti; - max 2 punti per pubblicazioni scientifiche pertinenti alle tematiche del dottorato. I candidati al concorso dovranno, pertanto, allegare obbligatoriamente nella voce "altri titoli" presente nella procedura telematica e pena la non valutazione, la documentazione attestante il proprio percorso di studi, ivi comprese le informazioni relative alla durata

Evaluation scores for CV and education (max 10/100)

dei relativi Corsi.

Selection procedure

Modalità di selezione



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- 6 points max for master degree (the selection committee will evaluate the exam list and marks, mark for the final degree, if applicable, duration of the course);
- 2 points max for other courses completed;
- 2 points max for scientific publications on topics relevant for the Ph. D. course.

Progetto di ricerca (max 45/100)

(massimo 20 000 caratteri – spazi inclusi – su una tematica ad autonoma scelta del candidato, all'interno degli obiettivi formativi e ambiti disciplinari del dottorato)

Al colloquio sono ammessi i candidati che abbiano riportato nella valutazione del progetto un punteggio minimo di 30.

Research project (20 000 characters maximum – including spaces – on a topic relevant for the Ph.D. research areas and themes).

Admission to the oral exam if the candidates obtain a mark for the research project equal or higher than 30.

<u>Colloquio (max 45/100)</u>

Oral exam (max 45/100)

Il colloquio sarà volto a verificare la preparazione del candidato e l'attitudine alla ricerca su tematiche oggetto del dottorato.

Durante il colloquio, per tutti i candidati, italiani e stranieri, verrà valutata la conoscenza della lingua inglese. La valutazione della conoscenza della lingua inglese prevede l'assegnazione di un punteggio massimo pari a 10/100 da ricomprendersi nel punteggio massimo conseguibile al colloquio.

Il colloquio si considera utilmente superato ove il candidato riporti un punteggio pari ad almeno 30/100.

Il colloquio sarà svolto per tutti i candidati ammessi in modalità telematica mediante la piattaforma Microsoft TEAMS. Nell'ipotesi di ammissione al colloquio il candidato riceverà un invito dalla Commissione a far parte del gruppo creato tramite la piattaforma indicata. Anche a tal fine, il candidato è tenuto obbligatoriamente a fornire già nel c.v. allegato alla domanda di partecipazione al concorso un valido account mail, associato a un'utenza Microsoft valida, a installare su un proprio dispositivo il software della piattaforma indicata, e a dotarsi di una webcam



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che ne consenta l'identificazione prima della prova orale.

The oral exam is aimed at evaluating the technical background of the candidate and his/her potential on the research topics of the course.

Proficiency in the use of English language is evaluated at this stage. A maximum of 10 points is awarded for English proficiency, within the total score for the oral exam.

To pass the interview the candidates need to achieve a score equal to or greater than 30 points.

The oral exam will take place for all shortlisted candidates by means of a teleconference system based on the Microsoft TEAMS platform. After being shortlisted, the selected candidates will receive an invitation to a "team" created for the platform. It is thus required for admission that the candidates indicate within the CV an e-mail address associated to a valid Microsoft account, install the software necessary for the call. A webcam is required for the identification procedure, prior to the oral exam.

<u>Lingua nella quale possono essere</u> svolte le prove

Language for project and oral exam

Il curriculum e il progetto di ricerca possono essere presentati in italiano o in inglese (per candidati italiani e stranieri). Il colloquio si svolgerà in italiano, con verifica delle conoscenze della lingua inglese, per i candidati italiani; per quelli stranieri il colloquio si svolgerà in inglese

Both Italian and foreign candidates can write their CV and research project in Italian or English language. The oral exam will be in Italian for Italian candidates; adequate knowledge of English will be evaluated. The oral exam will be in English for foreign candidates;.

Pubblicazione data degli ammessi al colloquio

Shortlist of candidates for the oral exam

La pubblicazione dell'elenco degli ammessi al colloquio avverrà **entro il giorno 14/09/2021**.

L'elenco dei candidati ammessi al colloquio sarà effettuata tramite una delle seguenti modalità:

- a) pubblicazione sul sito internet del Dip.to di Ingegneria dell'Innovazione https://www.dii.unisalento.it/home page;
- b) comunicazione via mail ai candidati all'indirizzo di posta elettronica indicato nella domanda di ammissione al concorso.

Short list of candidates convened for the oral exam will be published **by 14/09/2021**.



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UFFICIO MASTER E DOTTORATI

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Data di svolgimento del colloquio	Admission to the oral exam will be a) published on the internet website of the Department of Engineering for Innovation https://www.dii.unisalento.it/home_page ; communicated by e-mail using the e-mail address indicated in the application form. I colloqui si terranno a partire dal 21/09/2021 con inizio alle ore 9:30. I colloqui proseguiranno il 22/09/2021, sempre a partire dalle 9:30, se il numero di candidati ammessi non consentirà di concludere le prove orali in un'unica seduta.
Selection procedure timeline	The oral exam will be held on 21/09/2021 starting at 9:30 (Rome time). The exam will continue on 22/09/2021 at 9:30, if the number of shortlisted candidates is too large for completing the hearings in one day.
Modalità di svolgimento del Colloquio	Il colloquio sarà svolto per tutti i candidati ammessi tramite la piattaforma Microsoft TEAMS. I componenti della Commissione potranno riunirsi in presenza presso il Dipartimento di Ingegneria dell'Innovazione, ove la situazione epidemiologica lo consenta.
Interview	All candidates will be heard through the Microsoft TEAMS platform. The selection committee will meet at the Department of Engineering for Innovation, if possible, within the measures of containment of the COVID-19 outbreak.
Siti web dove reperire le informazioni	Sito di Ateneo: <u>www.unisalento.it</u> – sezione Bandi e concorsi – concorsi – Ricerca – Bandi per dottorati di ricerca
Information available from these websites	sito web del Dipartimento di Ingegneria dell'Innovazione: https://www.dii.unisalento.it/home_page
Responsabile amministrativo del procedimento di selezione	Dott. Andrea Pasquino – tel. 0832/299041
Administrative staff for the selection process	andrea.pasquino@unisalento.it master.dottorati@unisalento.it
Requisiti aggiuntivi per la posizione bandita sul Progetto InnoCyPES Additional note for the position funded	Per l'ammissione alla selezione è richiesto il possesso di tutti i requisiti previsti dalla legge per l'accesso al pubblico impiego, dei requisiti di eleggibilità previsti dall'Azione Marie Sklodowska-Curie (https://ec.europa.eu/research/
on the InnoCyPES research program	



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participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-msca_en.pdf) e dei seguenti requisiti:

- a) Laurea magistrale in Informatica o in Ingegneria Informatica o titolo equipollente al titolo di studio che consenta formalmente l'accesso a un Dottorato di ricerca in Italia:
- b) un'eccellente carriera accademica (voto di laurea non inferiore a 105/110);
- c) non aver svolto più di 4 anni di attività di ricerca successivamente al conseguimento del titolo di cui al punto precedente entro la data prevista di inizio del contratto (indicativamente fissata al 01.11.2021);
- d) avere un background ingegneristico pertinente alle seguenti aree ma non limitato a: calcolo distribuito, database, gestione distribuita dei dati, sicurezza e privacy; la conoscenza dell'archiviazione e dell'analisi delle serie temporali è un plus;
- e) non possedere un Dottorato di Ricerca alla data di inizio del contratto;
- f) non aver risieduto o svolto la principale attività di studio/lavoro in Italia per più di 12 mesi nel corso dei 3 anni precedenti la data di inizio del contratto;
- g) possedere un'ottima conoscenza della lingua inglese, comunque sufficiente a garantire lo svolgimento dell'attività prevista dal contratto e l'interazione quotidiana nel contesto lavorativo;
- h) non aver riportato condanne penali o avere procedimenti penali pendenti di particolare gravità. La mancanza anche di uno solo dei predetti requisiti comporterà l'esclusione dalla selezione in qualsiasi momento della procedura.

I titoli sopra descritti dovranno essere inseriti dal candidato nella voce "Altri titoli" della procedura telematica.

I titoli conseguiti all'estero dovranno essere di norma preventivamente riconosciuti in Italia secondo la legislazione vigente in materia.

L'equivalenza dei titoli conseguiti all'estero che non siano già stati riconosciuti in Italia verrà valutata dalla Commissione Giudicatrice unicamente ai fini dell'ammissione del candidato al presente bando di selezione.

I titoli devono essere posseduti alla data di scadenza del termine stabilito per la presentazione delle domande di ammissione alla presente selezione.

L'Università del Salento garantisce parità e pari opportunità tra uomini e donne per l'attribuzione degli



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assegni in questione e la tutela della riservatezza del trattamento dei dati personali, secondo le disposizioni vigenti.

For admission to the selection is required the possession of all the requirements provided by law for access to public employment, the eligibility requirements provided by the Marie Sklodowska-Curie Action (https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/ main/h2020-wp1820-msca_en.pdf) and the following requirements:

- a) Master of Science degree in Computer Science or Computer Engineering or equivalent qualification that formally allows access to a PhD in Italy;
- b) an excellent academic career;
- c) must not have carried out more than 4 years of research activity after obtaining the degree mentioned in the previous point within the expected starting date of the contract (indicatively fixed at 01.11.2021);
- d) have an engineering background relevant to the following areas but not limited to: distributed computing, databases, distributed data management, security and privacy; knowledge of time series archiving and analysis is a plus;
- *e) must not have a Ph.D. as of the contract start date;*
- f) must not have resided or carried out the main activity of study/work in Italy for more than 12 months during the 3 years preceding the date of the beginning of the contract;
- g) have an excellent knowledge of the English language, in any case sufficient to ensure the performance of the activity envisaged by the contract and daily interaction in the working environment:
- h) must not have criminal convictions or have pending criminal proceedings of particular gravity.

Lack of even one of the above requirements will result in exclusion from the selection process at any time.

The applicant should attach the files containing the titles in the telematic procedure in "Altri titoli/Other qualifications".

Qualifications obtained abroad must normally be previously recognized in Italy in accordance with current legislation. The equivalence of qualifications obtained abroad that have not already been



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recognized in Italy will be evaluated by the Selection Committee solely for the purpose of admitting the candidate to this call for selection.

The qualifications must be possessed on the date of expiry of the deadline established for the presentation of applications for admission to this selection.

The University of Salento guarantees equality and equal opportunities between men and women for the allocation of the grants in question and the protection of confidentiality in the processing of personal data, according to the provisions in force.