

**CALL FOR APPLICATIONS, BASED ON QUALIFICATIONS AND EXAMS,
FOR ADMISSION TO THE RESEARCH DOCTORAL COURSES - 39TH CYCLE
WITH ADMINISTRATIVE HEADQUARTERS AT
THE UNIVERSITY OF CAMPANIA LUIGI VANVITELLI**

Article 1

Establishment and call for applications

1. The 39th cycle of Research Doctorate Courses with the administrative headquarters at the University of Campania *Luigi Vanvitelli* is hereby instituted, subject to the accreditation or the verification of the continued fulfilment of the accreditation requirements performed by the Italian Ministry of University and Research.
2. Pending the above-mentioned accreditation procedure for the 39th cycle, a call for applications, based on qualifications and exams, is hereby issued for admission to the following three-year PhD courses with administrative headquarters at the University of Campania *Luigi Vanvitelli*:
 - **Doctoral School in Human and Social Sciences**
 01. Doctoral course in Architecture and Cultural Heritage
 02. Doctoral course in Legal and Social Sciences for Innovation
 03. Doctoral course in Internationalisation of Legal Systems and Fundamental Rights
 04. Doctoral course in the Sciences of the Mind
 05. Doctoral course in History and the Transmission of Cultural Heritage
 06. Doctoral Course in Environment, Comparative Law and Transitions
 - **Doctoral School of Polytechnics and Basic Sciences**
 07. Doctoral course in Science and Engineering for the Environment and Sustainability
 08. Doctoral course in Industrial and Information Engineering
 09. Doctoral course in Mathematics, Physics and Engineering Applications
 10. Doctoral course of National Interest in Design for Made in Italy: Identity, Innovation and Sustainability
 11. Industrial doctoral course in Technologies for Resilient Living Environments
 - **Doctoral School in Life Sciences**
 12. Doctoral course in Translational Medicine
 13. Doctoral course in Biochemical and Biotechnological Sciences
 14. Doctoral course in Biomolecular Sciences
 15. Doctoral course in Clinical and Experimental Medical Sciences
 16. Doctoral Course of National Interest in Public Administration and Innovation for Disability and Social Inclusion
 17. Doctoral course in Public Health
 18. Doctoral course in Sciences of the Critical Area.
3. Doctoral courses will start on December 22 2023, subject to the provisions of current internationalisation regulations and specific international agreements.
4. For each of the Doctoral Courses referred to in paragraph 2 above, a specific descriptive sheet (*Annexes 1 to 18*) is attached to the present call, which constitutes an integral part of this call and which indicates:
 - the Department administrative headquarters of the Doctoral Course;
 - the total number of positions offered in the call for applications and their type;

- the number of scholarships, their type (including the indication of scholarships with a restricted topic) and the indication of scholarships reserved for students who have obtained the necessary degree in international universities for the admission to the Doctoral Course;
 - any eventual *course of studies*;
 - the procedures for the execution of the admission tests;
 - the *web* pages of the Department and of the University where any useful information is available with reference to the academic programme, the calendar of the selection procedure and any useful notification for the candidates.
5. The number of positions and scholarships, as indicated in the forms attached to this call for applications, may be increased as a result of any additional financial resources of the University, regional and/or national and/or European and/or international, specifically NRRP, PON-RI, FSC, POR CAMPANIA; any funding will be adequately advertised on the **University website – www.unicampania.it** at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscrivarsi-ad-un-dottorato>.
 6. The number of scholarships may also be increased as a result of funding by public and/or private entities provided that the relevant agreement is signed no later than the deadline for submitting applications for participation in the selection procedure; in this case, such funding only increases the number of scholarships and does not affect the total number of positions planned under this call for applications for each Doctoral Course.
 7. In the event of equal merit, scholarships are awarded on a priority basis to deserving candidates with international protection status (with refugee status or beneficiaries of subsidiary protection) within the limit of one scholarship, either ordinary or reserved, for each Doctoral Course indicated in paragraph 2 of this article.
 8. The Administration reserves the right to revoke the competition notice, to suspend or postpone the competition tests or to suspend or not to proceed with the admission of the winners or to suspend or not to award all the scholarships provided for in the notice of competition, due to needs that cannot currently be assessed or foreseen. Specifically, the allocation of the positions made available for selection, as well as the awarding of scholarships based on NRRP funding, are subject to co-financing by the enterprises, ministerial approval and the signing of the Deed of Obligation relating to the project involved; if MUR does not provide the funding to cover the scholarships mentioned above, the scholarships are not awarded, with the consequent forfeiture of the positions awarded to the successful candidates. The allocation of positions as well as the awarding of INPS-funded scholarships are conditional on the positive assessment of the INPS Commission.
 9. This call for applications, which is drafted in Italian and translated into English, is published on the University of Campania *Luigi Vanvitelli's* electronic notice board: www.unicampania.it – **Online Notice Board**; this publication **has the status of an official notification to the interested parties for all the information it contains**, therefore the candidates are not going to receive any additional communication.
This call for applications is also advertised electronically on the University *website*, www.unicampania.it at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscrivarsi-ad-un-dottorato>.
The notification of this call for applications is also going to be published on the European Euraxess website and the website of the Italian Ministry of Universities and Research.

Any corrections are exclusively communicated by means of publication on the previously mentioned University electronic Notice Board.

10. The use of the male gender in this call for applications has no discriminatory character but is intended as gender-neutral in order to meet the needs of more immediate communication.

Article 2

General requirements for participation

1. Applicants for admission to the PhD courses indicated in Article 1, paragraph 2 of this call are entitled to submit an application, regardless of age or nationality, if they possess one of the following qualifications:
 - a postgraduate or master's degree achieved pursuant to Italian Ministerial Decree number 270/2004 (replacing 509/1999);
 - a university degree with a minimum duration of four years, achieved in compliance with the previous regulations;
 - an academic qualification equivalent to an Italian degree with at least four years duration achieved at international universities.
2. Candidates who will obtain the qualification required for admission by the deadline of **December 22 2023** at the latest are also entitled to submit an application, provided that they undertake to self-certify that they have obtained the qualification by the same date, under penalty of forfeiting their registration; for these candidates, the weighted average of the marks obtained in the exams taken and the thesis submitted are assessed for the purposes of participation in the selection.
3. All candidates are admitted to the selection procedure subject to verification of the self-certified declarations in compliance with Italian Presidential Decree number 445/2000 and its subsequent amendments. The University is entitled, at any time during the proceedings, even after the start of the Doctoral Courses, to perform inspections on the authenticity of the declarations submitted and to request the presentation of the original documents. The Administration is entitled to order, at any time, with justified provisions, the exclusion of candidates from the competitive procedure or the forfeiture of admission to the Doctoral Course, for breach of the requirements prescribed by this call, without prejudice to the criminal liability resulting from false declarations. This measure is notified to the interested party with a registered letter with acknowledgement of receipt.

Article 3

Requirements for participation in the reserved positions

1. **Only university graduates from international universities** who hold the qualification required by the preceding article 2, paragraph 1, or who are in the process of being awarded the qualification required by article 2, paragraph 2, are entitled to apply for the reserved positions listed in the forms annexed to this call for applications.
2. Candidates with a university degree completed in foreign countries that have not already been recognised as equivalent to a university degree in Italy, as specified in article 2, paragraph 1 above, are to request their degree's equivalence - **solely for the purpose of admission to the selection procedure for the Doctoral Research Course** - to the doctoral admission committee in compliance with the regulations in force. In this case, the application for participation has to

be submitted, **under penalty of exclusion**, including the following documents which have to be presented using the online procedure, as described in article 4 below:

- a) the qualification for admission to the PhD course, which is translated, in Italian or English, by the appropriate diplomatic or consular authorities or by a certified translator;
- b) request for an assessment of eligibility from the admissions Committee.

You are advised that, in the event of admission to a Doctoral Course, it will in any case be necessary to apply to the competent diplomatic authorities in your country of origin for a certificate of equivalence in order to obtain a residence visa.

3. For **the holders of scholarships financed by foreign States or within specific international mobility programmes and the beneficiaries of EU and international collaboration projects**, the selection procedures are performed by international panels and/or European Union institutions within the framework of competitive funding procedures, which expressly provide for the enrolment of the successful candidates in the doctoral research programme. Candidates who have passed the selection tests, which have been established in this way, are admitted by right to the Doctoral Course.

Article 4

Applications for participation (deadline and procedure)

1. The application to participate in the selection, complete with the required documentation, **under penalty of exclusion**, has to be compiled and submitted **exclusively** by electronic transmission, using the **dedicated on-line procedure**, which is available at: <https://pica.cineca.it/unicampania/dottorato39>, **starting at 2.00 p.m. (Italian time) on June 7 2023 and ending no later than 2.00 p.m. (Italian time) on July 6 2023.**

After this deadline, the system automatically closes and does not allow applications to be submitted.

Applications transmitted by other means are not taken into consideration for the purposes of participation in the selection procedure.

Additions to the documentation after the deadline indicated above are not admitted under any circumstances.

Before the final closing of the application, candidates are required to print out the application, sign it and upload the PDF into the procedure, attaching a copy, in colour, of a valid identity document, the research project and any other relevant documentation.

With the definitive closure of the on-line procedure, the application is automatically forwarded to the University, therefore, no delivery or dispatch of paper material to the Offices is required.

2. Applicants are invited to complete their application well in advance of the deadline of this notice. It is the candidates' responsibility to check that the procedure has been completed in the correct manner. No claims will be accepted for any malfunctioning of the computer system due to technical problems and/or overloading of the communication line and/or application systems.
3. Documents, qualifications, the research project and a colour photocopy of a valid identity document have to be attached to the application in electronic PDF format.

It is the responsibility of the candidate to verify the correct uploading of the required information, bearing in mind that only the qualifications that have been correctly attached to the application form will be assessed for the purposes of participation in the selection procedures. The Administration accepts no liability if it is impossible to read the submitted documents in electronic format as a result of damaged files or folders.

4. Applicants submitting an application for admission to more than one PhD course are required to submit as many applications as the number of courses chosen, attaching the required documentation for each application.
5. For all legal purposes, the application is to be considered as a self-certification, pursuant to articles 46 and 47 of Italian Presidential Decree 445/200, as amended, of the data contained therein and the documents attached to the same.
6. In order to participate in the competition, **candidates with Italian citizenship** are required to pay - **under penalty of exclusion from the selection procedure**, no later than the deadline for the submission of applications - EUR 30.00 (thirty euro), as a participation contribution for the admission tests to the PhD Course. The payment has to be executed using the same electronic procedure using the pagoPA system.
The contribution mentioned above is not refunded under any circumstances.
Candidates who pay the application fees using methods different from the methods described above or outside the terms indicated above are not admitted to participate in the selection procedure.
Foreign citizens who do not hold Italian citizenship are exempt from paying the contribution specified above.
7. Candidates are **excluded** from participation in the admission procedure if:
 - they do not meet the general admission requirements specified in article 2 of this call for applications;
 - they submit an application that is not supported by:
 - a copy of the identity document and the research project;
 - the payment of EUR 30.00 (thirty euro) as a contribution for participation (*for Italian candidates only*);
 - the academic title translated in compliance with the provisions of article 3 above (for candidates in possession of international qualifications only);
 - the request for the admission committee's assessment of the qualification if this has not already been declared equivalent (*for candidates holding an international qualification only*).

Article 5

Documents to be attached to the application

1. In order to be assessed, candidates are required to attach documents, the thesis and other qualifications referred to in article 6 below to the application for participation in the selection. These documents have to be either certified copies or simple copies, the conformity of which to the original is declared by the candidate in the online application.
2. **Candidates with refugee status or beneficiaries of subsidiary protection are required to attach documentation proving temporary protection or a residence permit for international protection (political asylum, subsidiary protection, humanitarian reasons).**
3. For participation in the selection procedure for ordinary positions, deeds and documents drafted in Italian, English, French or Spanish are permitted.
The deeds and documents written in a different language are required to include a translation into Italian certified as conforming to the corresponding foreign text by the relevant Italian diplomatic or consular authority, or by a certified translator, or by a declaration in place of an affidavit.

4. For participation in the selection procedure for reserved positions, the qualification required for admission has to be translated into Italian or English by the relevant diplomatic or consular authorities or by a certified translator.
Additional documents and qualifications that qualify for assessment must be produced in Italian, English, French or Spanish and self-certified in compliance with Italian law.
Thereafter, within 60 days of the publication of the general classification of merit list, the winners are required to produce the Declaration of Value of the qualification necessary for admission.

Article 6

Admission tests and qualifications eligible for assessment

1. The admission tests to the PhD courses are designed to determine the candidate's ability to undertake scientific research and the candidate is also required to demonstrate a good knowledge of the foreign language indicated in the schedule of each PhD course attached to this call for applications.
2. The selection procedure for both types of positions, ordinary and reserved, involves the assessment of qualifications, including the mandatory submission of a research project, in compliance with the format attached to this notice (Annex A), as well as an interview.
3. The research project has to be relevant to the SSDs characterising the PhD course and be related to the compulsory research topics specified in the sheet of each course (attached to the call for applications). Relevance to the specific topics results in the awarding of an additional mark as specified in paragraph 7, letter g of this article.

The research project specified above, not exceeding 800 words, has to include:

- a) The title of the project
- b) Relevance to the SSDs characterising the PhD course
- c) The compulsory Research Topics, if applicable
- d) The objectives of the project, related to the characterising SSDs of the PhD Course and/or to the compulsory research topics specified in the attached files of each PhD Course;
- e) The state of the art
- f) The methodology and related time frame over the 3 years of the doctoral programme
- g) The expected results and possible risk strategies
- h) The estimation of the period abroad
- i) The degree of organisational and financial feasibility
- l) The involvement of Italian and/or international research structures and/or researchers, with relevant motivations
- m) The involvement of enterprises *
- n) The essential bibliography up to a maximum of 12 titles (in addition to the 800 words).

If the candidate is admitted to the PhD course, the research project submitted by the candidate does not normally represent a binding work programme; On the other hand, if a candidate is admitted to the PhD course with the award of a restricted scholarship, funded by an external public or private Entity, following the approval of a specific research project, the work programme is considered binding for the candidate, subject to any changes, during the course of the research, agreed in advance (with the supervisor and the Faculty Board of the PhD course) and authorised by the funding Entity.

- 4 The **calendar of the selection procedure is published on the Department's website** and indicated in the files of each Research Doctoral Course annexed to the notice, by the President of the admissions Committee.

The publication of this call and the information contained in the annexed sheets constitute an effective notification for all purposes. Therefore, candidates who have not been notified of an exclusion from the selection procedure are required, without further notice, to take the examination test in compliance with the specified timetable.

Any changes to the date and time of the selection tests are published on the same Department website indicated in the forms attached to each PhD Course.

- 5 The admissions Committees referred to in article 7 below score 100 points for the assessment of candidates as follows:

Qualifications: **maximum 40 points**
(including the research project: maximum score of 12 points)

Interview: **maximum 60 points**

The minimum mark for admission to the interview (for both the reserved and the ordinary selection procedures) is set at a minimum of 12 points.

The minimum mark required to pass the interview (for the ordinary competition only) is set at a minimum of 42 points.

6. The Committees exclude, without any evaluation of qualifications, candidates who have submitted a research project that is not relevant to the SSDs characterising the PhD Course as indicated in the attached files of each Doctoral Research Course.

7. For the **assessment of qualifications**, without prejudice to the autonomy of the admissions Committee, the following documents are eligible for assessment in relation to both types of positions, ordinary and reserved:

a) the **entire thesis** (or, for undergraduate candidates only, a draft of the thesis currently being drafted countersigned by the thesis supervisor and stamped by the relevant department) assessed in terms of content and correspondence in relation to the PhD or at least one of the SSDs in which the candidate is participating

maximum 6 points awarded

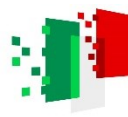
b) the **graduation mark** assessed according to proportional parameters (or equivalent characteristics for the reserved ranking); or, *if this is not an option, the weighted average mark of the examinations taken* (for undergraduates graduating from Italian universities within the deadline of December 22 2023)

maximum 10 points awarded

c) **monographs and publications in peer-reviewed journals** or collections which can be assessed if they are of specific relevance to the Sector(s) that are the subject of the PhD and have already been published or have been certified by the publisher as accepted and soon to be published;

Patents that can be assessed if they are specifically relevant to the SSD(s) covered by the PhD programme

maximum 6 points awarded



- d) post-graduate qualifications, including: **specialisation diplomas, specialisation courses, and master's degrees** with a duration of at least one year issued by universities or qualified research agencies, which can be assessed if they are compatible with the SSD(s) of the PhD
maximum 2 points awarded
- e) collaboration grants for research activities which are assessed if they are compatible with the SSD(s) of the PhD;
scholarships that are eligible for assessment if they are awarded following selection procedures carried out exclusively by Italian or foreign universities or research institutes of primary and proven relevance;
periods of study and research abroad (including time spent on an Erasmus exchange programme) which are assessed if undertaken at universities or qualified research institutes for a continuous period of no less than 3 months;
awards from National and International Scientific Societies that are assessed if they are compatible with the SSD(s) of the PhD;
maximum 2 points awarded
- f) other documents that are considered useful, by the admissions committee, for a comprehensive assessment, such as:
- *participation in research activities* which are assessed if proven by a letter of reference from a university lecturer with ASN commission criteria or a qualified international researcher;
- *appointments as an expert in the specific subject* under consideration, if these appointments were established before the date of issue of the call for applications;
maximum 2 points awarded
- g) the **Research Project**, in short form (not exceeding 800 words) drafted in compliance with paragraphs 2 and 3 of this article and the format (Annex A)
maximum 12 points awarded
subdivided as follows:
- project relevant to the SSDs characterising the PhD Course
maximum 8 points awarded
- project relevant to the SSDs characterising the PhD Course and which specifically addresses one of the compulsory research topics indicated in the sheet of each PhD Course attached to the call for proposals
Maximum additional 4 points awarded

For candidates who graduate before **December 22 2023**, *the weighted average mark of the exams taken*, which replaces the graduation mark referred to under letter b), is calculated:

- multiplying the grade of each exam taken at the date of submission of the application by the respective number of credits (30 with honours is considered as 30);
- adding up all the results that have been achieved;
- dividing the result by the sum of the useful credits (the credits of the exams with marks);
- multiplying the average obtained by 110 and dividing the result by 30 (resulting in a mark expressed in hundredths).

The weighted average is not required for students graduating from international universities.

8. Only candidates graduating from international universities and Italian candidates residing or domiciled outside the Region may participate in the interview, concerning the qualifications and the research project submitted, by video conference via Skype (or other similar channels)

subject to verification of the applicant's identity, which may be verified by showing a valid identity document, a colour copy of which has been attached to the application, the interview is public and will be conducted on the appointed day and time and in the presence of one or more candidates who voluntarily wish to be present.

It is forbidden to make audio/video recordings of the interview remotely through the computer platforms used. It is also forbidden for anyone to broadcast the audio/video recording made by means other than the platform.

A candidate's absence on the day and time of the interview is considered a withdrawal from the selection procedure, regardless of the cause.

9. For the **assessment of the interview**, without prejudice to the autonomy of the admissions committee, for both types of positions, ordinary and reserved, the **assessment criteria** are as follows:
- a) clarity of presentation **maximum 10** points awarded
 - b) skills of synthesis **maximum 5** points awarded
 - c) *critical thinking and adequate knowledge of the subjects related to the titles presented* **maximum 20** points awarded
 - d) *the ability to conduct part of the interview in the foreign language* chosen from the list specified for each PhD course attached to the call for applications **maximum 5** points awarded
 - e) *the ability to answer in-depth questions related to the presented research project* **maximum 20** points awarded

Article 7

Admissions Committees and their obligations

1. For admission to each Research Doctorate Course, an admissions Committee is appointed, by Rector's Decree, - within seven days from the deadline for the submission of applications for admission to the selection procedure - which is composed in compliance with the provisions of article 22 of the University Regulations containing the rules for the Research Doctorate referred to in the introduction.
2. The composition of the individual Committees is published on the University *website*: www.unicampania.it at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscrivarsi-ad-un-dottorato>.
3. The individual admissions Committees are in charge of, in addition to other duties, the following:
 - posting of the selection calendar on the Department's *website* indicated in the attached PhD Course Sheets, by the date indicated in the cited sheets;
 - publishing the results of the assessment of the qualifications, which have to be completed at least three working days before the interview;
 - the prompt publication of the results of each assessment (qualification assessment and interview) on the Department's website indicated in the attached PhD Course sheets, in compliance with the timetable of the selection calendar.
4. The Committee proposes the allocation of the type of scholarship for each candidate based on the assessment of the research project, the assessment of the qualifications, and the interview,

in compliance with article 6 specified above, as well as the possession of specific requirements necessary for the type of funding or the status of refugee or beneficiary of subsidiary protection.

5. If merit is equal, scholarships are awarded with priority to deserving candidates with international protection status (with refugee status or beneficiaries of subsidiary protection) within the limit of one scholarship, ordinary or reserved, for each Doctoral Research Course.
6. The work of the Committee is scheduled to start, **no later than July 20 2023**, with the holding of the preliminary meeting, in order to establish the criteria and procedures for the assessment of the selection examinations, in order to guarantee the proper and transparent comparative assessment of the candidates, and the work has to be concluded no later than September 14 2023.

Article 8

Approval of the general ranking list of merit

1. The Rector's decree establishes the general ranking list of merit for each selection, both ordinary and reserved, formulated in descending order of the total score of each candidate and indicating the type of grant awarded. If there is an equal number of points between two or more candidates, the deserving candidate with international protection status (with refugee status or beneficiaries of subsidiary protection) has priority within the limits of one scholarship, ordinary or reserved, for each Doctoral Research Course; if there is further parity, the candidate with the youngest age has priority.
The successful candidate who does not accept the type of scholarship awarded is not eligible for other types of scholarships on the same PhD Course and forfeits admission to the Course.
2. The University scholarships allocated to the reserved list, if not assigned, are budget savings, to be allocated for the same purposes of internationalisation of the PhD courses, in relation to the activation of the next cycle to fund the positions of the reserved list.
3. The general ranking lists of merit referred to above relating to individual selection procedures for admission to the Research Doctorate Courses - 39th cycle - are approved by Rectoral Decree **within 30 days of the completion of the work of the admissions Committees, and are published on the University website – www.unicampania.it** at the page: *Research Doctorates*, at the following link:
<https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscrivarsi-ad-un-dottorato>
with effect from **October 5 2023**.
This posting serves as official notification to interested parties, **therefore, no personal communications are sent to candidates.**

Article 9

Admission of public employees and medical trainees

1. Public employees admitted to a PhD course benefit, for the normal duration of the course, from the leave provided for by the collective contract or, if employed under public law, from extraordinary leave for study purposes, compatibly with the needs of the administration, pursuant to article 2 of Italian Law dated August 13 1984, number 476, with or without grants and unless explicitly waived, only if they are enrolled for the first time in a PhD course, regardless of the subject area. Without prejudice to the right to the *budget* for the research activity carried out in Italy and abroad referred to in article 9, paragraph 4 of Italian Ministerial Decree 226/2021.

2. Without prejudice to the provisions of article 8, paragraph 1 of Italian Ministerial Decree 226/2021, the University authorises the joint attendance of the Doctorate Course and a medical specialisation course, subject to the following conditions:
 - a) compatibility, also in consideration of the distance between the facilities, of the activities and commitment envisaged by the specialization school and the PhD course, certified by the board of the medical specialization school and by the PhD board;
 - b) incompatibility between the PhD scholarship and the fees, however denominated, received in relation to the activities of the specialization school.
3. In the cases of joint attendance referred to in this article, the request for reduction of PhD activities is accepted by the faculty of the PhD course, after a positive evaluation of the consistency of the research activities, already carried out in the medical specialization course, with the PhD project. For the purposes of accepting the application referred to in this paragraph, the opinion of compatibility, expressed by the board of the specialization school, of the PhD project with the didactic purposes of the same specialization school is also required. If the application referred to in this paragraph is accepted, the PhD course has a duration of no less than two years.
4. Physicians undergoing specialised training, by virtue of the incompatibility provided for in paragraph 1, letter b) of this article and article 7, letter b) of Italian Ministerial Decree 226/2021, are not entitled to receive a doctoral fellowship concurrently with other compensation, however, designated, collected in relation to the activities of the specialisation school, and therefore if they hold a doctoral post with a fellowship, they are entitled to receive it only at the conclusion of the specialisation course.
5. The provisions of this article do not apply to positions with a scholarship with a compulsory topic, for which reference is made to article 13, paragraph 7 of this call for applications.

Article 10
Admission of employees of enterprises to reserved positions
(the PhD Executive programme)

1. In order to encourage interaction with enterprises, the University activates Industrial Doctoral Courses with the possibility of allocating a share of the available positions, based on specific Agreements, to employees of enterprises engaged in highly qualified activities, who are admitted to the Doctoral Course after passing the corresponding selection procedure.
The places reserved for the PhD Executive programme are listed in the attached description of each course.
2. The enrolment of the employees of enterprises in Executive PhD positions is not compatible with the utilisation of the scholarship.
3. On condition that the financial sustainability of the Doctorate Course is guaranteed based on the minimum number of scholarships required for its activation, the reservation of positions without a scholarship is exceptionally allowed for employees of enterprises in the framework of courses with specific programmes designed to foster relations with enterprises and the productive world.

Article 11

Incompatibility and simultaneous registration

1. Registration in the PhD Courses is incompatible with simultaneous registration in other PhD Courses.
2. The simultaneous enrolment in a Doctoral Research Course and in a Bachelor's or Master's Degree Course or a non-medical specialisation course may be authorised by the Faculty Board subject to verification of the compatibility of the obligation to attend with the existence of the conditions for the acquisition of the knowledge and skills required to achieve the educational objectives of each programme.
3. The simultaneous enrolment in a Doctoral Research Course and a medical Specialisation Course is permitted. Please refer to article 9 of this call for applications for joint attendance.

Article 12

Enrolment of the successful candidates

1. For the purposes of admission to the Doctoral Research Course, **successful candidates**, with or without a scholarship, are required, **starting at 2.00 p.m. on October 12 2023 and no later than 2.00 p.m. on October 26 2023**, to submit an application for enrolment and submit the relevant declarations, exclusively in compliance with the **operating procedures that are going to be published by October 12 2023 on the University website – www.unicampania.it** at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscriversi-ad-un-dottorato>. **Candidates who do not proceed to enrol by the established deadline are automatically and effectively considered to have forfeited their right to enrol**, and the vacancies are assigned to candidates with a useful position in the ranking list of merit.

The ranking lists of merit will then be scrolled, in order to assign the vacant positions, according to the terms specified in the following table:

	<i>date of publication of successful candidates who are eligible for scrolling</i>	<i>enrolment terms</i>
First scroll	November 8 2023	from November 8 2023 within 2 p.m. on November 13 2023
Second scroll	November 15 2023	from November 15 2023 within 2 p.m. on November 20 2023

2. After the deadline of November 20 2023, additional scrolling of the ranking lists of merit will be performed in the event of the withdrawal of successful candidates or if additional resources become available, within 30 days of this deadline.
3. Starting on January 02 2024, any doctoral positions that become available are discontinued; these positions remain available and used to activate the subsequent cycle.
4. Successful candidates who complete their degree by the deadline of December 22 2023, are required to self-certify their graduation by the specified deadline at the following e-mail address: immatricolazione.dottorandi@unicampania.it.

5. If a candidate is successful in more than one ranking in different Doctoral Research Courses, the candidate is required to exercise the option for only one PhD Course.
6. Candidates who were found to be **eligible but who were not successful** are invited to consult **the information on the web page** specified above in order to obtain useful information on any changes in the general ranking lists of merit.

Article 13

Scholarships, taxes and contributions

1. The scholarships, which can also be financed with the help of several sources of funding, have a total duration of at least three years.
They are allocated, for the entire duration of the course, to PhD course participants according to the order defined in the general ranking list of merit and are renewed, annually, after positive verification of the completion of the programme of activities planned for each year.
The procedures for renewal are established by the Faculty Board and codified in the course regulations. If the scholarship is not renewed, or if the student renounces it, the unused amount of the scholarship is reinvested by the University for the funding of PhDs.
2. The amount of the scholarship, for the academic year 2023/2024, is equal to EUR 16,243.00 and it is allocated in monthly instalments, deferred according to the attendance and the study and research activities performed, with the exception of PhD students with foreign citizenship, for whom the allocation is always made in monthly instalments in advance.
3. The increase in the scholarship is established at 50%, for a total period not exceeding twelve months, for carrying out research activities abroad authorized by the faculty board. This period may be extended up to a maximum total of eighteen months for doctorates jointly implemented with foreign entities or activated pursuant to article 3, paragraph 2 of Italian Ministerial Decree 226/2021.
4. The scholarship for attending the PhD is compatible with other personal income received in the calendar year of greater use of the amount up to the limit of the scholarship itself. For the purpose of verifying this threshold, all personal income deriving from work activities is considered, with the exclusion of the amount of the scholarship or any income support benefits paid according to the scholarship (such as the maternity allowance).
5. If the candidate has already received a scholarship for a PhD course, he/she cannot apply for a second time.
6. Scholarships may not be combined with other scholarships for any reason whatsoever, except for those awarded by national or foreign institutions to supplement, stays abroad, training or research activities of scholarship holders abroad.
Scholarships for PhD attendance are compatible with Erasmus scholarships.
7. For positions awarded under NRRP with compulsory topics it is not possible to override the acceptance of the scholarship, therefore, if the successful candidate renounces the scholarship, he/she automatically forfeits admission to the Doctoral Course. If the withdrawal or forfeiture happens during the term of the doctoral programme, the programme is automatically terminated and the PhD student concerned is obliged to reimburse the monthly payments received, as provided for by the University Regulations governing Doctoral Research Programmes and by the regulations governing specific funding.

8. The doctoral student is obliged to repay, even if he/she withdraws from the course, the instalments of the grant already received only if he/she exceeds the income limit, as per paragraph 4 above, or if he/she is involved in one of the cases of incompatibility provided for by the regulations in force, by the University Regulations governing Doctoral Programmes and by the specific regulations provided for by the funding entities in the case of grants with a compulsory topic.
9. The PhD scholarship is subject to the payment of separately managed INPS social security contributions, pursuant to article 2, paragraph 26, of Italian Law number 335, to the extent of two-thirds paid by the administration and one-third by the holder of the scholarship. PhD students benefit from the protections and related rights.
10. For the performance of research activities in Italy and abroad, in addition to the scholarship, the doctoral student is guaranteed a budget, appropriate to the type of Doctoral Course and the specific discipline, and in any case no less than 10% of the amount of the scholarship for the first year of the course, and 20% of the amount of the scholarship from the second year, with the exception of doctoral courses of national interest for which the budget for each year of the course is always 20%. The budget referred to above is also guaranteed for doctoral students without a scholarship and is allocated to the department where the doctoral course is administered in order to support the doctoral student's research and training activities in conjunction with the start of the courses.
11. If the funds attributed for carrying out research and training activities of the PhD students of the third year have not been completely used, the PhD Coordinator can exceptionally authorise the missions of PhD students of the first year or PhD students of the second year for which funds have not yet been allocated.
12. The PhD student is authorized by the coordinator, with the approval of the supervisor, for the following expenses:
 - a) doctoral student missions in Italy and abroad, registrations for conferences, seminars, etc;
 - b) research supplies that doctoral students use for research (for example: chemical reagents, electrical and electronic equipment, stationery, etc.);
 - c) goods/equipment (for example: hardware, software, scientific equipment). The assets must be inventoried and at the end of the PhD cycle will remain the property of the University. Under no circumstances is it permitted to purchase goods/equipment for personal use (for example: mobile phones, tablets, etc.);
 - d) publishing costs;
 - e) research-specific training (for example: language courses, higher education courses, etc.);
 - f) events in which doctoral students are directly involved as organisers (for example: PhDay);
 - g) if there are unused funds available, the Faculty Board may decide to make use of them for the payment of the travel expenses of foreign committee members for the discussion of the thesis, which involves the award of an additional foreign title to the doctoral student (for example: *doctor europaeus*).
13. Doctoral students authorised abroad for research stays during which they benefit from the increase of the scholarship are also entitled to reimbursement for missions in order to promote international exchanges.

Article 14

One-off contribution granted to enrolled students residing abroad and to Italians who are not residents in the Region of Campania

1. A “one-off” contribution is provided for the payment of accommodation expenses. This contribution will be allocated, as a priority, to enrolled international students residing abroad or outside the Region of Campania, without the student submitting a specific request; subsequently, based on financial availability, to enrolled Italians not residing in the Region of Campania, who have been classified on a position with no scholarship, provided that they have presented a request at the time of submitting their application by selecting the item "Request one-off contribution".
2. The minimum amount of the "one-off" contribution is defined based on the number of eligible students up to the amount of the budget allocated for this purpose, while the maximum amount per student may not exceed EUR 5,000.
If a student withdraws from the PhD course during the first year of attendance, this contribution has to be refunded.

Article 15

Tax for the right to university studies

1. **No later than the deadline for enrolment**, Italian and international students, with or without a scholarship, are required to pay the virtual tax stamp of EUR 16.00 and the regional tax for the right to university studies, for the academic year 2023/2024, determined based on the student's financial situation, calculated according to the Equivalent Economic Situation Indicator (ISEEU) related to the right to university studies.
2. The **ISEEU statement** relating to the family unit **must be requested from the competent offices responsible for issuing certification, at least 10 days before the start of enrolment**, in order not to be automatically placed in the highest income bracket.
3. With subsequent notice on the University website – www.unicampania.it at the page: Research Doctorates, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscrivarsi-ad-un-dottorato> the income brackets and modalities for the presentation of ISEEU statements are going to be published.

Article 16

Obligations and Rights of PhD students

1. The PhD course requires an exclusive and full-time commitment, without prejudice to the provisions of Article 12, paragraph 4 and Article 10, paragraph 2, letter *b*) of the Italian Ministerial Decree 226/2021. PhD students, with or without a scholarship, are required to:
 - carry out the training course approved by the Faculty Board with exclusive commitment;
 - regularly attend the course activities provided by the Faculty Board;
 - participate in common courses within the PhD school;
 - present oral or written reports on the activities and research carried out;
 - draw up personal registers of the activities referred to in paragraph 3 below;
 - comply with whatever else is approved by the faculty board or is provided for by the regulations for the implementation of specific funds to cover the PhD scholarship;
 - to write, the PhD dissertation with original contributions at the end of the course.

2. PhD students must acquire at least 60 credits each year, distributed according to the training program agreed upon with the tutor and approved by the Faculty Board, consistent with the training offer advertised annually on the website of the department concerned on the PhD page. Where required by specific funding projects from which individual courses can benefit, the above credits per hour will be converted into training hours that the PhD students are obliged to attend.
3. The activities of doctoral students must be illustrated in personal records and/or in specific IT platforms and include:

course activities, research activities, personal study, bibliographic research and research in archives, ongoing verifications, participation in seminars, courses and conferences, activities at buildings outside the University (other universities, research entities, companies), in Italy and abroad, any supplementary teaching activities and tutoring activities and any other activity arranged by the Faculty Board that leads to the completion of the educational programme. **It is absolutely forbidden to carry out research activities related to the PhD within private bodies or structures, if not authorised by the Faculty Board. Violation of this rule results in forfeiture of the doctoral research course.**

4. **In addition to the provisions of this call for applications and the University Regulations governing PhD programmes, PhD recipients are required to comply with the specific provisions stipulated by the funding entities, including the compulsory period to be spent in entities/enterprises in Italy and abroad.**
5. The legitimacy of the different activities carried out by the PhD students is certified by the Coordinators based on the indications provided by the supervisor and by the co-supervisor/s.
6. At the end of each year of the Course, the Faculty Board, based on a detailed report on the activities and research carried out by each PhD student, decides on the admission to the following year or proposes to the Rector the exclusion from the course.
7. For proven reasons, the PhD student may ask the faculty board for an extension of the time allowed for the presentation of the PhD thesis, for a maximum duration of twelve months, without further financial charges.
8. The Faculty Board may decide to extend the duration of the PhD course for a period not exceeding twelve months, for justified scientific needs linked, among other things, to needs in the context of co-safeguards lasting more than three years. or the need for a proven increase in scientific productivity, (for example: for the submission or outcome of a patent application as well as in the event of an extension of the duration of a research project of significant national or international interest); in cases of extension, the corresponding duration of the scholarship must be ensured with funds from the University budget, therefore the motivated proposal for extension of the faculty board will be submitted for the approval of the Board of Directors for the related financial verification. The beneficiary PhD students are obliged to comply with everything resolved by the faculty with reference to the extended training course, including carrying out the course activities.
9. For proven reasons provided for by current legislation such as maternity, serious illness and civil service, PhD students may request the suspension of the course for a maximum duration of six months. No scholarship or other equivalent funding is envisaged for the duration of the suspension.

The Faculty Board, following communication from the course coordinator, takes note of the suspensions. Suspension of more than thirty days for one of the above-mentioned reasons involves the obligation to fully recuperate the periods of interruption of the activity and, therefore, in such cases, the duration of the educational programme is extended for a period corresponding to the period of the interruption.

10. The extension and suspension periods referred to in paragraphs 7, 8 and 9 of this article may not exceed a total of eighteen months, except in specific cases provided for by law.
11. Without prejudice to the interventions for the right to study as per Italian Legislative Decree dated March 29 2012, number 68.
12. Without prejudice to the application of the rules for the protection of parenthood referred to in the decree of the Italian Minister of Labour and Social Security dated July 12, 2007, published in the Italian Official Gazette of October 23 2007, number 247, PhD students on leave retain the right to the scholarship that will be paid at the end of the suspension period, namely the resumption of the course attendance up to the total duration of the scholarship itself.
13. It is the responsibility of the PhD Course Coordinator to promptly notify the competent office of the interruption of the PhD student's activity for the consequent administrative measures.
14. The PhD student may be authorized by the faculty board to carry out paid activities that allow them to acquire skills relating to the educational environment of the PhD, after evaluating the compatibility of the same activities with the successful performance of the training, teaching and research activities of the PhD course. In such cases, the maximum income limit, which the PhD student can receive as compatible with the scholarship, is equal to the amount of the scholarship itself.
15. For each PhD student, the faculty board normally provides for the carrying out of research and training activities, consistent with the PhD project, at highly qualified institutions abroad, for a total period not exceeding twelve months. This period can be extended up to an overall maximum of eighteen months for PhDs co-supervised with foreign subjects or for those in aggregate form activated pursuant to article 3, paragraph 2, of Italian Ministerial Decree 226/2021. In planning the training activities abroad, the board can take into account the proposal of the supervisor and the co-supervisor/s of the PhD student who must propose the program of activities, the title of the project and the invitation letter from the foreign supervisor. For periods of attendance abroad in the amount the scholarship is increased by 50%.
16. PhD students have an obligation of confidentiality in relation to the research activities carried out with external bodies.
17. The use of research grants by PhD students without a scholarship is allowed as long as the topic to which the grant refers is similar, in the judgement of the Faculty Board, to the topics of the PhD.
18. Following enrolment in the course, **each doctoral candidate receives an e-mail address from the University through which he or she receives institutional communications. It is compulsory to consult the institutional e-mail as well as to constantly be informed using the University's website and the department's website for general and specific communications relating to the PhD. The doctoral student is also obliged to register on the website of the Italian**

Ministry of Education, University and Research (MIUR) Login page, in order to be registered as a qualified researcher of the University.

19. PhD students can carry out, as an integral part of the training project, subject to authorization from the faculty board and without any increase in the scholarship:
 - tutoring, including paid tutoring, of undergraduate and master's degree students;
 - supplementary teaching activities, within the limit of forty hours for each academic year. For the activities referred to in this paragraph, PhD students are paid the grants referred to in article 1, paragraph 1, letter b), of Italian Decree-Law dated May 9 2003, number 105, converted, with modifications, by Italian Law dated July 11 2003, number 170. 2. The performance of activities must be indicated in staff records. This is without prejudice to specific teaching collaborations provided for by specific national rules for which the related discipline applies. All other forms of teaching are strictly prohibited and it is the responsibility of the Coordinator to supervise compliance with this provision.
20. All information regarding the administrative aspects of doctoral students, as well as their careers, is published on the University's website - www.unicampania.it at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca/iscriversi-ad-un-dottorato> – The publication referred to above replaces any other communication and, therefore, successful candidates are required to log on to the website referred to above for constant updates.

Article 17

Achievement of a PhD

1. The qualification of doctor of research, abbreviated to «Dott. Ric.» or «PhD», is awarded following the successful assessment of a research thesis that contributes to the advancement of knowledge or methodology in the chosen field of investigation.
2. The qualification of a PhD is conferred by the Rector, to the extent permitted, who certifies the achievement with the release of a parchment certificate.

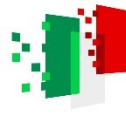
Article 18

Processing of personal data

1. In compliance with articles 13 and 14 of the GDPR - EU General Data Protection Regulation number 2016/679, the personal data provided by candidates is collected at the University of Campania *Luigi Vanvitelli*, for the purposes of managing the selection and is processed on paper and using an automated database. The provision of such data is mandatory for the purposes of verifying the requirements of participation in the selection and its management.
2. The Data Subject is entitled to the rights specified in Articles 15 to 22 of the previously mentioned EU Regulation 2016/679, which include the right of access to the data concerning the Data Subject, as well as certain complementary rights, including the right to have erroneous, incomplete, or unlawfully collected data rectified, updated, completed, or erased, as well as the right to object for legitimate reasons to their processing.
3. These rights can be exercised against the University of Campania Luigi Vanvitelli, Viale Lincoln number 5 - 81100 Caserta, the Data Controller acting in the person of the Rector, by sending a request to the Data Protection Officer (DPO) having as the object: "Privacy rights" *e-mail*: rpd@unicampania.it or PEC certified e-mail: rpd@pec.unicampania.it.



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Please refer to additional and more detailed information on the privacy policy posted on the University *website* at the following link <https://www.unicampania.it/index.php/privacy> .

Article 19

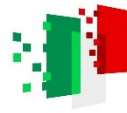
Organisational unit Responsible for the procedure

1. The organizational unit responsible for the selection process is the Office for Research Training, located at Viale Ellittico number 31 - 81100 Caserta; e-mail contact ufficio.formazionericerca@unicampania.it - Person in charge of the process: Dott.ssa Michela Schettino.

Article 20

Referral

1. For all issues not provided for in this call for applications, please refer to the University Regulations governing doctoral studies referred to in the introduction, which are available on the University's *website* – www.unicampania.it at the page: *Research Doctorates*, at the following link: <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca>.



RESEARCH PROJECT FORMAT
(not exceeding 800 words)

DOCTORAL COURSE IN _____

39TH CYCLE

CANDIDATE: _____

(Surname and first name)

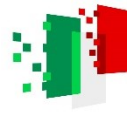
The title of the project	
Relevance to the SSDs characterising the PhD course	
Restricted research Topic, if applicable	
Objectives of the project	
State of the art	
Methodology and related timing with respect to the 3 years of the PhD	
Expected results and possible risk strategies	
Estimation of the period abroad (<i>minimum 6 months - maximum 12 months</i>)	
Degree of organisational and financial feasibility	
Involvement of Italian and/or international research structures and/or researchers, with relevant motivations	
Involvement of enterprises *	
Essential bibliography up to a maximum of 12 titles (in addition to the 800 words)	

- * For topics restricted under Italian Ministerial Decree 117/2023 and Italian Ministerial Decree 118/2023, a minimum 6-month and maximum 18-month course in an enterprise is mandatory.

Annex number 01	
DESCRIPTIVE SHEET OF THE PhD COURSE IN ARCHITECTURE AND CULTURAL HERITAGE - Cycle XXXIX	
Coordinator	Prof. Efsio PITZALIS <i>e-mail: efisio.pitzalis@unicampania.it</i>
Administrative headquarters of the Course	Department of ARCHITECTURE AND INDUSTRIAL DESIGN
Doctoral School: Director:	Humanities and Social Sciences Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	ICAR/08 - ICAR/09 - ICAR/12 - ICAR/14 - ICAR/17 - ICAR/18 - ICAR/19 - ICAR/20 - ICAR/21 - ICAR/22 - ING-IND/11 - IUS/10 - L-ANT/08 - L-ANT/09 - L-ART/03
COMPETITIVE POSITIONS OPEN	
13 (thirteen) SCHOLARSHIPS, of which:	
- 6 (six) SCHOLARSHIPS financed by the University	
- 3 (three) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 4 (four) SCHOLARSHIPS with a compulsory topic funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania <i>Luigi Vanvitelli</i>	
Topic: Cultural heritage, urban centres, territory, landscape. Title of the project: Protection, management and evaluation of cultural heritage, territory and landscape. Description of the activity: Research activities in the field of territorial planning with an impact on large, medium and small urban centres (size and inhabitants), and cultural heritage in relation to the natural and anthropised landscapes.	
3 (three) WITHOUT SCHOLARSHIP	
16 (sixteen) OVERALL TOTAL	
Procedure for admission tests	
- An assessment of qualifications , including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview , which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language , the knowledge of which will be tested during the interview: ENGLISH .	
Location and competition calendar	
These are going to be published on the Department's web page by July 20 2023 https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-architettura-e-beni-culturali	
Other useful information	



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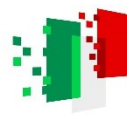
Università
degli Studi
della Campania
Luigi Vanvitelli

For all useful information, please consult the University website at <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca> and the following Department web page <https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-architettura-e-beni-culturali>

Useful contacts

Educational/scientific contact person	Prof. Efsio PITZALIS <i>e-mail:</i> efisio.pitzalis@unicampania.it
Administrative contact person:	Dott. Francesco IANNONE <i>e-mail:</i> francesco.iannone@unicampania.it

Annex number 02	
DESCRIPTION SHEET OF THE DOCTORAL RESEARCH COURSE IN LEGAL AND SOCIAL SCIENCES FOR INNOVATION - Cycle XXXIX	
Coordinator	Prof. Gennaro ROTONDO <i>e-mail: gennaro.rotondo@unicampania.it</i>
Administrative headquarters of the Course	Department of POLITICAL SCIENCES
Doctoral School	Humanities and Social Sciences
Director:	Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	IUS/01 - IUS/02 - IUS/03 - IUS/05 - IUS/06 - IUS/07 - IUS/10 - IUS/11 - IUS/12 - IUS/13 - IUS/19 - IUS/21 - L-LIN/07 - L-LIN/21, L-OR/12, M-STO/02, M-STO/04, SECS-P/01 - SECS-P/07 - SECS-P/08 - SPS/01 - SPS/04 - SPS/05 - SPS/07 - SPS/09 - SPS/12
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Administration, markets and public policy; • The individual, society and culture.
COMPETITIVE POSITIONS OPEN	
11 (eleven) WITH SCHOLARSHIP, of which:	
- 3 (three) SCHOLARSHIPS financed by the University	
- 1 (one) SCHOLARSHIP RESERVED for graduates of international Universities	
- 7 (seven) SCHOLARSHIPS with a compulsory topic of which:	
<p>2 (two) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Predictive justice, legal certainty and argumentative techniques. Title of the project: The reinforcement of the value of jurisprudential precedent: from classical models to predictive justice. Description of the activity: The project focuses on the study and analysis of the precepts of classical rhetoric and, in particular, argumentative techniques as applied to contemporary trials. Specifically, the research is to establish the extent to which computerisation and technological innovation have affected or may affect the various parties involved in trials, and to verify the extent to which public opinion influences the decision-making choices of media trials. In the field of new technologies, the project deals with predictive justice, which consists of predicting the outcome of a trial using artificial intelligence applied to case law. A central element of the project, with respect to predictive justice, concerns the non-avoidance of one of the cardinal principles of modern legal systems, namely that of legal certainty. The latter is essentially embodied in the predictability of judicial decisions, a tool that also makes it possible to reduce the conceptual distance between <i>common law</i> and <i>civil law</i> systems, as the pivotal element of both case-law precedents and rulings remains the interpretation of the law.</p> <p>Scholarship number 2 Topic: Sociology of cultural heritage: the hermeneutics of the symbolic-political work of art. Title of the project: New modalities of hermeneutics and communication of cultural heritage in the light of ICT technologies.</p>	



Description of the activity: The project is intended as functional research to improve the application of ICT technologies to the analysis, study and communication (with the significant use of digitisation processes) of tangible and intangible cultural assets. The methodology of analysis is that of the symbolic hermeneutics of the work of art: it pursues an in-depth study of the political-ideological context underlying artistic expression with a productive contamination between political, social and legal sciences. Specifically, a significant in-depth study of the sector's legislation is planned, also with a view to improving the quality of regulations on the subject and reducing the gap between the legislative text and its implementation (with an investigation of *control governance* systems in enhancement policies and considering, on the one hand, the development prospects of tourism marketing (applying digitisation processes to cultural attractions) and, on the other hand, the possible contribution - in terms of developing *best practices* - of companies in the sector of ICT applications applied to cultural heritage. The research project, therefore, is potentially instrumental in improving the multitude of ICT applications to the knowledge and enhancement of cultural heritage (apps, web animations, digital books, augmented reality, e-books, etc.) by fostering the development of national and international tourism.

4 (four) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Digitalisation of the Public Administration.

Title of the project: Digitalisation of the Public Administration: the contribution of the Digital Transition Manager.

Description of the activity: The topic of the digitisation of Public Administration is central in the NRRP. It is a process that contemplates an implementation from the top (resting on Agenzia per l'Italia Digitale - Agency for Digital Italy) and an implementation at the level of the individual administrations, using the Digital Transition Manager, whose skills are described by the Digital Administration Code in a framework that raises relevant questions about the effective ability of the administrative body to contribute to the digital transformation process. The methodology of the study has to start from the analysis of the relevant national regulatory sources in order to achieve a functional research proposal for a better definition of the role of the administrative body in the process of administrative digitalisation.

Scholarship number 2

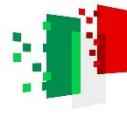
Topic: Public Administration.

Title of the project: The digitisation of the life cycle of contracts.

Description of the activity: The project has to examine in depth the discipline, envisaged by the new Italian Code of Public Contracts, of the digitisation of the life cycle of contracts, defined as the set of activities, from planning to the definition of requirements up to the complete execution of the contract, which are extremely demanding for administrations currently still carrying out the relevant procedures in the traditional way. The execution of the discipline is an indispensable prerequisite for the realisation of an effective digital transition and a tangible revitalisation of the Country. The project is required to identify the legal and organisational instruments to implement the discipline designed to set up a national *e-Procurement* system which, by taking up the efficiency drives deriving from technological development, inaugurates a new relationship between public administrations and operators characterised by the digitalisation of procedures and the interoperability of platforms, according to the *once only* principle, in compliance with the provisions of the Code itself, which also require specific in-depth study.

Scholarship numbers 3 and 4

Topic: Public Administration.



Title of the project: Technological innovation and *regulatory sand box*.

Description of the activity: The project investigates "*regulatory sand-boxes*", as spaces of legal experimentation in which the regulator and the regulated jointly test technological development and the rules to be applied in innovative and strategic areas for the Public Administration. Specifically, the benefits and criticalities connected to the possibility for recipients to benefit from exemptions and simplifications, but also to be beneficiaries of new rules created *expressly* for them, have to be verified. The theoretical framing of the topic finds specific application in the fields of public services, green mobility, sustainable tourism or innovation in local communities on the territory. The limits to which the exceptions introduced in the sandbox must be subjected, such as express provision, respect for the principle of equality, the guarantee of fundamental rights and limited duration, are analysed. Specific attention is devoted to the different models of *regulatory sand boxes* (centralised, diffuse or decentralised, general or sector-based) and the problematic nature of competition between jurisdictions by carefully monitoring their effects using comparative research.

of which **1 (one)** funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Cultural heritage”)
funded by the University of Campania *Luigi Vanvitelli*

Topic: Cultural Heritage e Digital Humanities.

Title of the project: Ontological models and semantic techniques for the management of knowledge in the field of history.

Description of the activity: The project is aimed at the study and use of ontological models and semantic techniques for the representation of cultural heritage information in the semantic web, with specific reference to *Cultural Heritage*. The objective of the research is the definition of an ontological model for the computerised representation of data on cultural heritage assets. The applied methodologies are based on models and techniques that are the basis of systems for the automatic retrieval of documents in digital form. The project entails the following activities: analysis of the application domain; study of instruments for the organisation of knowledge; study of ontological models and semantic techniques for the representation of information on cultural heritage assets in the Semantic Web; definition of ontological concepts, according to the restrictions established by the regulations for the description of information on the different types of assets; the recording of digital cultural content and interoperability with the Semantic Web; solutions and requirements for the representation of the cultural heritage assets in the Web.

3 (three) WITHOUT SCHOLARSHIP

14 (fourteen) OVERALL TOTAL

Procedure for admission tests

- **An assessment of qualifications**, including the compulsory submission of a research project drafted in compliance with the call for applications;
- **An interview**, which will be performed in compliance with article 6, paragraph 8 of the call for applications;
- **An international language**, the knowledge of which will be tested during the interview: **ENGLISH, FRENCH and SPANISH**.

Location and competition calendar

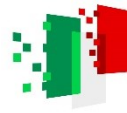
These are going to be published on the Department's web page by **July 20 2023**

<https://www.scienzepolitiche.unicampania.it/didattica/post-laurea/dottorato-di-ricerca-in-scienze-giuridiche-e-sociali-per-l-innovazione>

Other useful information



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DI RIPRESA E RESILIENZA



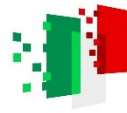
Università
degli Studi
della Campania
Luigi Vanvitelli

For all useful information, please consult the University website at <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca> and the following Department web page <https://www.scienzepolitiche.unicampania.it/didattica/post-laurea/dottorato-di-ricerca-in-scienze-giuridiche-e-sociali-per-l-innovazione>

Useful contacts

Educational/scientific contact person	Prof. Gennaro ROTONDO <i>e-mail:</i> gennaro.rotondo@unicampania.it
Administrative contact person:	Dott.ssa Paola LANDRIANI <i>e-mail:</i> paola.landriani@unicampania.it

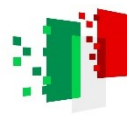
Annex number 03	
DESCRIPTION SHEET OF THE DOCTORAL RESEARCH COURSE IN THE INTERNATIONALISATION OF LEGAL SYSTEMS AND FUNDAMENTAL RIGHTS - Cycle XXXIX	
Coordinator	Prof. Ambrogio DE SIANO <i>email: ambrogio.desiano@unicampania.it</i>
Administrative headquarters of the Course	Department of JURISPRUDENCE
Doctoral School:	Humanities and Social Sciences
Director:	Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	IUS/01 - IIUS/02 - US/04 - IUS/07 - IUS/08 - IUS/09 - IUS/10 - IUS/11 - IUS/12 - IUS/13 - IUS/14 - IUS/15 - IUS/16 - IUS/17 - IUS/18 - IUS/19 - IUS/20 - SECS-P/01
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Public law; • Criminal law and trial; • Civil law, inter-cultural law and trial; • International, supranational and comparative law.
COMPETITIVE POSITIONS OPEN	
15 (fifteen) WITH SCHOLARSHIP, of which:	
- 5 (five) SCHOLARSHIPS financed by the University	
- 5 (five) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 5 (five) SCHOLARSHIPS with a compulsory topic of which:	
<p>2 (two) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Digital Transition of Public Administration Title of the project: Public contracts and the digital transition. Description of the activity: Included in the innovation strategy of the National Recovery and Resilience Plan, the reform of the public contracts code carries a very challenging technological direction: firstly, with regard to digitisation, to which the entire second part of Book I is dedicated, with the ambition of extending it to the entire life cycle of public contracts, and therefore to planning, design, publication (e-notification), awarding (e-submission) and execution; secondly, with regard to automation, namely the use of technological solutions with which to implement acts and make decisions, in relation to which the problem of administrative discretion is still present.</p> <p>Scholarship number 2 Topic: Digital Transition of Public Administration Title of the project: The space and time of work. Description of the activity: The digital transition requires a reflection on the time and space of work in all contexts, including the context of Public Administration. The efficiency of the administrative activity is traditionally also guaranteed by the coordination of the space and time of the work activities of public employees performed by management and middle management. Therefore, it is necessary to investigate the transformations generated by the new digital infrastructures and the consequent organisational innovations in the assignment of tasks and the monitoring of work performance. It is beyond doubt, in fact, that in the new organisational framework, the managerial powers of Public</p>	



<p>Administrations have changed and new risks have emerged, on the one hand, concerning administrative efficiency and, on the other hand, with regard to the personal sphere of employees.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - “From Research to Enterprise”) co-funded by the Enterprise: ING GROUP Srl and the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Digitalisation, innovation, competitiveness of the production system Title of the project: Safety and the management system. Description of the activity: The occupational safety management system is a corporate organisational model designed to achieve a social objective - the protection of workers - while maximising benefits and reducing costs. Its relevance is to the extent that, by demonstrating that it has adopted and applied a compliance model, the enterprise is exempted from liability in the case of offences committed in violation of occupational health and safety regulations. A growing number of enterprises are adopting staff management systems based on artificial intelligence, the impact of which, however, remains to be assessed as there are many related legal and ethical issues.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - “From Research to Enterprise”) co-funded by the Enterprise: Il notturno di Mastrominico Tiberio & C. SAS and the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Digitalisation, innovation, competitiveness of the production system. Title of the project: Suspicious transaction reports and cooperation with supervisory and control authorities in the framework of anti-money laundering. Description of the activity: Italian Legislative Decree number 231/2007 governs what have been termed anti-money laundering obligations: the obligation to perform due diligence, the obligation of registration, and the obligation to report. The latter requires, among other requirements, the careful analysis and verification of business operations using what are known as anomaly indexes. In this context, the use of technology, specifically artificial intelligence, is of great impact. The research activity is aimed at developing organisational models that, relying on the potential of artificial intelligence, are efficient for the management of anti-money laundering risks, particularly with regard to the reporting of suspicious transactions.</p>
<p>1 (one) funded by the University of Campania <i>Luigi Vanvitelli</i> in the framework of the <i>UNESCO Chair on Business Integrity and crime Prevention in Art and Antiquities Market</i>.</p> <p>Topic: Protection of cultural heritage and enterprise compliance. Title of the project: Preventing and contrasting illicit practices in the market of cultural property: national and international perspectives. Description of the activity: Legal systems are currently undergoing a phase of significant reconsideration also with a focus on providing cultural property with updated forms of protection. These are necessary against the background of the awareness, on the one hand, of the centrality of cultural heritage and, on the other hand, of the consolidation of risks which are traditional (dispersion, degradation) and becoming increasingly common (conflicts, catastrophes, and the logic of markets). The research activity, which is part of the UNESCO Chair on Business Integrity and crime Prevention in Art and Antiquities Market, focuses on strategies for the protection of cultural property using traditional legal instruments as well as enterprise compliance.</p>
<p>04 (four) WITHOUT SCHOLARSHIP</p>

19 (nineteen) OVERALL TOTAL	
<i>Procedure for admission tests</i>	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<i>Location and competition calendar</i>	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.giurisprudenza.unicampania.it/didattica/dottorato-di-ricerca-in-internazionalizzazione-dei-sistemi-giuridici-e-diritti-fondamentali</p>	
<i>Other useful information</i>	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.giurisprudenza.unicampania.it/didattica/dottorato-di-ricerca-in-internazionalizzazione-dei-sistemi-giuridici-e-diritti-fondamentali</p>	
<i>Useful contacts</i>	
Educational/scientific contact person	<p>Prof. Ambrogio DE SIANO <i>e-mail:</i> ambrogio.desiano@unicampania.it</p>
Administrative contact person:	<p>Dott.ssa Elena Daniela SCARAMELLA <i>e-mail:</i> elenadaniela.scaramella@unicampania.it</p>

Annex number 04	
DESCRIPTION SHEET OF THE RESEARCH DOCTORATE COURSE IN MIND SCIENCES - Cycle XXXIX	
Coordinator	Prof. Gabriella Misso; <i>e-mail: gabriella.santangelo@unicampania.it</i>
Administrative headquarters of the Course	Department of PSYCHOLOGY
Doctoral School: Director:	Humanities and Social Sciences Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	M-PSI/01 - M-PSI /02 - M-PSI /03 - M-PSI/04 - M-PSI/05 - M-PSI/06 - M-PSI/08 - INF/01 – M-PED/01 - SPS/11
COMPETITIVE POSITIONS OPEN	
19 (nineteen) WITH SCHOLARSHIP, of which:	
- 5 (five) SCHOLARSHIPS financed by the University	
- 7 (seven) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 7 (seven) SCHOLARSHIPS with a compulsory topic of which:	
<p>2 (two) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Digital and environmental transitions Title of the project: Erasing the boundary between organism and machine. Biotechnology in action, or infinite manipulation. Description of the activity: The project is designed to analyse the relationship between the organism and technology in light of the current post-digital condition. The convergence of nanotechnologies, biotechnologies, information technologies and cognitive sciences is in fact profoundly transforming the woman/man-technology interplay, creating a vision of the human being as an organic-technological hybrid, a hybrid that can always be further transformed and manipulated. Specifically, the focus is going to be on: a) neurobotics and neuromorphic computing; b) CRISPR-Cas9 technology; c) the biodigital convergence; d) bio-computing and the brain-computer interface; e) open AI. The vision of life that emerges at this intersection and its ethical and educational consequences will then be explored and analysed. The project operates entirely within the framework of the analysis of the post-digital society and the educational model associated with it.</p> <p>Scholarship number 2 Topic: Digital and environmental transitions Title of the project: The role of perceived self-efficacy, of belonging and psychological distance in the ecological transition. Description of the activity: The training activities of the PhD student during the three years of the project are going to focus on the construction of immersive Virtual Reality (IVR) scenarios simulating environments that are both near and far, polluted and unpolluted, with and without avatars, with and without eco-friendly solutions (for example, electric cars, solar panels, reuse and recycling). The PhD student is going to use these settings in a series of experiments on participants who are healthy (age range 18-60) and will implement both psychophysiological measures (for example, skin conductance, heart rate), explicit subjective measures (such as perceived self-efficacy, environmental anxiety, sense of belonging and psychological distance) and implicit behavioural measures (for example, spontaneous implementation of pro-environmental behaviours and performance on cognitive tests). Participation in this research project will enable the PhD student to develop adequate theoretical and practical skills</p>	



in a wide range of research and intervention techniques, from physiological to psychological, as well as to become familiar with IVR.

4 (four) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: “HUMANISTIC CULTURE, CREATIVITY, SOCIAL TRANSFORMATION, THE SOCIETY OF INCLUSION”

Title of the project: What are the factors that contribute to the generation of the "first impressions" for the acceptance of interactive dialogue systems (virtual agents, robots, and chatbots) for children?

Description of the activity: The success of the interaction with virtual agents, robots and chatbots, just like the interaction between humans, depends heavily on the first impression drawn by the end user. These are highly critical in nature because the desire to accept the use of these systems and the willingness to establish an ongoing relationship with them is derived from these impressions. For assistive technologies aimed at vulnerable individuals such as children with cognitive and/or speech disorders, it is essential to investigate the effects of these first impressions and the factors from which they originate. The research proposal is aimed at understanding the degree of acceptance of these systems and ensuring that their design takes into account the needs and requirements expressed by end users. This project aims at identifying the factors that contribute to the generation of first impressions in interactions with interactive dialogue systems in children by investigating: a) the type of system (virtual agent, robot, chatbot) b) the gender of the participants (males and females) c) the age of the participants (3<age<5 and 7<age<9) d) cultural differences (differences between the Italian population, and other countries in the EU).

Scholarship number 2

Topic: “HUMANISTIC CULTURE, CREATIVITY, SOCIAL TRANSFORMATION, THE SOCIETY OF INCLUSION”.

Title of the project: Measuring exposure to discrimination in order to improve the population's quality of life.

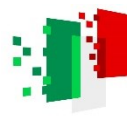
Description of the activity: This project is aimed at developing new methods for measuring and analysing different types of discrimination in order to quantify their impact on health. The training activities involve the construction and use of measures that are explicit (questionnaires) and implicit (Implicit Association Test; IAT) for the assessment of exposure to discrimination. Implicit measures are instruments that indirectly detect content and mental representations. Different types of discrimination (based on age, disability, socio-economic status, race/ethnicity, gender, sexual identity, and weight) are going to be analysed. In addition, health aspects related to discrimination (for example, psychological distress and sleep disturbances) which have the potential of harming the quality of life and increasing the risk of developing physical illnesses, and psychological disorders as well as promoting maladaptive behaviour (alcohol, drug and tobacco consumption) are going to be assessed. Participation in this project will enable the PhD student to acquire skills in the field of social psychology and social cognition, which are necessary to be able to estimate the consequences of discrimination on the health of the population and to design programmes, policies and initiatives to promote health equity, well-being and the quality of life of people.

Scholarship number 3

Topic: “HEALTH”

Title of the project: The combination of light exposure and cognitive training for improved sleep, cognition and well-being for the elderly.

Description of the activity: The training activities of the PhD will focus on active participation in a randomised study on a sample of healthy elderly people (age 70-85), designed to assess the immediate and long-term effects of three interventions (cognitive training, light exposure, combined intervention) on three sets of measures, namely subjective and objective sleep quality, cognitive functioning and subjective well-being. The modulation of daily lighting conditions on the effectiveness of the



interventions will also be assessed. Participation in this elaborate research project will enable the PhD student to develop adequate theoretical and practical skills in a wide range of research and intervention techniques, from physiological (polysomnography, attigraphy) to psychological (assessment on all cognitive domains), as well as to familiarise him/herself with intervention strategies - namely cognitive training and light exposure - of great clinical and psychosocial interest for the promotion and maintenance of psychophysical well-being in the elderly population.

Scholarship number 4

Topic: "HEALTH"

Title of the project: Psychological distress in university students and drop-out intentions

Description of the activity: In light of the weight of mental health issues on academic performance and the risk of academic drop-out, the project is aimed at measuring both the psychological distress of university students, (with a specific focus on psychopathological symptoms and risk of behaviours involving self-injury and injuring others) and the relationship between psychological distress, academic motivation and the risk of drop-out, with a specific focus on identifying the main predictors of academic performance. The study is going to adopt a cross-sectional observational design with snowball sampling. The project is going to be divided into three groups of activities:

- 1) planning and implementation of scientific and administrative activities (objectives: selecting and contacting universities in the national territory; submitting requests for opinions to the relevant Ethics Committees; planning activities preparatory to the recruitment of participants and data collection; monitoring the progress of the project);
- 2) data collection, management and analysis (objectives: planning data collection; collecting socio-demographic and clinical data; administering and scoring the psychological questionnaires adopted; entering the data in the purpose-made collection grid; monitoring the project's progress);
- 3) dissemination (objectives: plan dissemination programmes; disseminate objectives and results to the scientific community; monitor project progress).

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 "Public Administration")
funded by the University of Campania *Luigi Vanvitelli*

Topic: Public Administration

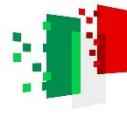
Title of the project: The involvement of youth enterprises and start-ups in regional policies for the development of the territory

Description of the activity: PhD projects are expected to target, using qualitative-quantitative mixed-methods research, useful data in order to outline a comprehensive picture of regional policies in Italy aimed at local development through the involvement of youth enterprises and start-ups. Specifically, the projects are expected to:

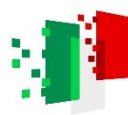
- 1) analyse the procedures by which regional public administrations involve youth enterprises and start-ups in local development projects,
- 2) highlight, from a comparative perspective, their cases of success or failure, and explain the main reasons for one and the other.
- 3) Define, as a result of the mapping referred to in points 1 and 2, an overall framework from which to identify possible strategies for improving and reinforcing the relationship between regional administrations, youth enterprises and start-ups.
- 4) Identify organisational strategies designed to reinforce and improve the efficiency of the regional administrations' internal structures dedicated to the involvement of youth enterprises and start-ups.

05 (five) WITHOUT SCHOLARSHIP

24 (twenty-four) OVERALL TOTAL

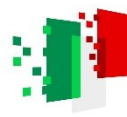


Procedure for admission tests	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
These are going to be published on the Department's web page by July 20 2023 https://www.psicologia.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-della-mente	
Other useful information	
For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.psicologia.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-della-mente	
Useful contacts	
Educational/scientific contact person	Prof. Gabriella Misso; <i>e-mail:</i> gabriella.santangelo@unicampania.it
Administrative contact person:	Dott.ssa Luciana MAINOLFi - <i>e-mail:</i> luciana.mainolfi@unicampania.it

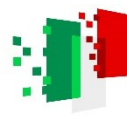


<i>Annex number 05</i>	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN THE HISTORY AND TRANSMISSION OF CULTURAL IDENTITIES - Cycle XXXIX	
Coordinator	Prof. Paola ZITO <i>e-mail:</i> paola.zito@unicampania.it
Administrative headquarters of the Course	Department of Humanities and Cultural Heritage
Doctoral School: Director:	School of Human and Social Sciences Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	ICAR/18 - L-ANT/02 - L-ANT/05 - L-ANT/06 - L-ANT/07 - L-ART/01 - L-ART/02 - L-ART/04 - L-FIL-LET/04 - L-FIL-LET/05 - L-FIL-LET/09 - L-FIL-LET/10 - L-FIL-LET/11 - L-FIL-LET/12 - L-LIN/04 - L-LIN/05 - L-LIN/12 - M-FIL/06 - M-STO/01 - M-STO/02 - M-STO/04 - M-STO/08
COMPETITIVE POSITIONS OPEN	
15 (fifteen) WITH SCHOLARSHIP, of which:	
- 5 (five) SCHOLARSHIPS financed by the University	
- 6 (six) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 4 (four) SCHOLARSHIPS with a compulsory topic of which:	
<p>2 (two) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Management and enhancement of Cultural Property using the tools of the Public Administration. Title of the project: Cultural property and the Public Administration: case studies and innovative management perspectives. Description of the research activity: Italian Ministerial Decree 118 specifies, among the eligibility criteria, that Recipients of scholarships are required to "improve the capacity of administration in relation to the formulation and design of public policies" and that they are required to be capable of "developing autonomous research itineraries useful for defining and enhancing effective management, leadership and communication skills for public organisations".</p> <p>Therefore, the project is expected to identify an element of the tangible (archaeological, artistic, library-archival) or intangible (historical, historical-religious, philological-literary, anthropological) cultural heritage analysed within the territorial context and, above all, assessed according to the interactions with the Public Administration entity that is in charge of it or that is, at any level, responsible for it.</p> <p>The project has to privilege the point of view of the chosen entity, not as a simple holder/container of the property, but as a potential vehicle for the dissemination of culture and propeller of innovation, capable of generating activities of promotion, growth and territorial development.</p> <p>The project, also based on the study of the chosen element of heritage, has to identify clear methods of interaction with the entity in which the research will be carried out, envisaging a spin-off of the project in terms of the development of the territory and the entity itself.</p> <p>The research activity is expected to produce innovative methods of utilisation, management and valorisation of the identified asset, carefully considering the legal <i>status</i>, starting conditions and potential development of the entity that hosts or is in charge of it. The candidate, during the period of study and research activity performed at the entities, required by Italian Ministerial Decree 118, is expected to be able to identify potential funding and establish collaborations and interactions that can generate benefits for the entity itself and the entire territory.</p>	

<p>2 (two) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “Cultural heritage”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Innovation and digitisation of cultural heritage. Title of the project: Strategies for the study and valorisation of cultural heritage. Description of the research activity: Mission 4, Component 1 of the NRRP and, specifically, investment 1.1 is focused on the implementation of «Digital Strategies and Platforms for the Cultural Heritage». The investment, which aims to bridge the existing digital divide, includes among its «directions» the capacity to «facilitate the transfer of Research and Development (R&D) innovations into cultural heritage practice» and «ensure the long-term use and accessibility of digital archives and digitisation products of cultural heritage». Article 10 of Italian Ministerial Decree 118 specifies the topics related to cultural heritage in correspondence with the relevant CUN areas, specifying the topics that the projects related to these scholarships are required to focus on. Given these premises, the project is expected to involve the practical application of the latest technologies to elements of cultural heritage that have already been studied, recently acquired, or not yet the subject of specific research. The project may involve both the technologies for analysing and diagnosing cultural heritage as well as systems (acquired or experimental) for cataloguing and those aimed at the restoration, preservation and use of the cultural asset being researched. The activity may also include the creation of models and replicas (real or virtual) of the heritage elements under consideration, also with a view to their reception at different levels (scientific and educational).</p>	
04 (four) WITHOUT SCHOLARSHIP	
19 (nineteen) OVERALL TOTAL	
Procedure for admission tests	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
Refer to the following Department webpage, before July 20 2023 https://www.letterebeneficurali.unicampania.it/didattica/post-laurea/dottorati-di-ricerca	
Other useful information	
For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.letterebeneficurali.unicampania.it/didattica/post-laurea/dottorati-di-ricerca	
Useful contacts	
Educational/scientific contact person	Prof. Paola ZITO <i>e-mail:</i> paola.zito@unicampania.it
Administrative contact person:	Dott. Pasquale GALIERO <i>e-mail:</i> pasquale.galiero@unicampania.it



Annex number 06	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN THE ENVIRONMENT, COMPARATIVE LAW AND TRANSITIONS - Cycle XXXIX	
Coordinator	Prof. Domenico AMIRANTE <i>e-mail:</i> domenico.amirante@unicampania.it
Administrative headquarters of the Course	Department of POLITICAL SCIENCES
Doctoral School:	Humanities and Social Sciences
Director:	Prof. Domenico AMIRANTE
Duration	3 years
Scientific and disciplinary sectors:	IUS/01 - IUS/02 - IUS/03 - IUS/09 - IUS/10 - IUS/13 - IUS/21 - M-GGR/02 - SECS-P/01
COMPETITIVE POSITIONS OPEN	
10 (ten) WITH SCHOLARSHIP, of which:	
- 3 (three) SCHOLARSHIPS financed by the University	
- 2 (two) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 5 (five) SCHOLARSHIPS with a compulsory topic of which:	
<p>3 (three) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Ecological reconversion of water management practices. Title of the project: The risk of a water crisis and preventive and precautionary interventions: comparative profiles. Description of the activity: Climate change has recently brought the issue of proper water management and access to water back to the centre of the debate. Especially from the perspective of reducing the <i>water service divide</i>. The reduction of water losses, optimisation of water discharge and purification systems, security of supply and sustainable use are just some of the aspects that require action to ensure the proper management and protection of water resources and also in the interest of future generations. In order to ensure effective interventions, it is necessary to plan a priority use of the water resource for human consumption and supplementary use, for example, in agriculture and for the production of energy. This perspective is part of a more comprehensive environmentally friendly growth that makes the resources used (including water resources) more efficient in order to sustainably overcome the economic and environmental crisis, adapt to climate change and increase disaster resilience.</p> <p>The research project aims to investigate, from a comparative perspective, the current regulatory framework in European and non-European countries with respect to quantitative and qualitative water protection. The acknowledgement of the right to water - already the subject of constitutional protection in some of the younger Global South jurisdictions - as well as the multilevel <i>governance</i> of water resources, require an integrated approach to environmental protection and, at the same time, a responsible and solidarity-based policy that respects the rights and interests of future generations. Specifically, the research will focus on the regulatory profiles and administrative tools of water resource management, also studying preventive interventions for the risk of a water crisis, as well as policies for the correct use of the resource, including precautionary measures. From this perspective, it is also necessary to verify the role of the <i>stakeholders</i> involved in the planning, management and protection of the water resource and the regulations aimed at guaranteeing the security of supply.</p> <p>Scholarship number 2 Topic: Ecological transition and circular economy policies.</p>	



Project title: The transition to the circular economy in a comparative perspective: European scenarios and implementation profiles in Italy.

Description of the activity: The research activity envisages the detailed analysis of public policies in support of the circular economy in the EU Member States, specifically focusing on high value-added sectors such as WEEE, paper and cardboard, plastics and textiles.

The research methodology adopted will be comparative in nature, with the aim of identifying discrete profiles and possible points of convergence between the regulatory instruments and policies to encourage the recycling and reuse of materials adopted by the different member countries. The multilevel articulation of the discipline under analysis will require the study of international, supranational, constitutional and supra-national regulations, guided by the implementation of the legal comparison method. Among the expected results of the research, it is proposed to provide recommendations to improve public policies in support of the circular economy in Italy, in order to achieve the material recycling and reuse targets set by the National Plan for Resilience and Resilience. The comparative analysis of the policies of other member countries may allow the identification of best practices to improve the effectiveness of Italian policies and promote greater cooperation among European countries for the transition towards a circular economy.

Scholarship number 3

Topic: Climate transition and the Green Deal.

Project title: Comparative profiles of the ecological transition: legal innovation and the European Green Deal.

Description of the activity: The European Green Deal, understood as a drive towards sustainable policies that foster the ecological transition, represents the set of policies that member states will translate, also in the light of "EU Climate Law," into national law. The shift from the political to the legal sphere, as well as the shift from the European to the national implementation space, imposes the need to analyse the actual content of these actions, both vertically (EU-Member States) and horizontally (between individual Member States or groups of them). For this purpose, the research is aimed at analysing and assessing the effects of the national implementation of the European Green Deal, with the objective of highlighting any implementation failures related to transposition. In terms of the effects on the national territory, the impact is of considerable importance, because the result of the research will be to elaborate an evaluation scheme to verify the implementation of policies and legislation aimed at fostering the ecological transition, specifically with regard to the areas of interest of the NRRP. The research activity involves three phases: 1) mapping the relevant regulatory material and scientific literature; 2) critical processing of the data and dissemination of the temporary results; 3) definition of the evaluation model of the legal-political measures. The research activity also includes at least six months of research abroad, possibly to be carried out during the implementation of the second phase. Compatible with the research activities, the results, both temporary and final, will be emphasised by means of appropriate dissemination (namely based on the 'Open Science' and 'FAIR Data' principles).

2 (two) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 "Public Administration")

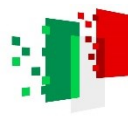
funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Policies for energy communities between digitisation and innovation.

Title of the project: Urban regeneration and the Public Administration: policies for energy communities.

Description of the activity: Renewable energy communities represent an innovative model of clean energy production and consumption, through which end clients, taking on the role of *prosumers*, can contribute, in an associated form, to the pursuit of the energy transition objective, which is part of the more ambitious EU objective of climate neutrality.



Territorial public administrations play a crucial role in the dissemination of the model and the full development of its potential, in compliance with the principle of horizontal subsidiarity.

The research project aims to investigate, from a comparative perspective, the role that territorial public administrations can play in the establishment of energy communities and the dissemination of the related models, in order to catalyse the process of urban regeneration, a component of the energy transition promoted by the European Union. The decision by local administrations to take an active part in the constitution of a new renewable energy community - stimulated also by the possibility for small municipalities to benefit from NRRP funding - involves a commitment in terms of drafting the feasibility study, outsourcing the design phase and the execution of the works, and developing public awareness and information strategies. Therefore, part of the research focuses on the elaboration and dissemination of *know-how* and *best practices* acquired in the field, also investigating the possible use of collaboration agreements under article 15 of Italian law 241/1990.

The perspective of the Regions undertaking a proactive role in the same direction can be analysed in terms of comparison with the experience coming from the Spanish legal system, where a share of the resources of the *Plan de Recuperación Transformación y Resiliencia (PRTR)* is allocated to finance what is referred to as the *ecosistema de apoyo* elaborated by the Spanish Ministry of Ecological Transition in order to remove the obstacles preventing the spread of energy communities in Spain.

Scholarship number 2

Topic: Cultural heritage, sustainability and innovation.

Title of the project: The revitalisation of small villages between tourism, sustainability and innovation: a European and comparative perspective.

Description of the activity: Italy's villages and small historical centres increasingly represent an innovative model of sustainable and resilient tourism capable of combining the enhancement of cultural identities, the protection of historical and artistic heritage and environmental protection. The European Union - through various policies, such as rural development, cohesion policy, as well as calls under the Horizon 2020 and Connecting Europe Facility (CEF) programmes - has already been contributing to the protection of villages and the development of smart villages for years. In Italy, following the pandemic, the NRRP specifically supported a process aimed at supporting the economic and social development of the many small villages in Italy. This approach encourages local Public Administrations that are called upon to limit the phenomenon of depopulation of inland areas in an attempt to relaunch the social, economic and cultural revitalisation processes of local communities, offering enormous potential for sustainable alternative and proximity-based tourism, thanks to their cultural heritage (tangible and intangible), history, arts and identity and food and wine traditions that characterise them.

What is increasingly emerging alongside the right of villages is a "right to the village" as one of the declinations of the right to beauty and as an expression of culture.

The research project aims to investigate the role that territorial Public Administrations can play in the protection of small villages and Smart Villages.

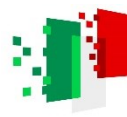
The decision by local administrations to become an active part of the enhancement of small villages - promoted specifically using the "National Village Plan" and programmes to support the economic/social development of disadvantaged areas - implies a tangible commitment on the part of local communities, Third Sector stakeholders, and also citizens, in order to promote a *bottom up* model of revitalising small municipalities in the inland areas of our country.

From a European and comparative perspective, the project intends to research and focus attention on the legal, regulatory and administrative actions and instruments (for example, associative and participative models, identity or quality marks, quality charters, etc.), implemented by the local Public Administrations of the villages and by private individuals (individually or also in associated form, such as the strategies implemented by Local Action Groups - LAGs) to support and relaunch cultural, tourist, trade, agricultural and food activities which are aimed at revitalising small villages and their identity.

02 (two) WITHOUT SCHOLARSHIP

12 (twelve) OVERALL TOTAL	
<i>Procedure for admission tests</i>	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<i>Location and competition calendar</i>	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.scienzepolitiche.unicampania.it/didattica/post-laurea/9-ricerca/617-dottorato-di-ricerca-in-ambiente-diritto-comparato-e-transizioni</p>	
<i>Other useful information</i>	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.scienzepolitiche.unicampania.it/didattica/post-laurea/9-ricerca/617-dottorato-di-ricerca-in-ambiente-diritto-comparato-e-transizioni</p>	
<i>Useful contacts</i>	
Educational/scientific contact person	Prof. Luigi COLELLA <i>e-mail:</i> luigi.colella@unicampania.it
Administrative contact person:	Dott.ssa Paola LANDRIANI <i>e-mail:</i> paola.landriani@unicampania.it

Annex number 07	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN SCIENCE AND ENGINEERING FOR THE ENVIRONMENT AND SUSTAINABILITY - Cycle XXXIX	
Coordinator	Prof. Diego VICINANZA <i>e-mail: diego.vicinanza@unicampania.it</i>
Administrative headquarters of the Course	Department of ENGINEERING
Doctoral School:	Polytechnic and Basic Sciences
Director:	Prof. Oronzio MANCA
Duration	3 years
Scientific and disciplinary sectors:	AGR/02 - AGR/05 - AGR/07 - AGR/14 - BIO/01 - BIO/03 - BIO/07 - CHIM/02 - CHIM/10 - CHIM/12 - FIS/07 - GEO/05 - GEO/08 - ICAR/02 - ICAR/07 - ICAR/03 - ICAR/05 - ICAR/08 - ICAR/09 - ICAR/10 - ICAR/12 - ICAR/13 - ICAR/17 - ING-IND/01 - ING-IND/25 - MED/42
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Natural Resources, Environment, Agriculture and Food; • Sustainable Civil Engineering; • Circular Economy of Goods and Services.
COMPETITIVE POSITIONS OPEN	
27 (twenty-seven) WITH SCHOLARSHIP, of which:	
- 08 (eight) SCHOLARSHIPS financed by the University	
- 07 (seven) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 12 (twelve) SCHOLARSHIPS with a compulsory topic of which:	
<p>3 (three) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Measure M2C4.4 LAND AND WATER RESOURCE PROTECTION - GUARANTEEING THE SUSTAINABLE MANAGEMENT OF WATER RESOURCES ALONG THE ENTIRE CYCLE AND THE IMPROVEMENT OF THE ENVIRONMENTAL QUALITY OF INLAND AND SEA WATER (Investments in sewerage and purification: "prevention of pollution and protection and restoration of healthy ecosystems" and "elimination of water pollution"). Title of the project: Sustainable management of overflow discharges in mixed sewers. Description of the activity: The research intends to investigate the functioning of mixed-system sewage systems, in view of the great uncertainties regarding the quantity and characteristics of the incoming effluent, the numerous and diversified types used in sewage systems, and the complexity of the hydrological and hydraulic modelling of their performance. The research will be developed in cooperation with GORI S.p.A., which provides the 'integrated water service' in 74 cities over a territory of 897 square kilometres, with approximately 1,500,000 inhabitants. A research and training period of at least 6 months is planned to be carried out at the Department of Civil Engineering, Aristotle University of Thessaloniki (Greece).</p> <p>Scholarship number 2 Topic: Design and technological planning of architecture. Title of the project: BIM-Based Material Passport for Sustainable Construction and Digital Transition.</p>	



Description of the activity: The research will explore the challenges and opportunities of integrating the material passport into BIM work flows and how it can be used to support the implementation of sustainable building practices, improve resource efficiency and reduce waste in construction projects. The research will develop a framework for the implementation of a BIM based material passport, including a standardised approach for the collection and management of material data, a database of material properties and tools for the analysis and visualisation of material data, with a view to sustainability and digital transition of the construction process. The research will contribute to the achievement of sustainability goals in the construction industry and support the digital transition by providing decision-makers with the necessary tools to make informed choices on material use and to develop innovative solutions for better resource utilisation and waste reduction. The research will be developed for a period of at least 6 months at the partner University TU Eindhoven (The Netherlands) and an additional 6 months at the industrial partner Immensive srls.

Scholarship number 3

Topic: Green revolution and ecological transition.

Title of the project: Advanced methodologies for quantifying the sustainability of waste management processes to support planning at local, national and European levels.

Description of the activity: The research activity aims at quantifying the sustainability (environmental, economic and social) of the main forms of resource recovery from different types of solid waste, evaluating the most appropriate process and technology with the help of advanced environmental impact metrics. Environmental Life Cycle Assessment, Life Cycle Costing and Social LCA procedures will be adopted, proposing new methodological solutions. The various metrics based on the life cycle will be combined with others, such as the analysis of material and substance flows: one of the aims will be the development of a "tools kit" to support decision-making processes, e.g. waste management planning at the regional or national level. The research will make it possible to study conventional and innovative solid waste management options with a multidisciplinary approach, also with the use of experimental tests on pre-pilot scale plants. Synergetic contributions from various scientific fields, such as chemical engineering, environmental engineering, industrial ecology and chemical sciences, will be required and will have a potential impact on various fields of ecological transition, leading to choices being made not based on perceptions or evaluations limited to the "battery limits" of the processes/services examined, but rather on evidence based on objective data covering their entire life cycle.

The period of study and research abroad will be no less than six months, preferably at one of the research centres with which collaborations are already active (Denmark Technical University of Copenhagen; VTT, Finland; University of Western Ontario, Canada; North Carolina State University, USA). The research activity will presumably be carried out in cooperation with CONAI - the Italian Packaging Consortium and CNR STEMS_Institute of Science and Technology for Energy and Sustainable Mobility for a period of no less than 6 months.

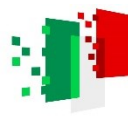
5 (five) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 "NRRP Research") funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Green Revolution Ecological Transition.

Title of the project: Monitoring of the Overtopping Breakwater for Wave Energy Conversion pilot plant at the port of Naples.

Description of the activity: The integration between devices for the conversion of wave power into electricity and coastal defence structures, could represent a valid alternative to reduce the high costs of such technologies. The research project intends to study the OBREC (Overtopping Breakwater for the Energy Conversion) device, the first pilot plant in the world of an "overtopping" device for the conversion of wave energy into electricity totally embedded in a traditional breakwater. The OBREC experimental module is integrated in the seawall of the San Vincenzo pier, in the port of Naples (ITALY).



Unlike traditional breakwaters, instead of dissipating the energy of the incident wave, OBREC captures as much energy as possible to convert it into electricity. The technology is both simple and innovative at the same time. The research activity will consist of the monitoring of the prototype and, in particular, of the hydraulic, structural and electromechanical (turbine) parameters of the OBREC system, as well as the study of the performance of an upgrade version (OBREC 2.0). A research and training period of at least six months is foreseen, to be carried out at IHCantabria (Spain) to develop CFD analysis.

Scholarship number 2

Topic: Green revolution and ecological transition. Component 4 - Protection of the territory and water resources.

Title of the project: Modelling the phenomena of liquefaction of natural deposits.

Description of the activity: The project requires the development of research topics related to the modelling of natural hazards and their mitigation. In the research project, specific attention must be paid to modelling the response of natural deposits that may be subject to phenomena of liquefaction under cyclic or dynamic stress. Structural and infrastructural systems may be subjected to cyclic and dynamic stresses both due to natural phenomena and to causes induced by human activities. This problem is particularly acute in Italy, which is characterised by an outdated infrastructural and structural heritage and by centres of historical, artistic and cultural interest falling within seismic zones. The challenge to be undertaken in the research project is the development of complex constitutive models capable of reproducing the real response of natural deposits subjected to cyclic and dynamic stresses and predicting the occurrence of liquefaction phenomena. The subject matter is part of a multidisciplinary project involving different scientific sectors ranging from geotechnical engineering to structural engineering. The disciplinary scientific sectors involved are ICAR7/07 and ICAR/08. A six-month period of research abroad at the University of Auckland in New Zealand is planned in the second year of the PhD course.

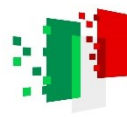
Scholarship number 3

Topic: GREEN REVOLUTION AND ECOLOGICAL TRANSITION.

Title of the project: Assessment and minimisation of the environmental impact associated with the exploitation of marine renewable energies.

Description of the activity: As Europe approaches its targets for renewable energy sources, more and more attention is being given to marine renewables. Among these, wind energy combined with wave energy are increasingly targeted in the area of the Mediterranean. The expected development of this sector will make the maritime space increasingly crowded in a context where the cumulative effects of human activities on the marine environment are generally still poorly understood. Although several studies have now been carried out on the main impact factors associated with this sector, such as: underwater noise, the generation of electromagnetic fields, the introduction of artificial light, possible changes induced by the presence of infrastructures on the hydro-geomorphology of the marine environments themselves (changes in the circulation of currents, wave heights in sediment transport processes), the emission of pollutants, collision risks and other possible interferences in marine trophic networks, the methods for assessing them are still far from being consolidated. To complicate the situation even further, there is the still unfinished itinerary of the implementation of the Marine Strategy Directive (MSFD-2008/56/EC), which has not yet clearly defined target and objective thresholds for most of the aforementioned impact factors, which may constitute unavoidable references in the processes of assessing the environmental compatibility of these infrastructures. In this context, the proposed research activity will focus precisely on the development of methods for assessing the environmental impact of infrastructures for the exploitation of marine renewable energies and on the possibility of minimising and compensating for these impacts. A research and training period of at least six months will be carried out at Perpignan University (France).

Scholarship number 4



Topic: Safeguarding the air quality and biodiversity of the territory using the protection of green areas, soil and marine areas [M2C4M3].

Title of the project: Assessment of the quality of ambient air and study of technologies for direct CO2 removal

Description of the activity: The research activity will focus on the assessment of ambient air quality and the study of direct CO2 capture systems in the atmosphere. Specifically, the activity will involve both field work by monitoring the main contaminants that alter air quality, and the modelling of their dispersion. Finally, the study and modelling of CO2 capture systems will be carried out.

A 12-month research and training period is planned at the National Technical University of Athens, Athens (Greece).

Scholarship number 5

Topic: Measure M2C4.2 PROTECTION OF THE TERRITORY AND WATER RESOURCES - PREVENTING AND COUNTERING THE EFFECTS OF CLIMATE CHANGE ON HYDROGEOLOGICAL DISEASE PHENOMENA AND ON THE VULNERABILITY OF THE TERRITORY (Measures for the management of flood risk and reduction of hydrogeological risk: "Mitigating and better managing hydrogeological risks")

Title of the project: Assessment of geo-hydrological hazard in small basins using a hydro-meteorological approach

Description of the activity: The research proposes an innovative approach to assessing the hydraulic hazard of foothill stretches of watercourses draining small basins, with reference to debris flows, rapid landslides and flash floods. This assessment is usually carried out with reference only to the characteristics of the meteorological events that trigger the phenomena, modelling the response of the basins in a static way. The behaviour of the slopes during heavy rainfall, on the other hand, depends on a series of factors that are variable over time, linked to the dynamics of the hydrological cycle, which strongly influence the hydrological response of the basins. The identification of these factors will be conducted from monitoring data at sample sites, which will be interpreted with different modelling approaches, both conceptual and physically based.

A research and training period of at least six months is planned at the Delft University of Technology, Faculty of Civil Engineering and Geosciences, Delft (The Netherlands).

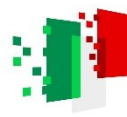
1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Cultural heritage”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Physics applied to cultural heritage and cultural property.

Title of the project: RECONSTRUCTION AND CORRELATION OF DIET BETWEEN PAST AND PRESENT.

Description of the activity: The Research project aims to develop innovative methods of analysis useful for reconstructing the paleo-diet of ancient populations, with a resolution and accuracy never previously achieved. Measurements of isotope ratios will be carried out through the development of sample preparation and characterisation protocols, based on elemental analysis and spectroscopy (e.g. FTIR) methods and techniques. The massive amount of well-preserved archaeobotanical and zooarchaeological material then makes it possible to create the isotopic baseline, and by correlating these with isotopic ratios in human individuals, reconstruction of the dietary regimes at the site under study will be carried out, thanks to the use of Bayesian statistical models that allow the absolute quantification (in percentage) of the calories and macronutrients obtained from each individual resource.

An additional research step is the possibility of carrying out analyses of key samples using the measurement of the Carbon and Nitrogen isotope ratios of amino acids. This will make it possible to reconstruct the diet more precisely - also in quantitative terms with Bayesian statistical models - and will make it possible, by means of certain amino acids, to hypothesise the health status of an individual. The PhD student will spend a period of 9 months at the entity or entities (Archaeological Park of Pompeii and/or Archaeological Park of Ostia) and a period of approximately 6 months (albeit not



continuous) at foreign enterprises and/or universities (e.g. Max Planck Institute, University of the Netherlands, ...)

1 (one) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")

co-funded by the Enterprise CIC – Cellulosa Innovativa Canapa SRL Benefit and the University of Campania *Luigi Vanvitelli*

Topic: Green Agriculture.

Title of the project: Production of bio-based and biodegradable composite materials from sustainable plant fibres.

Description of the activity: The project is aimed at the valorisation of natural fibres to obtain and design new biocomposites using the recognition and utilisation of pre-existing resources in nature. The objective is the realisation of bio-materials to strengthen competitiveness in the industrial sector by promoting technological innovations and sustainable growth. The intention is to select the best polymer matrix for a type of natural fibre to maximise its properties and performance in the expected composite. The separation of plant fibres (for example lignocellulose and cellulose) from the other plant components is a fundamental stage for their functional recovery. For this purpose, considering supply chains that have an impact on our territory, once the plant material has been recovered, it will be subject to exhaustive extraction. Extraction techniques with a low environmental impact will be taken into account in order to preserve the sustainability of the supply chain. The comparison of the techniques adopted will take into account parameters of quality, purity and extractive yield. Non-fibrous material, equally recoverable from extraction processes, will also be studied in terms of its chemical composition for a possible different application. The project activities are intended to make use of the integration of multidisciplinary and interdisciplinary approaches to obtain sustainable biocomposites. Specifically, a 12-month commitment is planned for the research activities at the enterprise CIC srl, whereas the international activities (a minimum of 6 months, even if not continuous) will take place at TUD (Technische Universität Dresden) in Dresden, at the "Institute for Materials Science".

1 (one) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")

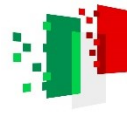
co-funded by the Enterprise MINT Srl and the University of Campania *Luigi Vanvitelli*

Topic: Green Revolution Ecological Transition

Title of the project: Development of advanced sensor and prediction models for the monitoring of energy consumption and environmental parameters

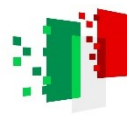
Description of the activity: The Research project aims to develop an integrated innovative sensor system useful for the monitoring, control, prediction and dynamic management of environmental and energy parameters. Specifically, the intention is to develop miniaturised sensors useful for monitoring microclimatic parameters, chemical pollutants, energy consumption, physical agents, and geodynamic parameters, to be executed both continuously over time and in a spatially distributed manner, in order to characterise environments and processes in an overall context of space and time. Therefore, this involves the design, integration, implementation and testing of various sensors based on different technologies and the use of diagnostic methodologies and statistical techniques devised to provide decision-making and interpretative support for any anomalies that may be encountered with the aim of creating predictive models based on Artificial Intelligence.

The PhD student is going to spend a period of 18 months at MINT Srl and also a period of approximately 6 months (although not continuous) at foreign enterprises and/or universities (for example, the MAX PLANCK Institute, the University of the Basque Country, ...).



<p>1 (one) financed by INPS reserved for the children and orphans of members of the Unified Management of Credit and Social Benefits and of pensioners who are users of the Management of Public Employees for the performance of the research indicated in the INPS Notice.</p> <p>Topic: Measure M2C4.4 PROTECTION OF THE TERRITORY AND WATER RESOURCES - GUARANTEEING THE SUSTAINABLE MANAGEMENT OF WATER RESOURCES DURING THE ENTIRE CYCLE AND THE IMPROVEMENT OF THE ENVIRONMENTAL QUALITY OF INLAND AND SEA WATER (Investments in primary water infrastructures for the security of water supply: "making primary water infrastructures more efficient and resilient").</p> <p>Title of the project: A decision support system for water crisis management.</p> <p>Description of the activity: The research aims to develop a decision support system, which, based on information available in real time, enables the development of forecast scenarios at different levels of probability, in order to compare the effectiveness of various possible crisis management strategies in water use.</p> <p>The research envisages a period of 12 months at GORI S.p.A., which supplies the integrated water service in 74 cities across a territory of 897 square kilometres, with approximately 1,500,000 inhabitants.</p> <p>A research and training period of at least 3 months is planned to be carried out at the Department of Civil Engineering, Aristotle University of Thessaloniki (Greece).</p>	
<p>07 (seven) WITHOUT SCHOLARSHIP</p>	
<p>34 (thirty-four) OVERALL TOTAL</p>	
<p>Procedure for admission tests</p> <ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<p>Location and competition calendar</p> <p>These are going to be published on the Department's web page by July 20 2023 https://www.ingegneria.unicampania.it/didattica/dottorato-in-scienze-e-ingegneria-per-l-ambiente-e-la-sostenibilita</p>	
<p>Other useful information</p> <p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.ingegneria.unicampania.it/didattica/dottorato-in-scienze-e-ingegneria-per-l-ambiente-e-la-sostenibilita</p>	
<p>Useful contacts</p>	
<p>Educational/scientific contact person</p>	<p>Prof. Diego VICINANZA e-mail: diego.vicinanza@unicampania.it</p>
<p>Administrative contact person:</p>	<p>Dott. Massimo MANNA e-mail: massimo.manna@unicampania.it</p>

Annex number 08	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN RESEARCH IN INDUSTRIAL AND INFORMATION ENGINEERING - Cycle XXXIX	
Coordinator	Prof. Aldo MINARDO <i>e-mail: aldo.minardo@unicampania.it</i>
Administrative headquarters of the Course	Department of ENGINEERING
Doctoral School: Director:	Polytechnic and Basic Sciences Prof. Oronzio MANCA
Duration	3 years
Scientific and disciplinary sectors:	NG-INF/01 - ING-INF/02 – ING-INF/03 - ING-INF/04 - ING-INF/05 - ING-INF/07 - ING-IND/03 - ING-IND/04 - ING-IND/05 - ING-IND/06 - ING-IND/07 - ING-IND/10 - ING-IND/14 - ING-IND/15 - ING-IND/16 - ING-IND/17 - ING-IND/31 - ING-IND/33
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Electrical Engineering; • Computer Engineering; • Energy Conversion; • Aerospace Engineering; • Mechanical Engineering.
COMPETITIVE POSITIONS OPEN	
28 (twenty-eight) WITH SCHOLARSHIP, of which:	
- 09 (nine) SCHOLARSHIPS financed by the University	
- 06 (six) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 13 (thirteen) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: NRRP Research. Aerospace Engineering. Title of the project: CFD analysis of supersonic flight in the presence of rain. Description of the activity: The development of a numerical methodology for the creation of a virtual environment for the experimental study of rain erosion for supersonic aircraft. Specific attention will be paid to the interaction between water droplets and shock waves, resulting in drift, deformation and disintegration, and to the distribution of fragments impacting aircraft surfaces.</p>	
<p>5 (five) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Mechatronics and Robotics. Title of the project: Multimodal sensory systems for robotic applications. Description of the activity: Research activities will focus on the development of multi-sensory mechatronic systems to increase the degree of autonomy and dexterity of robotic systems. Specifically, the development will start with the hardware part to integrate tactile sensors, proximity sensors and inertial sensors in a single device and will continue with the development of control algorithms based on sensory fusion and integrated into the same device. The resulting mechatronic system will be tested in robotic manipulation applications for objects with very different physical properties (for example, shape, weight, and rigidity).</p>	



Scholarship number 2

Topic: Analysis and Implementation of Disruptive Technologies.

Title of the project: Disruptive Technologies and Digital Health in Health Services.

Description of the activity: The project focuses on the topic of digitisation processes, characterised by disruptive innovation, completely revolutionising the previous innovations that had been implemented. This type of innovation has resulted in profound alterations in business models, improving competitiveness, profitability and long-term growth. The innovation process has many social implications: it improves a company's products and services and guarantees its success and growth, and consequently increased employment. This doctoral research will explore how public e-government models are used, analysing their strengths and weaknesses. The research is intended to analyse the typology of e-government models, their maturity and implementation. Using a SWOT and correlative analysis, the research aims to understand whether they are relevant to productivity and efficiency, effectiveness, inclusiveness and sustainability, legitimacy and trust.

Scholarship number 3

Topic: Innovation and competitiveness of the production system.

Title of the project: Robotic nonprehensile manipulation using multimodal perception systems.

Description of the activity: The research topic is focused on nonprehensile robotic manipulation of objects of different shapes and sizes. The robotic solution under study involves the implementation of a multimodal, visual and tactile perception system capable of providing the robot with the autonomy required to perform pick&place tasks on everyday objects, including fresh fruit. The perceptual data is intended to be usefully exploited by the control system of the grasping organ and manipulator arm in order to safely handle objects of interest in complex scenarios. The objective is to extend the use of robotic systems in various production sectors, from agriculture and food to logistics, from industrial production to customer assistance with the autonomy and the necessary sturdiness for medium-term utilisation.

Scholarship number 4

Topic: Smart and sustainable industry, energy and the environment.

Title of the project: Design of lightweight aerospace components made of innovative and eco-friendly materials integrated through innovative production processes based on additive manufacturing.

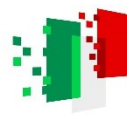
Description of the activity: The activity will be aimed at designing lightweight aerospace components made of innovative and eco-friendly materials integrated through innovative production processes based on the additive manufacturing technique (enabling industry 4.0 technology). The main objective will be to reduce the raw material required for the production of structural components and to reduce manufacturing costs using innovative additive manufacturing techniques by optimising material use and limiting waste generation that is typical of traditional subtractive manufacturing processes.

Scholarship number 5

Topic: Aerospace and Defence

Title of the project: Innovative methods for the design of damage-tolerant lightweight aerospace components for UAVs and light aircraft.

Description of the activity: The activity will be aimed at the definition of damage-tolerant aerospace structural components for UAVs and light aircraft in innovative materials and their verification, taking into account damage phenomena resulting from static and fatigue operating loads. The objective is related to the development of robust and innovative design methodologies, which provide a high added value compared to the current state of the art, in the damage-tolerant design of aerospace structural components of Unmanned Aerial Vehicles (UAV) and light aircraft manufactured with advanced materials, such as reinforced composites and hybrid materials (metal-composite). In response to the design requirements of increasingly lightweight and high-performance structures, the activity will be aimed at the implementation and validation of robust and efficient numerical methods



for the simulation of the different damage phenomena that characterise the advanced materials considered and their interaction.

5 (five) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Italian Aerospace Research Centre - CIRA S.C.p.A. and the University of Campania Luigi Vanvitelli.

Scholarship number 1

Topic: Aerospace

Title of the project: Modelling the noise of supersonic jets (shock associated and mixing) using CFD solutions.

Description of the activity: This PhD proposal deals with the problem of predicting the noise generated by supersonic jets (shock associated and mixing). Noise is a critical design issue in the development of propulsion systems for supersonic aircraft. In fact, when a jet of air is generated from the nozzle of an engine at a speed exceeding the speed of sound, strong shear flows and shock waves are produced, which result in a strong noise source in the surrounding field. As a result, an observer in the vicinity perceives strong pressure disturbances that lead to annoying noise for people, thus limiting the level of well-being of both passengers and the populations living near airports (green-aviation). Noise prediction involves, in order, the prediction of the pressure signature in the near field and its propagation in space. Within this framework, the proposal concerns a multi-disciplinary parametric analysis to assess the effects of supersonic jet characteristics on the noise it generates. The prediction of near field pressure signatures is addressed by numerical CFD simulations, both Eulerian and Navier-Stokes, of supersonic flows. The results are then used as input to define and design aeroacoustic models that can accurately provide the noise level associated with the jets.

Scholarship number 2

Topic: Metrology for aerospace applications.

Title of the project: Innovative sensors to measure environmental characteristics for Survivability.

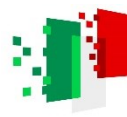
Description of the activity: The continued requirement in aviation to use increasingly less environmentally polluting propulsion sources now makes the study and development of new energy sources (hydrogen and electric) in both future aircraft and airport infrastructures an urgent necessity. The use of these sources raises the issue of safety and consequently the survival not only of the workforce but also of the entire crew or all the people present in the environment of airports. In fact, the presence of hydrogen could potentially be an indication of impending failure and any concentrations of other chemical elements foreign to the normal composition of the air could be a sign of problems with electrical systems (batteries). This highlights the requirement for efficient detection of any hydrogen or other substance leaks in the air to be accomplished with a next-generation sensor array (with very high uncertainty) and a control system that, based on the greater or lesser reliability of the individual sensor, will make the best decision to avoid an emergency situation and ensure the survival of human lives.

Scholarship number 3

Topic: Metrology for aerospace applications.

Title of the project: Fibre optic sensors for strain measurement.

Description of the activity: Fibre-optic sensors for the measurement of deformation exploit the properties of optical fibres to detect and measure changes in the shape or deformation of an object. The research project involves the development of distributed fibre-optic sensors for the measurement of deformation, also in comparison with other "contactless" technologies such as the Digital Image Correlation for the three-dimensional visualisation of mechanical deformations. This technique is based on two cameras, placed at eye distance, which fix an image at the same instant. From the



correlation of the two images, it is possible to reconstruct the three-dimensional profile of the deformation.

Scholarship number 4

Topic: Security and aerospace.

Title of the project: Security and Drone-Team Applications for Surveillance Missions.

Description of the activity: The use of drones for surveillance is a practice that is becoming increasingly widespread, thanks to the economic viability of the devices, their increased autonomy and the extreme flexibility of possible solutions. A drone dedicated to surveillance, however, needs to be highly autonomous, since human guidance (even if the system is equipped with FPV systems) is often difficult at long distances. Consequently, the systems are equipped with intelligent solutions that autonomously stabilise the vehicle, manage any obstacles encountered, coordinate with other drones in the team, and sometimes even completely execute the surveillance mission without any interaction with human staff. Such an autonomous system, however, is open to a thousand new problems, particularly in terms of cybersecurity: from the risk of theft to the alteration of the mission or its results. Designing such a system while also guaranteeing cybersecurity requirements is a complex problem, and, to date, completely open. The objective of the PhD course, in line with the PNRR paths dedicated to the digital transition with particular attention to the topics related to cyber-physical systems, cybersecurity and artificial intelligence, will be to investigate the state of the art of methodologies for the secure design of cyber-physical systems, with particular attention to the case of drones, the process of security assessment of these systems and therefore the identification, study and in-depth study of the technologies to be adopted to increase the security of the systems. In addition, the application of intelligent systems in the management of drone team behaviour and the use of adversarial techniques (Adaptive Cyber Defence) will be of particular interest in order to understand how to exploit artificial intelligence-based systems both to protect and attack drones on surveillance missions.

Scholarship number 5

Topic: Artificial Intelligence.

Title of the project: AI-powered Digital Assistant for Safety-Critical Tasks in Advanced Air Mobility.

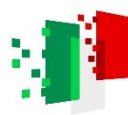
Description of the activity: In the domain of Advanced Air Mobility, the planning and conduct of operations using fleets of drones (for example, for delivery, search and rescue operations, fires, etc.) are limited by the high cost, as they require the remote involvement of many pilots to enable adequate supervision of fleet activities. In this context, the research challenge is to support "one-to-many" operations, where a single operator is able to manage multiple aircraft, through the development of Digital Assistants (DA). The advancement of Artificial Intelligence (AI) techniques and technologies represents an opportunity for the development of Digital Assistants that help overcome the current limitations of manned and unmanned air traffic management: (i) in supporting the remote pilot, (ii) in increasing the level of on-board automation, (iii) in supporting the air traffic control operator. The objective of the PhD course, in line with the PNRR paths dedicated to the digital transition, with a special focus on the topic of AI, will be to explore and advance the state of the art of AI techniques for the realisation of the Digital Assistant (DA). In particular, the focus will be on the architectural and design aspects of the DA, and on the problems of allocating the main tasks between machine and human and their integration with the various support tasks.

2 (two) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Enterprise: Kiranet srl and the University of Campania *Luigi Vanvitelli*

Scholarship number 1

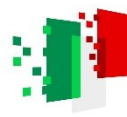
Topic: Electronics and sensors.

Title of the project: Instruments for data analysis and simulation.



<p>Description of the activity: The proposed PhD research topic will focus on the use of data analysis and simulation tools to develop customised and targeted solutions for patient care. Specifically, the project involves the development of machine learning algorithms for the analysis of data collected from sensors monitoring various diseases, from mental health to chronic illnesses. The aim of the research will be to use these instruments to refine the effectiveness of personalised treatments for patients and to predict their response potential. In addition, the project will create simulation models of the treatment process and its effects on patients, which will help health professionals make more informed decisions and plan more effective interventions. The ultimate goal of the project will be to integrate data analysis and simulation into everyday clinical practice, giving physicians and healthcare professionals a more complete and detailed view of each patient and offering patients tailor-made and personalised treatments.</p> <p>Scholarship number 2 Topic: Electronics and sensors. Title of the project: Telemedicine. Description of the activity: The proposed research topic focuses on the use of artificial intelligence systems to improve the quality of healthcare at a distance. Specifically, the project involves the development of machine learning algorithms and neural networks for the diagnosis, supervision and follow-up of patients. Specific objectives include the development of tools to assess the health of patients, subject them to diagnostic tests and continuously monitor their state of health, with the aim of identifying problems early and improving clinical outcomes. The results of the project will be tested in the context of various pathologies, such as chronic diseases, cardiovascular diseases or respiratory tract diseases.</p>	
<p>07 (seven) WITHOUT SCHOLARSHIP</p>	
<p>35 (thirty-five) OVERALL TOTAL</p>	
<p>Procedure for admission tests</p> <ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<p>Location and competition calendar</p> <p>These are going to be published on the Department's web page by July 20 2023 https://www.ingegneria.unicampania.it/didattica/dottorato-di-ricerca-in-ingegneria-industriale-e-dell-informazione</p>	
<p>Other useful information</p> <p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.ingegneria.unicampania.it/didattica/dottorato-di-ricerca-in-ingegneria-industriale-e-dell-informazione</p>	
<p>Useful contacts</p>	
<p>Educational/scientific contact person</p>	<p>Prof. Aldo MINARDO e-mail: aldo.minardo@unicampania.it</p>
<p>Administrative contact person:</p>	<p>Ms. Immacolata DIRETTORE e-mail: immacolata.direttore@unicampania.it</p>

Annex number 09	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN MATHEMATICS, PHYSICS AND ENGINEERING APPLICATIONS - Cycle XXXIX	
Coordinator	Prof. Francesca CRISPO <i>e-mail: francesca.crispo@unicampania.it</i>
Administrative headquarters of the Course	Department of MATHEMATICS AND PHYSICS
Doctoral School:	Polytechnic and Basic Sciences
Director:	Prof. Oronzio MANCA
Duration	3 years
Scientific and disciplinary sectors:	MAT/01 - MAT/02 - MAT/03 - MAT/04 - MAT/05 - MAT/07 - MAT/08 - FIS/01-FIS/02 - FIS/03 - FIS/04 - FIS/06 - FIS/07 - GEO/10 - ING-IND/10 - ING-IND/22 -ING-IND/24 - ING-INF/05 - ICAR/01 - ICAR/08 -SECS- S/01 - SECS-S/06
COMPETITIVE POSITIONS OPEN	
19 (nineteen) WITH SCHOLARSHIP, of which:	
- 6 (six) SCHOLARSHIPS financed by the University	
- 6 (six) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 7 (seven) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Environmental monitoring using sensor networks. Title of the project: Topological optimisation of sensor networks for environmental risk assessment. Description of the activity: The PhD project will focus on the study of wireless sensor networks (WSNs) used to monitor various environmental aspects, including climate, air pollution, water quality, biodiversity and seismic risk. Specifically, the PhD activity will focus on identifying the most efficient communication protocol between sensor pairs in order to improve the efficiency and resilience of the network. This path of research will use the mathematical tools of the percolation theory integrated with more specific aspects of WSNs, which require interdisciplinary training of the PhD student, including in the field of communication engineering and energy storage systems. The final objective will be to identify the minimum density of sensors required to guarantee a constant and homogeneous coverage of a given region over time and space, taking into account the energy characteristics of individual sensors, such as energy consumption during transmission and recharge times. Among the many applications, specific attention will be paid to the optimisation of the mathematical model, also using artificial intelligence techniques, for the creation of a WSN capable of providing real-time forecasts of the seismic risk in the minutes following a major earthquake.</p>	
<p>1 (one) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Green Revolution and Ecological Transition - Climate Change and quantifying the anthropogenic impact on the carbon cycle. Title of the project: Quantification of fossil CO₂ emissions using ¹⁴CO₂ measurements. Description of the activity: The final objective of the proposed doctoral programme is to provide the Italian scientific community dealing with the carbon cycle and climate change with a direct method for measuring the fraction of anthropogenic CO₂ in the atmosphere using the measurement of ¹⁴C content. To date, these estimates are still made using indirect inventory methods (bottom-up approach). An</p>	



innovative methodology for sampling, sample preparation and measurement based on Accelerator Mass Spectrometry will be developed that allows for the direct monitoring of fossil atmospheric CO₂ emissions contributing to the enhancement of climate change mitigation capacity (NRRP M2C4 mission objective 1) using Top-down estimates applicable at various scales of space and time.

1 (one) funded under **Italian Ministerial Decree 118/2023** PNRR (M4C1 – Inv. 4.1 “PNRR Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Education and Research - Laser probes of hydrocarbons in environments

Title of the project: Molecules in optical cavities at high Q

Description of the activity: The doctoral project involves research and methodological development aimed at the ultra-sensitive and selective detection of hydrocarbons in ultra-high vacuum (UHV) environments of interest to gravitational wave detectors. The activity will be performed as part of the ETIC (Einstein Telescope Infrastructure Consortium) Project, in which the Vanvitelli University is a partner. The very high requirements on the vacuum in gravitational wave detectors are derived from the necessity to limit the phase noise associated with optical path fluctuations due to residual gas. It is also important to avoid the possible condensation of residual gas on the highly reflective surfaces of interferometer mirrors. The above requirements are particularly rigorous for hydrocarbons. The study of hydrocarbon contamination thus requires the development of new spectroscopic methods, based on high-Q resonant optical cavities, with novel sensitivity characteristics to push the detection limit to the levels required in UHV environments.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Digitalisation, innovation, competitiveness, culture and tourism - Processing and analysis of large data sets.

Title of the project: Study of numerical methodologies in the analysis of functional data.

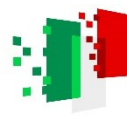
Description of the activity: The management and processing of environmental, biological and economic data, which are naturally diverse and of great dimensions, require effective numerical and computational pre-processing techniques that reduce the dimensionality of the data while preserving their information content and facilitating their effective processing in the formulation of analysis and forecasting models. A powerful tool is offered by functional data analysis (FDA). Starting from experimental data, the mathematical problem is to reconstruct functions and make inferences on them (parameter estimation, group comparison, regression, prediction of a new curve). The aim of the FDA is the statistical analysis of phenomena whose quantities are represented in functional form. The research activity has to be framed within the framework of numerical approximation and optimisation. Reconstruction is based on the use of data fitting and smoothing techniques that are aimed at minimising functionals to ensure the fidelity of the models to the experimental data, incorporate available information and avoid overfitting. An example of an applicative sphere is environmental data, which by its very nature is complex and of great size, in which the FDA is a potential pre-process tool, useful in setting parameters in mathematical models designed for the analysis and prediction of possible ecological scenarios resulting from climate change.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

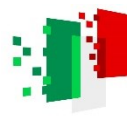
Topic: Education and Research - Neutrino astronomy in multimessenger physics.

Title of the project: data analysis for the KM3NeT telescope and development of alert strategies in multimessenger astronomy.

Description of the activity: The KM3NeT-Unicampania group is involved in all phases of the realisation of the KM3NeT neutrino telescope. The focus of the project will be on the analysis of experimental



<p>data, in the field of multimessenger astronomy, with the involvement also in activities of integration and calibration of the Digital Optical Modules.</p> <p>The project is oriented towards the definition and optimisation of alert strategies among the various experiments that make up the multimessenger physics landscape.</p> <p>The physical analysis is mainly aimed at studying point sources, as well as the widespread flux of high-energy astrophysical neutrinos. Techniques will be developed from data acquired during the integration and calibration of KM3NeT's Digital Optical Modules and will include "data quality" studies, aimed at the selection and management of telescope data, comparisons of Monte Carlo (MC) simulations, and background rejection techniques from atmospheric muons.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise") co-funded by the Italian Aerospace Research Centre - CIRA S.C.p.A. and the University of Campania Luigi Vanvitelli.</p> <p>Topic: Education and research - Innovative spectroscopic methods for plasma diagnostics Title of the project: Experimental characterisation of plasmas in electric thrusters using CRDS Description of the activity: The doctoral project is aimed at responding to a specific training requirement in the field of aerospace propulsion, in relation to the application of ultra-sensitive spectroscopic techniques for the experimental characterisation of plasmas in Hall Effect Engines (HET). Specifically, the CRDS (an acronym that stands for Cavity Ring-Down Spectroscopy) spectroscopic method will be extended to the deep UV region to observe traces of boron in the aforementioned plasmas, follow their time evolution and study the erosion dynamics of the acceleration channel of HET motors. The CRDS technique provides a non-intrusive solution to the problem of diagnosing the plasmas while guaranteeing the high detection sensitivity required by the specific application.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise") co-funded by the Italian Aerospace Research Centre - CIRA S.C.p.A. and the University of Campania Luigi Vanvitelli.</p> <p>Topic: Education and Research - Space Research. Title of the project: Nuclear physics applied to space research. Description of the activity: PhD projects are expected to target the development of systems and technologies for the testing and characterisation of materials and subsystems of space interest subject to primary and secondary cosmic radiation as well as subject to re-entry into the Earth's and extraterrestrial atmosphere, using innovative nuclear methodologies with charged particle and neutron beams in possible combination with innovative infrared thermographic techniques. The proposal would ideally include the upgrade of the accelerators held by the CIRCE research infrastructure in order to develop new beam routes, also using simulation codes for charged particle and neutron beams, and/or the realisation of a modulable surface chamber for the planned tests on materials and subsystems relevant to outer Space. The project is part of the long-standing collaboration between the Department of Mathematics and Physics and the Italian Aerospace Research Centre.</p>
<p>05 (five) WITHOUT SCHOLARSHIP</p>
<p>24 (twenty-four) OVERALL TOTAL</p>
<p>Procedure for admission tests</p>
<p>- An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications;</p>



<ul style="list-style-type: none"> - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.matfis.unicampania.it/ricerca/dottorato-di-ricerca-in-matematica-fisica-e-applicazioni-per-l- ingegneria</p>	
Other useful information	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.matfis.unicampania.it/ricerca/dottorato-di-ricerca-in-matematica-fisica-e-applicazioni-per-l- ingegneria</p>	
Useful contacts	
Educational/scientific contact person	Prof. Francesca CRISPO - <i>e-mail</i> : francesca.crispo@unicampania.it
Administrative contact person:	Dott. Carlo PETRICCIONE - <i>e-mail</i> : carlo.petriccione@unicampania.it

Annex number 10	
DESCRIPTION SHEET OF THE DOCTORAL COURSE OF NATIONAL INTEREST IN DESIGN FOR MADE IN ITALY: IDENTITY, INNOVATION AND SUSTAINABILITY - Cycle XXXIX	
Coordinator	Prof. Alessandra CIRAFICI <i>e-mail:</i> alessandra.cirafici@unicampania.it
Administrative headquarters of the Course	Department of ARCHITECTURE AND INDUSTRIAL DESIGN
Doctoral School: Director:	Polytechnic and Basic Sciences Prof. Oronzio MANCA
Duration	3 years
Scientific and disciplinary sectors:	ICAR13 - ICAR17 - ICAR18 - ICAR/09 - ICAR/10 - ING-IND/11 – ING-IND/17 - ING-IND/25 - ING-IND/35 - SECS-P/02 - SECS-P/07 - SECS-P/08 - IUS/02-IUS/10 - M-PSI/01 - M-PSI/05 - CHIM/02 - CHIM/03 - CHIM/04- CHIM/06 - AGR/01 - MAT/07 - SPS/07 - L-ART/03- BIO/04- INF/01
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Design for Inclusion; • Sustainable Innovation of Product, Service and Process Systems for Made in Italy; • Made in Italy and Technological and Digital Transition; • Made in Italy: Manufacturing and New Economic and Business Models; • The Cultural Heritage of Made in Italy.
COMPETITIVE POSITIONS OPEN	
34 (thirty-four) WITH SCHOLARSHIP, of which:	
- 01 (one) SCHOLARSHIP with funding from the University of Genoa's Academic resources	
- 01 (one) SCHOLARSHIP with funding from the University of Palermo's Academic resources	
- 01 (one) SCHOLARSHIP with funding from the Free University of Bozen/Bolzano's Academic resources	
- 31 (thirty-one) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Camerino.</p> <p>Topic: Strategies, methods and tools of Eco-design for circular and sustainable Made in Italy. Title of the project: Design for circular and sustainable Made in Italy. The role of Eco-design in SMEs for the transition to a circular economy. Description of the activity: The main objective of the research project is to support Made in Italy SMEs in the implementation of Eco-design tools and methods for the development of more circular and sustainable products and to activate and accelerate their transition process towards the Circular Economy. The project is aimed at developing a digital tool to facilitate the introduction of the most advanced design methodologies for circularity and sustainability of products into the culture and practice of Italian SMEs of the Made in Italy manufacturing sectors.</p> <p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Trieste.</p>	

Topic: Green Revolution and Ecological Transition - Modernise

Title of the project: Microplastics and water systems: risk identification and possible biotechnological responses

Description of the activity: The development of an experimental model to study risks from microplastics in integrated water systems and the implementation of bio-technological systems to intercept and break down low molecular weight microplastics.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Milan.

Topic: Green revolution and ecological transition.

Title of the project: Life cycle assessment, reduction of environmental impacts and sustainable design”.

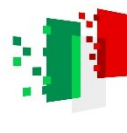
Description of the activity: The research topic aims to develop skills in life cycle assessment, environmental impact reduction and sustainable design to foster the development of more sustainable products and processes in the sector of Made in Italy. Skills will be developed in the area of life cycle assessment (LCA) and environmental impact assessment. The PhD student will acquire the ability to use LCA data to identify critical environmental impacts related to products and processes and to develop strategies aimed at their reduction. In addition, he/she will acquire skills in sustainable and circular design to create products, processes and services that minimise the use of natural resources, generate less waste and promote reusability and recycling. At the end of the PhD itinerary, the student will be able to interact with strategic Made in Italy sectors in order to promote the development of sustainable and circular solutions that reduce environmental impacts and optimise the use of natural resources.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Basilicata.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Circular economy and life cycle thinking in the sustainable management of architectural heritage.

Description of the activity: The research project addresses the issue of the conservation and enhancement of cultural heritage with an innovative vision, consistent with the objectives of the NRRP, based on the resource decoupling concept of the Green Deal with which the European Union promotes the new models of the circular and green economy for sustainable development. The priority objective is the development and dissemination of closed-loop processes in which waste from one production process becomes a resource for another according to the Cradle to Cradle theory. The methodology of the research activity utilises the new digital tools of Life Cycle Thinking, which allow the environmental, economic and social aspects of sustainability to be combined in a synergetic method of process and product innovation in the management of the built heritage. The research outlines new scenarios of integration between sustainable development and the conservation of cultural heritage using the application and implementation of the LCT methodology in the definition of support tools to verify the effectiveness of the use of resources.



1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the G. D'Annunzio Chieti-Pescara University.

Topic: Design for social inclusion and sustainability.

Title of the project: Inclusive and sustainable product/service design for enhancing the Italian qualities of products, communities and territories.

Description of the activity: The research activity will focus on strategic analysis, the exploration of identity opportunities, the study of excellent cases and system concepts for the development of a new methodological design model derived from MSDS (Method for System Design for Sustainability) and Design for All methods, aimed at finding generalisable meta-design solutions and guides for the development of new product/service system concepts with a low environmental impact and a high degree of social inclusion.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the Carlo Bo University of Urbino.

Topic: Business Models for Made in Italy Design.

Title of the project: Design for Made in Italy and the role of eco-design

Description of the activity: The research activity will focus on the identification of new business models focused on the production and marketing of design products in terms of eco-sustainability and circular economy. The theme relates to how eco-design impacts product conception, starting with materials, but also involving production processes, suppliers and upstream supply chains. In the same way, distribution channels require reconsideration in terms of how they can contribute to reducing inefficiencies in commercial circuits and reinforce the reuse, recovery and recycling aspects of both finished products and their components.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Calabria.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Innovating and Enhancing Made in Italy Design with Big Data and Artificial Intelligence

Description of the activity: The research activity will focus on the impact of Big Data and Artificial Intelligence on Design processes, with specific reference to the use and development of Neural Networks based on deep learning. The reference contexts include: the generation of ideas, generative and chaotic design, product optimisation and customisation, automation of repetitive tasks, project management and Decision Support Systems. Furthermore, the research will focus on the analysis and interpretation of data in order to implement scenarios in relation to design for Made in Italy and to improve the quality and efficiency of production. Specific attention will be given to the use of virtual and augmented reality both to support the design process and to improve the user experience.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Salento.

Topic: Sustainable innovation of products, services and processes systems for Made in Italy

Title of the project: Co-creation methods for the sustainability of Made in Italy production chains

Description of the activity: The research activity aims to promote collaborative innovation within the Made in Italy production chains. Specifically, the research activity will be aimed at designing new methods of collaborative innovation among Made in Italy enterprises to develop sustainable and

circular products and processes, using digital technologies, open innovation and co-creation platforms. The design of the new methods will also have to take into consideration the assessment of the impact on the environment and society of these Made in Italy products and processes, using tools such as life cycle analysis and S-LCA.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Florence.

Topic: Digital Transition. Digital Twin to support the circular and sustainable transition.

Title of the project: Scenarios Design for circular and sustainable textiles through the Digital Twin.

Description of the activity: The research aims to define the possibilities of applying the Digital Twin to the textile supply chain from a circular and sustainable perspective. In Digital Twin, the continuous exchange between the physical elements of complex systems such as those in the supply chain and virtual models that take in a large amount of data acquired from sensors placed on the real system, using Artificial Intelligence (AI) and Machine Learning (ML) algorithms, makes it possible to replicate the process in real time and to predict and optimise its operation. These virtual representations help organisations foresee problems in advance and help them define working strategies and alternative (what if) scenarios that can support the circular and sustainable transition in the textile industry.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Florence.

Topic: Ecological transition.

Title of the project: Design innovations in electrochemical processes applied to metal accessories for fashion.

Description of the activity: The research activity will be carried out within the PE11 "Circular and Sustainable Made in Italy" Spoke 2 and will focus on product innovations related to electrochemical processes in the field of metal accessories for fashion. Specifically, the research will investigate the possible applications of generative design to the design of small parts and components to be applied in the production of clothing and accessories, with the aim of optimising galvanic processes and reducing the use of metals.

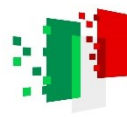
1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Siena.

Topic: Digital transition- Artificial Intelligence as a driver of innovation in digital service design.

Title of the project: The use of artificial intelligence in digital service design.

Description of the activity: The research activity will be aimed at promoting processes that generate a good user experience, automate processes and personalise interactions. Specifically, it will cover the following research areas:

1. Conversational interface design including conversation design, avatar design, and possibly 3D modelling and animation. User experience customisation and evaluation.
2. Generative design: use of algorithms to automatically generate innovative and customised design solutions.
3. Ethics in AI and responsible design: analysis of biases and stereotypes in the construction of datasets for the prevention of discrimination and to promote the transparency of systems by integrating ethical values into the design process.



1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the Mediterranea University of Reggio Calabria.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Territorial identity between design and stereotype.

Description of the activity: The research itinerary is aimed at defining a territorial identity starting from the analysis of Heritage communication in Sicily and Calabria. The activities may include the research and cataloguing of graphic materials relating to the communication and promotion of the "cultural product" from the early 20th century to today. The digitisation of the data obtained is planned for conservation and the construction of a virtual catalogue. The latter will allow easy access and interchange with other territorial and cultural realities. The cross comparison with other forms of communication: literature, art, and photography will result in the identification of recurring elements and identities of Sicily interpreted by Made in Italy graphics.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Digitalisation, innovation, competitiveness, for Made in Italy.

Title of the project: Parametric design for the digitisation of local manufacturing processes in Italian fashion.

Description of the activity: The research topic is aimed at defining digitisation protocols of manufacturing, tailoring and craftsmanship processes, specific to local production cultures in the broader framework of Italian Fashion, in order to implement, using parametric digital design, the production flow of garments or clothing accessories. Objectives: to classify the tailoring processes of twentieth-century Italian Fashion; to analyse the traditional processes in order to propose the digitisation of the different design phases, from the sketch to the technical graphics; to experiment with monitor rendering simulation and with AR viewers as support tools from the conception to the marketing of fashion garments and accessories; to verify the digitisation protocol through prototyping.

2 (two) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Digitalisation, innovation, competitiveness, for Made in Italy.

Title of the project: Design and technological scenarios in contemporary fashion: design and production challenges and opportunities.

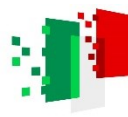
Description of the activity: The research investigates the opportunities that digital technologies and artificial intelligence generate in the design culture of fashion and the related production chains, in a socially and environmentally aware perspective towards the social and environmental impact of the production system and its design choices.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Sustainable innovation of products, services and processes systems for Made in Italy.

Title of the project: Digital humanities: the new nature of artefacts.

Description of the activity: The research examines the extensive changes driven by digital technology and artificial intelligence in the cultural and scientific landscape of the design project, also examining "other" visions of the project with respect to what appears to be a technological determinism that invests the world of life, also generating a new nature of artefacts. The research is part of the strand of



critical making, exploring new opportunities in the relationship with technologies, in the context of a post-anthropocentric and project-conscious vision.

1 (one) funded under **Italian Ministerial Decree 118/2023** PNRR (M4C1 – Inv. 4.1 “PNRR Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Productive landscapes: human capital, agricultural and food systems, advanced artisan and manufacturing industries.

Title of the project: Designing productive landscapes. Pluralities of production and integrated supply chains

Description of the activity: The research topic ideally represents a development laboratory that, by enhancing human capital, pursues the following objectives:

- innovating agricultural and food systems, by developing diversified production and management solutions and models capable of safeguarding the uniqueness of territories and landscapes, guaranteeing sustainable, resilient and quality production that has a positive impact on consumer health
- producing knowledge and tools to ensure the economic sustainability of development processes capable of combining the competitiveness of production with environmental and social sustainability, together with the valorisation of non-market functions (landscape, protection and conservation of cultural heritage and biodiversity, and combating climate change). The research itinerary will be undertaken in collaboration with the Province of Avellino.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Experiential Digital Heritage: Between the Tangible and Intangible.

Description of the activity: Development and application of methodologies and techniques for the creation of digital content for a Multisensory and Interactive Digital Library of traditional Italian arts and trades.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Design and Inclusion.

Title of the project: Social design e social innovation.

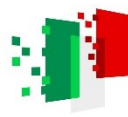
Description of the activity: The research investigates collaborative methodologies in the design of products and services for communities with the aim of outlining areas and opportunities for design practice. The themes investigated give rise to multidisciplinary design processes with the active involvement of communities and third-sector operators, generating solidarity and inclusive living scenarios.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*.

Topic: Communication design as a tool for social activation.

Title of the project: Designing is building relationships.

Description of the activity: The research activity has to investigate, using the *Listening Design* methodologies, how visual communication can act as a seismograph of the present, a space for



facilitating and managing relations, a platform for sharing knowledge and co-designing in relation to environmental and social emergency phenomena, in the public as well as in the private sphere. The research itinerary will have to adopt as its point of view the definition of visual ecology to counteract phenomena of semantic noise, over-production of information and content, but also unsustainability of both analogue and digital information production processes.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*.

Topic: Digitisation, innovation and competitiveness in the production system - Technological innovation for fashion Made in Italy.

Title of the project: Phygital fashion and new technological transitions between A.I., A.R. and N.F.T.

Description of the activity: The research investigates emerging digital scenarios and fashion-oriented production processes using the analysis and technological experimentation of Artificial Intelligence, Augmented Reality, Web 3.0., and N.F.T. from a phygital perspective. The research activity will have to intersect *human-centred* codesign methodologies with new digital tools and software, in a vision of technological cooperation and environmental sustainability, towards a carbon-free Made in Italy innovation.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Sustainable innovation of products, services and processes systems for Made in Italy.

Title of the project: Protecting Made in Italy excellence: goldsmith design between tradition and innovation

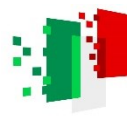
Description of the activity: The research intends to investigate scenarios and strategies of Eco-Design and sustainable materials for well-being jewellery. The project aims at expanding the role and meaning of jewellery, in addition to its aesthetic qualities, investigating above all functional qualities linked to people's well-being by using natural phytotherapeutic materials and extracts, for example from volcanic stones (SDG 3 Health and Well-being; SDG 15 Life on Earth) in order to promote research between education and production, strengthening the network of relations between universities, entities, enterprises, institutions, museums, and implementing the possibility of promoting employment.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the Cà Foscari University of Venice.

Topic: Valorisation of waste for new Made in Italy processes/products

Title of the project: "The development of innovative processes for the valorisation of Italian agricultural and food industry waste for fine chemical products".

Description of the activity: In line with the principles of the circular economy, a methodology will be developed to transform agro-industrial waste into secondary raw material alternatives to materials from non-recyclable fossil sources. These activities are in line with the development trajectories of the 2030 Agenda and the NRRP to develop new products/processes and applied research activities with Public Administrations/enterprises aimed at integrated development for the ecological transition in compliance with Italian Ministerial Decree 118/2023-Article 9.



1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the Cà Foscari University of Venice.

Topic: Green Revolution and Ecological Transition

Title of the project: Valorisation of lignocellulosic materials from renewable resources

Description of the activity: The PhD project will focus on the development of sustainable plant biomass fractionation processes and valorisation of emerging hemicellulosic and lignin streams to identify new ways of valorising modified lignocellulosic biomass.

The objective of this study is the structural characterisation of biomasses modified by innovative and sustainable treatments, the study of their reactivity and the development of analytical methods for their structural characterisation.

1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the Luav University of Venice.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Preservation, knowledge and valorisation of heritages of material culture and design, between universal and local history

Description of the activity: Considerations and practices related to the "design museum" have resulted in a rich case history and literature that today deserve a scientific and cultural investigation, aimed at instructing a historical-critical consideration necessary to initiate research projects and guide operations in a new direction. In this sense, the research itinerary is designed to investigate the following questions: some are historiographic in nature and relate to the methodological approach (a multidisciplinary history, design heroes stories, design as a "history of things", etc.), others relate to the methods of preservation and knowledge linked to technological tools (big data, AI, "new archiving", etc.), and others to specific narrative strategies beyond the auratic ostentation.

Reference PA: Dott. Andrea Colasio Municipality of Padua, Department of Culture.

2 (two) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Cultural heritage”) funded by the University of Campania *Luigi Vanvitelli*.

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: The identity of Made in Italy heritages: discovery, valorisation and narration.

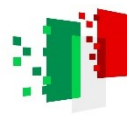
Description of the activity: The research project has to be designed to trace, analyse, collect and enhance, using the historical-critical methodology, or through the actions and strategies of communication design, the multiple elements qualifying cultural heritage: from archives to Made in Italy products, from documents to historical artefacts, to the different forms of cultural expression, both material and immaterial.

The proposal may adopt multiple narrative models aimed at building a structured and detailed account of the identity of the Made in Italy heritage.

1 (one) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")

co-funded by the Enterprise: CAPRI Srl and the University of Campania *Luigi Vanvitelli*

Topic: From research to Enterprise. Sustainable Innovation of Products, Services and Processes for Made in Italy - Advanced Textile Design.



Title of the project: Space Suit Design. Textile Design Innovation for Performative Garments and Services System.

Description of the activity: The "Space Suit Design. Textile design innovation for performative garments and service system" research project focuses on the design and realisation of innovative and advanced textiles for the conception, design and prototyping of a space suit for extra-vehicular activities and clothing for intra-vehicular activities.

The research project has the objective of developing, through study and design, new textiles and advanced, interdisciplinary production processes for the prototyping of space suits and accessories, the purpose of which is to provide support for new trajectories in the aerospace sector, and technology and knowledge transfer in the textile and clothing production sectors. Therefore, the research will address the following objectives: a) the Development of a space suit model and/or functional and innovative textile solutions for the aerospace sector b) Technology and knowledge transfer resulting from the research findings and the experiments envisaged by the research, to other textile or clothing sectors.

1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Enterprise: ITM-CNR and the University of Campania *Luigi Vanvitelli*.

Topic: From Research to Enterprise.

Title of the project: Membrane separation processes in the treatment of gas streams of industrial interest.

Description of the activity: The research activity, aimed at supporting the relevant production activities, will focus on the study of material transport properties in membranes for gas and vapour separations; on the development of membrane separation operations in the treatment of gaseous streams of application interest (gas transport, separation, recovery, concentration, purification, etc.); on the development of innovative separation processes integrating advanced membrane operations in production processes.

1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Enterprise: IRCCS "Istituto Giannina Gaslini" and the University of Genoa.

Topic: From Research to Enterprise.

Title of the project: Innovation of instruments and methods for the accessible and inclusive design of centres designed for care.

Description of the activity: The research is aimed at investigating the issue of accessible and inclusive design for healthcare facilities from the architectural scale down to the detail of product design, with a specific focus on communication as well as the aspects of *wayfinding*. The extent to which the use of digital tools, such as the BIM model, can contribute to facilitating the design and management process in terms of accessibility and inclusiveness will also be investigated. The activity will be carried out with U.T. IRCCS "Istituto Giannina Gaslini".

1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise")
co-funded by Impresa EnuKlea soc. coop. and the University of Salento.

Topic: Sustainable innovation of products, services and processes systems for Made in Italy.

Title of the project: Made in Italy, tradition and innovation for sustainable crop regeneration

Description of the activity: The aim of the PhD project is to promote the organic, environmentally

sustainable and environmentally friendly cultivation of agricultural food chains, creating a virtuous system that is profitable for producers and geared towards the preservation of rural areas. Notwithstanding their richness in terms of natural and cultural resources, rural areas are often subject to significant shocks, as in the case of the spread of *Xylella fastidiosa*, with heavy environmental, economic and social consequences. These phenomena require effective strategies for productive valorisation, based on life-cycle approaches, in order to activate new and sustainable economic opportunities for farmers, avoiding the irreversible compromise of the original vocation of the territory. Hence the requirement to build a systemic framework of useful interventions to promote innovations along the entire life cycle of agricultural and food products, and to support the agricultural and agro-industrial system with a view to enhancing organic farming and sustainability.

Procedure for admission tests

- **An assessment of qualifications**, including the compulsory submission of a research project drafted in compliance with the call for applications;
- **An interview**, which will be performed in compliance with article 6, paragraph 8 of the call for applications;
- **An international language**, the knowledge of which will be tested during the interview: **ENGLISH**.

Location and competition calendar

These are going to be published on the Department's web page by **July 20 2023**

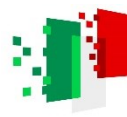
<https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-design-per-il-made-in-italy#calendario-degli-eventi-del-dottorato>

Other useful information

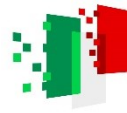
For all useful information, please consult the University website at <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca> and the following Department web page <https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-design-per-il-made-in-italy#calendario-degli-eventi-del-dottorato>

Useful contacts

Educational/scientific contact person	Prof. Alessandra Cirafici <i>e-mail:</i> alessandra.cirafici@unicampania.it
Administrative contact person:	Dott.ssa Alessandra Esposito <i>e-mail:</i> alessandra.esposito@unicampania.it



Annex number 11	
DESCRIPTIVE SHEET OF THE INDUSTRIAL DOCTORAL COURSE IN TECHNOLOGY FOR RESILIENT LIFE ENVIRONMENTS - Cycle XXXIX	
Coordinator	Prof. Sergio SIBILIO e-mail: sergio.sibilio@unicampania.it
Administrative headquarters of the Course	Department of ARCHITECTURE AND INDUSTRIAL DESIGN
Doctoral School: Director:	Polytechnic and Basic Sciences Prof. Oronzio MANCA
Duration	3 years
Scientific and disciplinary sectors:	L-ART/04 - ICAR/05 - ING-IND/11 - ICAR/17 - ICAR/09 - BIO/02 - ICAR/02 - ICAR/07 - ING-IND/10 - L-ANT/07 - ING-INF/01
COMPETITIVE POSITIONS OPEN	
19 (nineteen) WITH SCHOLARSHIP, of which :	
- 02 (two) SCHOLARSHIPS financed by the University	
- 04 (four) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 13 (thirteen) SCHOLARSHIPS with a compulsory topic of which:	
<p>2 (two) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Digitalisation and Innovation. Title of the project: Digital tools and technologies for research and design in applied lighting. Description of the activity: The research project aims at analysing and assessing the potential of digital tools and technologies (VR, smart and human-centred lighting, real-time diagnostics, ...) for the concept and design of luminaires and integrated lighting systems with low environmental impact, able to improve the visual comfort of the environment of buildings and integrate the visual and non-visual requirements of users. The activity, starting from the state of the art in various fields of application, is aimed at identifying the potential use of these digital tools and technologies starting from the benchmarks (hardware and software) available. Subsequently, using experimental and numerical activities, a number of lighting fixture and system solutions (concepts) will be developed and their reliability and integrability into the built environment will be evaluated. Lastly, the research activity envisages the development and realisation of a lighting fixture/system in both full-scale and digital environments, using both field surveys and virtual environments in order to investigate user acceptance, as well as to define reference protocols for the methodology developed. The PhD student will also spend a period (6 months) at an international university and, in collaboration with companies in the sector, where certain PhD activities are carried out. The line of research is consistent with the NRRP cornerstone "Digital Transformation".</p> <p>Scholarship number 2 Topic: Sustainable mobility. Title of the project: Environmental and human impact assessment of urban and rural transformation projects for sustainable mobility and energy transition using digital or hybrid twins. Description of the activity: The project envisages the development, fine-tuning and application of methodologies for the modelling and simulation of digital, or hybrid, scenarios for the comparison of different design solutions, as well as new strategies for environmental impact assessment in the context of urban and rural transformation scenarios. Specifically, the research project mainly focuses</p>	



on those urban and rural transformation projects geared towards the reduction of environmental pollution of the current state and the modern planning and design of the anthropised environment, giving specific importance to all those design solutions that concern the use of renewable sources (e.g. wind, micro-wind), mobility and sustainable mobility (e.g. hybrid and electric vehicles), as well as the probable future sources of pollution (e.g. urban-air mobility). The project is aimed at configuring a new way of assessing the impact (e.g. acoustic, visual, thermo-hygrometric) of transport and energy infrastructures, using assessment procedures and simulated environments that exploit innovative and human-centred approaches.

4 (four) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Architecture, man-made environment, cultural heritage and cultural property.

Title of the project: Integrated seismic risk mitigation methodologies for the heritage constructed in masonry.

Description of the activity: The main objective of the research project is to mitigate the seismic risk of heritage property built in masonry using integrated approaches at the spatial and individual building scale. The PhD student will develop, with reference to selected building types, methodologies for surveying and assessing seismic vulnerability at the urban scale for the prediction of damage scenarios. This activity will be carried out through the acquisition of geometric and material information using non-destructive tests for the mechanical characterisation of materials and detailed surveys at the urban scale with the use of drones. One or more case studies will be selected in order to propose interventions to reduce seismic vulnerability. This will possibly also be conducted using experimental tests on small-scale prototypes of portions of the building. Intervention methodologies will therefore be proposed for widespread application and aimed at mitigating seismic risk on a large scale, with the consequent prediction of damage scenarios in reinforced configurations. These assessments can be adopted productively by Public Administrations to carry out cost-benefit analyses within the framework of national seismic risk mitigation objectives. Therefore, the research proposal is strongly consistent with NRRP mission number 1 "Digitisation, innovation, competitiveness, culture and tourism".

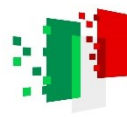
Scholarship number 2

Topic: Heritage.

Title of the project: Architecture that no longer exists: Digital Cultural Heritage between visualisation and immersion.

Description of the activity: Exploiting the opportunities deriving from Digital Cultural Heritage applications, the project proposes the realisation of immersive content for the enjoyment of architectural spaces that no longer exist or are inaccessible. Specific attention will be given to the retrieval of digital (and non-digital) resources for the elaboration of graphic contents allowing three-dimensional modelling of the investigated context. Furthermore, in the collection of already existing digital resources or those not yet digitised, the thematic elaboration of the spatial iconography of the investigated case is also proposed, aimed at the elaboration of a complex digital map organised on temporal layers. The process aims at defining a methodology for the creation of a thematic Digital Library of the elements (environments, artefacts, objects, characters) characterising a case study. The development paths will be configured as follows:

- identification of the graphic and iconographic material available;
- analysis and processing of the material for the graphic reconstruction of the elements characterising the case study; three-dimensional modelling of the contents;
- production of the resources in immersive environments usable by the public.



The activities are supported by SENS-i Lab, a human-centred, multi-purpose university laboratory for the creation, development, prototyping and interaction of humans with physical and virtual products and systems.

Scholarship number 3

Topic: Energy efficiency of buildings.

Title of the project: Predictive maintenance and efficiency enhancement of installations for thermal-hygrometric comfort control in confined spaces.

Description of the activity: The research project aims to define new tools for the predictive maintenance and efficiency enhancement of installations for the control of thermo-hygrometric comfort in confined spaces using the development of innovative methodologies for the detection and automatic diagnosis of faults. The study will be conducted with an experimental approach through laboratory tests on a real installation and/or with a numerical approach using dynamic simulation software possibly combined with algorithms developed using artificial intelligence techniques. The analysis of the experimental and/or simulated data will be conducted taking into account energy, environmental and economic factors. The activity will be aimed at promoting interdisciplinarity as well as collaboration with other research entities. A period abroad of 6 months, which may also be non-continuous, is envisaged. The PhD student will make use of the equipment and tools of the laboratories of the Department of Architecture and Industrial Design. The research is consistent with the cornerstone of the NRRP named "Green Transition", as well as with mission 2 of the NRRP named "Green Revolution and Ecological Transition" in that the project is aimed at supporting the green and ecological transition of society and the economy through actions for the efficiency upgrading of real estate, both public and private.

Scholarship number 4

Topic: Digitalisation and Innovation.

Title of the project: Integrated lighting solutions with low environmental impact for visual comfort.

Description of the activity: The scope of the research, with prevalent reference to non-residential users, is related both to indoor lighting systems and to the interaction between building façades and the urban environment in which they are placed. The activity aims at analysing the following topics and/or technologies: (i) the use of daylight by means of advanced façade systems and innovative architectural solutions, (ii) artificial lighting systems based on technologies and design strategies in the context of progressive digitisation, (iii) lighting control systems and strategies, with specific attention to its visual and non-visual effects, with special focus on natural-artificial light interaction. All the above-mentioned aspects will be analysed with a view to reducing climate-altering emissions. The results of the research activity are aimed at building designers and consultants, industry (façades, electric lighting, software companies), and public and private investors, providing strategic, technical and economic information and networking activities to assist interested parties in implementing environmentally friendly lighting solutions. In addition, the PhD student will spend a period (6 months) at an international university and at enterprises of the sector, where some of the PhD activities are carried out in cooperation with enterprises of the sector. The line of research is consistent with the NRRP cornerstone "Digital Transformation".

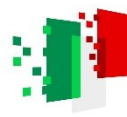
2 (two) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”)

funded by the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Digital Magna Graecia: new forms of management and knowledge of the archaeological heritage of the Regions of Southern Italy.



Description of the activity: Within the framework of the doctoral course's main research themes in Technologies for Resilient Living Environments, which include studies for the development and application of new technologies for new forms of knowledge and the construction of smart working environments, in the NRRP lines dedicated to digitisation and the redefinition of management actions in public administration places, the project aims at the construction of itineraries for the accessibility of museum warehouses and the construction of new knowledge archives, with the following main objectives:

- the survey and analysis of archaeological deposits and museum heritage in ancient Magna Graecia with the selection of a sample building;
- the study of forms of survey, inventorying, management and use of spaces;
- the study of architectural and digital spaces for the preservation of data and artefacts;
- the creation of digital archives and forms of heritage sharing;
- the definition of new forms of heritage publishing and publication.

Scholarship number 2

Topic: Digitisation, innovation, competitiveness, culture and tourism.

Title of the project: Ancient cities in digital form: new forms of management and knowledge of the archaeological heritage of parks and ancient sites in the Regions of southern Italy.

Description of the activity: Within the framework of the doctoral course's main research themes in Technologies for Resilient Living Environments, which include studies for the development and application of new technologies for new forms of knowledge and the construction of smart working environments, in the NRRP lines dedicated to digitisation and the redefinition of management actions in public administration places, the project aims at the construction of itineraries for the accessibility of monuments, data and information from ancient urban sites, with the following main objectives:

- survey and analysis of the archaeological heritage of abandoned or continuing ancient sites with the selection of a sample area;
- the study of forms of survey, inventorying, management and use of the information;
- the creation of digital archaeological maps;
- the creation of forms of sharing of submerged and monumental heritage;
- the definition of new forms of heritage publishing and publication.

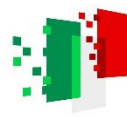
1 (one) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Cultural heritage”) funded by the University of Campania *Luigi Vanvitelli*

Topic: Heritage.

Title of the project: Digital technologies for the knowledge and monitoring of Cultural Heritage.

Description of the activity: The objective of the project is to develop, within the discipline of Design, an integrated and rapid scientific protocol for the digital survey, continuous monitoring and valorisation of architectural emergencies of Cultural Heritage. Necessary operations aimed at taking action before the definitive impoverishment of the sites, also by means of predictive analyses. The consolidated survey and representation methodologies will be flanked by innovative ICT. The consolidated survey and representation methodologies will be flanked by innovative ICT. Specific attention is also going to be given to the relationship between traditional and innovative methods, techniques and tools for knowledge, scientific representation and multimedia and multi-sensory communication of tangible and intangible cultural heritage. In detail, the contents of the scientific-disciplinary commitment will be focused on the following research topics:

- analysis of theories and methods relating to purely disciplinary sources during their historical development;
- multiscalar graphic analysis of the existing;
- knowledge and visualisation of tangible and intangible cultural heritage for different operational and management purposes also from an interdisciplinary perspective;



- development of digital twins of the existing: information databases that can always be interrogated, modified and implemented;
- multimedia and multi-sensory communication of tangible and intangible heritage for knowledge and cultural tourism.

2 (two) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Enterprise IMMENSIVE srls and the University of Campania *Luigi Vanvitelli*

Scholarship number 1

Topic: Innovation of enterprises

Title of the project: Simulation of risk in the workplace using innovative virtual immersion technologies

Description of the activity: The objective of this research activity is to perfect a system of simulation of risk in the workplace in virtual reality environments developed by the enterprise, through the realisation of verification tests according to a human-centred logic, which foresees the user benefiting from the experience being completely involved in the simulation and subjected to a variety of sensorial triggers. The primary target is to obtain a system that is effectively able to impart a culture of safety to the workforce and to increase the risk awareness of workers.

The training project focuses on the implementation of innovative technologies applied to living environments represented by workplaces, in order to increase the resilience of workers to high-risk operating conditions. The research on this topic is part of the vision of the enterprise to develop solutions for operational training in high-risk industrial environments by undertaking actions in controlled environments and to create a competitive advantage of innovation guaranteed by the experimental method of the doctoral researcher who performs the research activity.

Scholarship number 2

Topic: Innovation of enterprises.

Title of the project: New digital content creation and visualisation systems of living environments based on the use of real-time interactive 3D graphics.

Description of the activity: The activity involves the analysis and implementation of new digital content creation and visualisation systems based on the use of real-time interactive 3D graphics. With virtual production systems, the captured content can be transported into interactive experiences in the metaverse for different purposes. To realise such experiences, as well as the virtual production content itself, a prompt and accurate simulation of movement through the implementation of motion capture technologies is crucial. In order to enhance the user experience and increase user involvement, it will be essential to set up multi-stimuli simulations. The training project focuses on the implementation of innovative technologies applied to the most diverse living environments, from the world of cultural heritage to the world of experiential marketing.

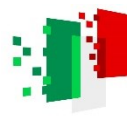
Research on the topic in question is part of the vision of the enterprise to scout and follow technological trends in the market and create a competitive advantage in innovation guaranteed by the experimental method of the PhD figure who will carry out the research activity.

1 (one) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")
co-funded by the Enterprise CMD S.p.A. and the University of Campania *Luigi Vanvitelli*.

Topic: Green revolution and Ecological Transition.

Title of the project: Development of innovative catalysts for the Water Gas Shift reaction and alternative methods for methane production from residual biomass gasification.

Description of the activity: Research is aimed at the analysis, testing and development of methods, techniques and components for the production of hydrogen and biomethane from gasification. Possible fields of research are:



- the development of innovative catalysts that are active towards the Water Gas Shift reaction ($CO+H_2O=CO_2+H_2$) with the aim of producing a high-pressure hydrogen flow from synthesis gas
- the development of innovative catalytic methanation reactor configurations (fixed bed and fluidised bed). The innovative catalytic systems have to be able to increase the calorific value of syngas starting from plant biomasses/contaminated biomasses/residual materials also from the agriculture and food sector and similar, also different from virgin wood;
- the optimisation of the gasification process for integration with a methanation reactor.

It is expected that the candidate is capable of:

- have an understanding of the technical documentation and comprehend the operation of the energy systems existing in the Enterprise;
- performing measurements on the chemical, mechanical and electrical quantities characteristic of the energy systems;
- compiling mathematical models of the process using appropriate software and validating their accuracy on the basis of experimental measurements;
- determining the efficiencies of gasifiers and methanation reactors as indicated by the Enterprise;
- drafting technical reports on these activities.

1 (one) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise")

co-funded by the Enterprise BOVIAR Srl and the University of Campania *Luigi Vanvitelli*.

Topic: Architecture, man-made environment, cultural heritage and cultural property.

Title of the project: Techniques for the dynamic identification and structural monitoring of historical monumental heritage.

Description of the activity: The research proposal aims to implement innovative methodologies for the knowledge and monitoring of historical and monumental heritage. With reference to monumental masonry buildings (e.g. churches, bell towers, etc.), different monitoring and dynamic identification techniques (based on static and/or dynamic and single and/or continuous measurements) will be studied. The acquired data will be processed with the aim of proposing:

- a procedural protocol for the dynamic identification and effective structural monitoring of monumental masonry buildings based on various specific objectives;
- the development of strategies to determine modal frequencies and assess the possible presence of structural damage based on the interpretation of the results;
- numerical modelling techniques to accurately reproduce the real behaviour of the buildings studied.

In order to obtain these results, a strong collaboration will be established with the cooperating enterprise. The PhD student will also spend a period (3-6 months) at a foreign university to extend the implementation of the proposed methods to different structural types. The results that will be achieved will set the foundations for a more comprehensive field of application related to the conservation and preservation of cultural heritage. Therefore, the research proposal is strongly consistent with NRRP mission number 1 "Digitisation, innovation, competitiveness, culture and tourism".

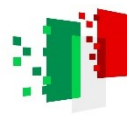
2 (two) POSITIONS PROVIDED FOR EMPLOYEES OF ENTERPRISES (PhD executive), of which

1 (one) PhD Executive position allocated to employees of GEOLUMEN srl

Topic: Digitalisation and Innovation.

Title of the project: The lamp as the information hub of an ecosystem: interactive lighting.

Description of the activity: The research project will start with a context analysis concerning the new frontiers of information technologies and the ways in which these can have an impact on the everyday life of users, both active and passive. It will then investigate the role of spaces of sharing and cohabitation in the interactions between subjects and the extent to which lighting can perform a function of "emotional adjustment". These two actions will be mainly carried out through market research as well as through the implementation of joint practices initiated and to be initiated with



Geolumen's partner enterprises operating in the Internet of Things (IoT), psychology, sociology, web development and medicine (especially ophthalmology) sectors. An additional phase of the research will be the study of the LED technology lighting fixture and of remote control systems capable of providing the lamp with an inside intelligence that will allow it to interact with devices and "actors" operating in the reference context. This phase will require the study of technologies, including hardware and software, which can effectively respond to the results of the first two project phases. The ultimate objective of the research will be the design, prototyping and realisation of an LED lamp which, in addition to simply illuminating, will perform a broader function of use, assuming the role of an information hub, according to the logic of the IoT, through which it will interact with the reference ecosystem, contributing, moreover, thanks to self-configuration processes, to generate psychophysical benefits for the users of the reference spaces. The implementation of industrial machinery and equipment available at Geolumen, as well as relations with partners and suppliers operating in the IoT and electronic components sector, will represent essential and reference elements for the entire research activity.

1 (one) PhD Executive position allocated to employees of CAMPANIA SISTEMI srl

Topic: Digitalisation and Innovation.

Title of the project: The development of a centralised distribution system for augmented reality (AR) content in a geo-localised modality.

Description of the activity: The research will concern the realisation of a centralised distribution system for augmented reality (AR) content in a geo-localised modality. Using a cloud platform and an app, the aim will be to distribute AR content online in specific geographical areas (extremely detailed through advanced algorithms) in order to improve the appeal of cultural heritage and its use in an innovative and, above all, precisely geolocalised way. The research activities will be organised in 4 work packages that will lead to the development of a system for the use of Augmented Reality content exclusively within circumscribed geographical areas of museums or cultural entities.

Workpackage 1: Deployment of the dataset and the cloud structure

Workpackage 2: Integration of AR configuration and editing technologies

Workpackage 3: Deployment of geohash algorithms

Workpackage 4: App development and results testing.

02 (two) WITHOUT SCHOLARSHIP

23 (twenty-three) OVERALL TOTAL

Procedure for admission tests

- **An assessment of qualifications**, including the compulsory submission of a research project drafted in compliance with the call for applications;
- **An interview**, which will be performed in compliance with article 6, paragraph 8 of the call for applications;
- **An international language**, the knowledge of which will be tested during the interview: **ENGLISH**.

Location and competition calendar

These are going to be published on the Department's web page by **July 20 2023**

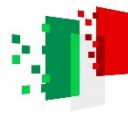
<https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-tecnologie-per-ambienti-di-vita-resilienti>

Other useful information

For all useful information, please consult the University website at <https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca> and the following Department web page <https://www.architettura.unicampania.it/ricerca/dottorato-di-ricerca-in-tecnologie-per-ambienti-di-vita-resilienti>



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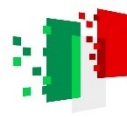
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PIANO NAZIONALE
DI RIPRESA E RESILIENZA



Università
degli Studi
della Campania
Luigi Vanvitelli

Useful contacts	
Educational/scientific contact person	Prof. Sergio SIBILIO <i>e-mail:</i> sergio.sibilio@unicampania.it
Administrative contact person:	Dott. Francesco IANNONE <i>e-mail:</i> francesco.iannone@unicampania.it

Annex number 12	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN TRANSLATIONAL MEDICINE - Cycle XXXIX	
Coordinator	Prof. Katherine ESPOSITO <i>e-mail:</i> katherine.esposito@unicampania.it
Administrative headquarters of the Course Department of Advanced Medical and Surgical Sciences	Department of ADVANCED MEDICAL AND SURGICAL SCIENCES
Doctoral School: Director:	Life Sciences Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	MED/13 - MED/04 - MED/05 - MED/06 - MED/09 - MED/11 - MED/14 - MED/16 - MED/18 - MED/23 - MED/26 - MED/30 - MED/36 - MED/37 - MED/38 - MED/40 - BIO/09 - BIO/14 - CHIM/11
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Chronic diseases and complications: from bench to bedside; • Clinical and molecular oncology; • Translational approach to basic, clinical and surgical research.
COMPETITIVE POSITIONS OPEN	
25 (twenty-five) WITH SCHOLARSHIP, of which:	
- 13 (thirteen) SCHOLARSHIPS financed by the University	
- 07 (seven) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 05 (five) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: NRRP health. Title of the project: Alternative molecular mechanisms of programmed cell death in human disease. Description of the activity: In recent years, several mechanisms of regulated cell death have been identified, the molecular processes of which and their direct involvement in the pathogenesis of high-impact diseases have yet to be well defined. To date, restoring the proper functioning of cell death signal transduction pathways is one of the main goals of pharmacological therapy. The project aims to define the functional characterisation of new cell death pathways and their involvement in key molecular itineraries of pathogenesis, through the application of basic molecular and cellular biology methodologies combined with functional and cellular phenotyping analyses.</p>	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: NRRP health. Title of the project: Epigenetic alterations in human pathologies. Description of the activity: Underlying the origin of some diseases are epigenetic changes, in other words, reversible modifications responsible for altering normal cellular control mechanisms. Underlying these processes are different classes of enzymes that can read, write or eliminate a given epigenetic change resulting in altered cell function. This project will focus on the molecular and functional characterisation of certain epi-enzymes and the identification of cellular <i>targets</i>. Using</p>	



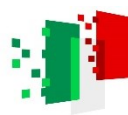
<p>various NGS technologies, a study will be conducted in cells up to the analysis of a single cell, characterising the epi(genetic) alterations involved in pathogenesis.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise") co-funded by the Enterprise: Epitech Group SpA and the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Experimental Pharmacology. Title of the project: Potential use of N-acyl ethanolamines for the resolution of low-grade inflammation processes. Description of the activity: the doctoral candidate will focus on evaluating the pharmacological efficacy of several pipeline N-acyl ethanolamines for the treatment of disease states associated with low-grade pain and inflammation. Activities include behavioural, biomolecular and electrophysiological evaluations in vivo. In addition, a preliminary evaluation will be carried out on in vitro models of microglial inflammatory cells.</p>
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - "From Research to Enterprise") co-funded by the Enterprise: Dompé farmaceutici S.p.A and the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Experimental Pharmacology. Title of the project: Pharmacological characterisation of potential new therapies for the treatment of pain and type 1 diabetes and comorbidities Description of the activity: The PhD student will focus on the development and characterisation of preclinical models of chronic and neuropathic pain including diabetic neuropathy in order to validate the pharmacological efficacy of several pipeline molecules. He/she will evaluate the following behavioural and electrophysiological changes: tactile allodynia, thermal hyperalgesia, spontaneous pain, and spinal neuronal activity. The PhD student will also focus on the identification of potential new pharmacological targets for the treatment of pathological pain.</p>
<p>1 (one) financed by INPS reserved for the children and orphans of members of the Unified Management of Credit and Social Benefits and of pensioners who are users of the Management of Public Employees for the performance of the research indicated in the INPS Notice</p> <p>Topic: General pathology. Title of the project: Single-cell approaches for the study of tumour heterogeneity in pancreatic cancer. Description of the activity: Pancreatic ductal adenocarcinoma (PDAC) is the most common tumour of the pancreas and is a particularly aggressive neoplasm with limited possibilities of response to medical treatment. The project aims to define the expression profile, metabolic and protein structure using single cell approaches, in order to draw a road map of clonal evolution (tumour heterogeneity) and multilevel alterations typical of pancreatic cancer and its advanced and/or relapsing forms. The identification of cell subgroups will be the basis for the development of targeted therapies.</p>
<p>06 (six) WITHOUT SCHOLARSHIP</p>
<p>31 (thirty-one) OVERALL TOTAL</p>
<p>Procedure for admission tests</p>
<p>- An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications;</p>

<ul style="list-style-type: none"> - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.damss.unicampania.it/didattica/dottorato-di-ricerca</p>	
Other useful information	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.damss.unicampania.it/didattica/dottorato-di-ricerca</p>	
Useful contacts	
Educational/scientific contact person	<p>Prof. Katherine ESPOSITO <i>e-mail:</i> katherine.esposito@unicampania.it</p>
Administrative contact person:	<p>Dott. Paolo PARISO <i>e-mail:</i> paolo.pariso@unicampania.it</p>

Annex number 13	
DESCRIPTION SHEET OF THE DOCTORAL RESEARCH COURSE IN IN BIOCHEMICAL AND BIOTECHNOLOGICAL SCIENCES - Cycle XXXIX	
Coordinator	Prof. Michele CARAGLIA e-mail: michele.caraglia@unicampania.it
Administrative headquarters of the Course	Department of PRECISION MEDICINE
Doctoral School:	Life Sciences
Director:	Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	BIO/09 – BIO/10 - BIO/12 – BIO/13 - BIO/14 – BIO/17 - BIO/16 – CHIM/03 – CHIM-07 – MED/04 - MED/06 - MED/07 - MED/28
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Biology, Biochemistry and Medical Biotechnology; • Microbiology and Pathophysiology.
COMPETITIVE POSITIONS OPEN	
18 (eighteen) WITH SCHOLARSHIP, of which:	
- 10 (ten) SCHOLARSHIPS financed by the University	
- 06 (six) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 02 (two) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - “From Research to Enterprise”) co-funded by Impresa Farmaceutici DAMOR S.p.A. and the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Biotechnology applied to the release of nutraceuticals in complex biological systems. Title of the project: Development of biomolecules from renewable sources for biotechnological applications. Description of the activity: Development of biomolecules from renewable, plant-extractive and biotechnological sources, for the design, development and in vitro characterisation of formulations of interest in topical application, for example in healing wounds, or in the nutraceutical sector, with particular reference to inflammatory states also induced by diseases (for example viral).</p> <p>1 (one) funded under Italian Ministerial Decree 117/2023 NRRP (M4C2 - “From Research to Enterprise”) co-funded by the enterprise Bioactive Surfaces SL. and the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Biomedical biotechnology and the use of atomic force microscopy and its applications in pharmacology, cell biology and biomedicine. Title of the project: Biomimetic technologies for the construction of human tissues and organs. Description of the activity: Biofunctionalisation of surfaces, prostheses and tips for atomic force microscopy to design strategies for the construction of human tissues and organs and for the creation of artificial blood-brain barriers.</p>	
05 (five) WITHOUT SCHOLARSHIP	

23 (twenty-three) OVERALL TOTAL	
<i>Procedure for admission tests</i>	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<i>Location and competition calendar</i>	
These are going to be published on the Department's web page by July 20 2023 https://www.medicinadiprecisione.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-biochimiche-e-biotecnologiche	
<i>Other useful information</i>	
For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.medicinadiprecisione.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-biochimiche-e-biotecnologiche	
<i>Useful contacts</i>	
Educational/scientific contact person	Prof. Michele Caraglia <i>e-mail:</i> michele.caraglia@unicampania.it
Administrative contact person:	Ms. Giuseppina CARFORA <i>e-mail:</i> giuseppina.carfora@unicampania.it

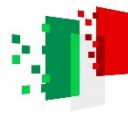
Annex number 14	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN BIOMOLECULAR SCIENCES - Cycle XXXIX	
Coordinator	Prof. Angela Chambery e-mail: angela.chambery@unicampania.it
Administrative headquarters of the Course	Department of ENVIRONMENTAL, BIOLOGICAL AND PHARMACEUTICAL SCIENCES AND TECHNOLOGIES
Doctoral School: Director:	Life Sciences Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	MED/08 - MED/03 - BIO/18 - BIO/10 - BIO/06 - CHIM/08 – M-EDF/01 - CHIM/03- CHIM/06 - BIO/09 - BIO/11 - BIO/12
COMPETITIVE POSITIONS OPEN	
26 (twenty-six) WITH SCHOLARSHIP GRANTS, of which:	
- 09 (nine) SCHOLARSHIPS financed by the University	
- 09 (nine) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 05 (five) SCHOLARSHIPS RESERVED for scholarship holders/successful candidates of specific international mobility programmes (please refer to Annex "14A" and Annex "14B" Project Programme HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA) ACTION- HORIZON-TMA-MSCA-DN; Call: HORIZON-MSCA-2021-DN-01) of which:	
- 1 (one) funded under the "Targeting RNA as an approach for treating retinal disease" (RETORNA) Project - Annex 14A ;	
- 4 (four) funded under the "Cohesin and its regulators: from chromosome dynamics and nuclear architecture to human diseases" (COHESINET) Project - Annex 14B .	
- 03 (three) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 "NRRP Research") funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: HEALTH: Innovative diagnostics and therapies in precision medicine. Title of the project: Development of innovative strategies for the early detection of solid tumours that over express the CXCR4 chemokine receptor. Description of the activity: The main focus of the research is the development of new innovative strategies for the early detection of solid tumours that over express the CXCR4 chemokine receptor. Specifically, potent and selective peptide ligands are going to be synthesised for CXCR4, a G-protein-coupled receptor that is involved in the etiopathogenesis and metastasis of more than 23 different types of tumours. These ligands are going to be used for:</p> <ol style="list-style-type: none"> 1. Functionalising photonic biochips that can be used to perform Point of Care Tests (POCTs) capable of early detection of circulating tumour cells (CTCs) from tumour forms that over express the CXCR4 receptor 2. Making dendrimers that can be marked with radioactive metals for the early and highly accurate detection by positron emission tomography (PET) methods of tumours that over express the CXCR4 receptor. 	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 "NRRP Research") funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: HEALTH: Innovative diagnostics and therapies in precision medicine.</p>	



<p>Title of the project: Development of innovative nanostructured formulations for the delivery of pharmaceuticals in the treatment of drug-resistant infections.</p> <p>Description of the activity: The main focus of the research is the development of innovative nanostructured systems for the delivery of anti-infective agents, both known and emerging drugs, in order to identify new effective therapeutic strategies in the treatment of drug-resistant infections. These delivery systems are expected to (i) increase the stability of the delivered pharmaceutical drug; (ii) screen interactions between the drug and the biological environment (for example, bacterial biofilms); (iii) increase the drug concentration at the site of infection; and (iv) prolong the drug's residence time at the infection site in order to sustain its pharmacological effect (reduction in the number of administrations). Proposals are expected to include the design and development of new delivery systems, using advanced manufacturing techniques (for example microfluidics), and their full characterisation in vitro and in vivo in compliance with the planned scope. The technological approach is expected to take into account the distinctive features of the identified mode of administration and the potential biological barriers that influence the pharmacokinetics of the drug and, hence, its pharmacological profile.</p>
<p>1 (one) funded by IEOS - the "Gaetano Salvatore" Institute for Experimental Endocrinology and Oncology - an entity of the Italian National Research Council (CNR)</p> <p>Topic: HEALTH</p> <p>Title of the project: Study of the role of the PARP12 enzyme in breast cancer progression.</p> <p>Description of the activity: The main research topic will be the analysis at the molecular level of the role of PARP12-catalysed mono-ADP-ribosylation in cellular models of breast cancer, analysing first of all the effects of this post-translational modification in modulating interactions and functions of the Akt kinase (a substrate already identified and validated by our previous studies). In parallel, and more generally, the project plans to identify the ADP-ribosyl proteome of models that are "sensitive" to the action of PARP12, in order to identify and validate key targets in the survival and proliferation of oestrogen receptor-positive breast cancer cells by generating inducible PARP12-knock-out routes using lentiviral systems. The project also includes the characterisation of PARP12-specific inhibitors in breast cancer cell models. The inhibitors with the greatest effect will then be tested on organoids, obtained from cells of breast cancer patients.</p>
<p>06 (six) WITHOUT SCHOLARSHIP</p>
<p>32 (thirty-two) OVERALL TOTAL</p>
<p>Procedure for admission tests</p> <ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH.
<p>Location and competition calendar</p> <p>These are going to be published on the Department's web page by July 20 2023 https://www.distabif.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-biomolecolari</p>
<p>Other useful information</p> <p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.distabif.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-biomolecolari</p>
<p>Useful contacts</p>



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della Campania
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Annex 14A

DOCTORAL RESEARCH COURSE IN BIOMOLECULAR SCIENCES - Cycle XXXIX

Positions reserved for scholarship holders in the framework of specific international mobility programmes

Programme: HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA)

Call: HORIZON-MSCA-2021-DN-01

Funding Scheme: HORIZON-AG-UN - HORIZON Unit Grant

Topic: HORIZON-MSCA-2021-DN-01-01 - MSCA Doctoral Networks 2021

Type of action: HORIZON-TMA-MSCA-DN

Project Full title: "Targeting RNA as an approach for treating retinal disease"

Project Acronym: RETORNA

Grant Agreement: number 101073316

RETORNA is a project operated by a consortium of 8 partners (UCV-Spain, ULEI-Germany, EKUT-Germany, UA-Spain, BAU-Turkey, LUMC-Netherlands, UCC-Ireland, FTELE.IGM-Italy) based in 6 countries for the training of 10 PhD students. The RETORNA doctoral students are trained in a programme with joint scientific and technical courses, active participation in joint scientific events and an intensive inter-sectoral exchange plan. The programme uses the knowledge and expertise of the scientific partners receiving funding in the field of retinal biology and retinal diseases as well as in "omics" techniques also applied to the study of the retina, as a training platform to train 10 young researchers in the use of RNA-based procedures for the treatment of eye diseases. For additional information, please visit the website <https://cordis.europa.eu/project/id/101073316>.

The University of Campania Luigi Vanvitelli is a partner in the RETORNA project for training as part of the PhD course in Biomolecular Sciences.

OUTLINE OF THE SCIENTIFIC PROGRAMME

The training programme is based on: 1) advanced level theoretical courses and laboratory training at the project's partner institutions; 2) specific courses on knowledge/skills complementary to scientific studies, such as scientific communication, project management, ethics, intellectual property and entrepreneurship; 3) exposure of students to the industrial sector with internships and site visits to enterprises.

The PhD positions subject to selection within the RETORNA project are mainly addressed to international students, or to Italian students who have resided or worked abroad for at least 24 months in the last 3 years.

RETORNA is coordinated by UNIVERSIDAD CATÓLICA DE VALENCIA SAN VICENTE MÁRTIR, UCV. One of the beneficiary partners is the Telethon Institute of Genetics and Medicine (TIGEM) of the Telethon Foundation and the University of Campania "Luigi Vanvitelli" is an affiliated Partner.

Within the framework of the RETORNA project, 1 (one) position is planned for the Telethon Institute of Genetics and Medicine (Telethon Foundation) reserved for successful scholarship holders whose financial coverage is directly provided by the Telethon Foundation from European funds in the role of beneficiaries.

Annex 14B

DOCTORAL RESEARCH COURSE IN BIOMOLECULAR SCIENCES - Cycle XXXIX

Positions reserved for scholarship holders in the framework of specific international mobility programmes

Programme: HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA)

Call: HORIZON-MSCA-2021-DN-01

Funding Scheme: HORIZON-AG-UN - HORIZON Unit Grant

Topic: HORIZON-MSCA-2021-DN-01-01 - MSCA Doctoral Networks 2021

Type of action: HORIZON-TMA-MSCA-DN

Project Full title: "Cohesin and its regulators: from chromosome dynamics and nuclear architecture to human diseases"

Project Acronym: COHESINET

Grant Agreement: number 101072505

The CohesiNet consortium consists of 8 academic institutions (*Consiglio Nazionale delle Ricerche*, Naples, Italy; *UKRI-MRC Laboratory of Molecular Biology*, Cambridge, UK; *IFOM - Istituto Fondazione di Oncologia Molecolare ETS*, Milan, Italy; *Centre De Biologie Integrative - CNRS*, Toulouse, France; *Instituto Gulbenkian de Ciência*, Oeiras, Portugal; *Research Institute of Molecular Pathology*, Vienna, Austria; *Amsterdam University Medical Center*, Amsterdam, The Netherlands; *Centro Nacional de Investigaciones Oncológicas*, Madrid, Spain) and 2 enterprises (Lumicks BV, Amsterdam, The Netherlands and Plasticell LTD, Stevenage, UK). For additional information, please visit the website <https://cordis.europa.eu/project/id/101072505> or <https://www.cohesinet.eu/>

The University of Campania Luigi Vanvitelli is a partner in the COHESINET project for training as part of the PhD course in Biomolecular Sciences.

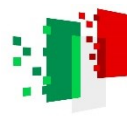
OUTLINE OF THE SCIENTIFIC PROGRAMME

This consortium, coordinated by Francesca M. Pisani, Research Director at the Institute of Biochemistry and Cell Biology (IBBC) of the CNR in Naples, is aimed at training 12 PhD students in the use of multidisciplinary experimental approaches to study the biology of cohesin, the multi-subunit protein complex that guarantees the integrity of chromosome structure and the three-dimensional organisation of chromatin, as well as the pathologies associated with its malfunctioning (various forms of cancer and hereditary diseases known as "cohesinopathies").

The PhD students recruited by the consortium are going to use multidisciplinary methodologies and experimental approaches in their research work and benefit from a programme that includes advanced theoretical and practical courses; specific courses on knowledge/skills complementary to scientific ones, such as scientific communication, *project management*, ethics, intellectual property and entrepreneurship.

Within the framework of the COHESINET project, there are 4 positions reserved for successful scholarship holders whose financial coverage is provided directly by the above-mentioned institutions from European funds in the role of beneficiaries.

Annex number 15	
DESCRIPTION SHEET OF THE DOCTORAL RESEARCH COURSE IN CLINICAL AND EXPERIMENTAL MEDICAL SCIENCES - Cycle XXXIX	
Coordinator	Prof. Armida MUCCI <i>e-mail: armida.mucci@unicampania.it</i>
Administrative headquarters of the Course	Department of MENTAL HEALTH AND PHYSICS AND PREVENTIVE MEDICINE
Doctoral School: Director:	Life Sciences Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	BIO/05 – BIO/09 - BIO/10- BIO/14- BIO/16 – FIS/07 – ING-INF/06 - MED/04 - MED/06 - MED/09 - MED/12 - MED/14 - MED/18 - MED/19 - MED/21 - MED/24- MED/25 - MED/26 – MED/31 - MED/34 - MED/37 - MED/39
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Nephrology; • Gastroenterology/Nutrition-Alimentation; • Internal Medicine/Geriatrics; • Neurology; • Child Neuropsychiatry; • Psychiatry.
COMPETITIVE POSITIONS OPEN	
19 (nineteen) SCHOLARSHIP GRANTS, of which :	
- 08 (eight) SCHOLARSHIPS financed by the University	
- 05 (five) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 06 (six) SCHOLARSHIPS with a compulsory topic of which:	
<p>3 (three) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Health Title of the project: Proteomic and immunological aspects in cystinuria. Description of the activity: The objective of the project is to clarify the pathogenesis of renal stones in cystinuric patients, which is not fully explained by the presence of genetic mutations (SLC3A1 and SLC7A9), with a wide clinical variability even within the same family. The project will focus on the characterisation of specific urinary proteins that may act as promoters for cystine precipitation, aggregation and epithelial adhesion. The project, therefore, aims to: 1) outline the urinary proteomic profile in cystinuric patients with and without chronic kidney disease and a control group of healthy subjects; 2) study the potential effect of urinary alkalinisation on the urinary proteome in cystinuria; 3) investigate the correlation between urinary protein pattern and bone status with a bone mineral densitometry.</p>	
<p>Scholarship number 2 Topic: Health Title of the project: The effect of environmental exposure to bisphenol A (BPA) on pathways related to trained immunity reactivity in non-alcoholic fatty liver disease (NAFLD). Description of the activity: This research will focus on the evaluation of the effect resulting from BPA exposure on TI reactivity in patients with NAFLD. Serum samples from healthy individuals and patients with histologically proven NAFLD (at different disease stages: simple steatosis, F3, compensated cirrhosis, decompensated cirrhosis) will be subjected to BPA quantification by mass spectrometry. In parallel, each</p>	



subject will undergo a peripheral venous blood sampling (20 mL). Monocytes will be isolated by density gradient centrifugation and then stimulated with BPA for 24 hours (1 nM, 10 nM, 20 nM) and lipopolysaccharide (LPS) as a second antigenic stimulus (10 ng/mL) for 24 hours (at day 0 and day 6, respectively) according to specific TI protocol.

To assess the pro-inflammatory response, ELISA assays will be performed on the major cytokines involved in the process (TNF- α , IL-1ra, IL-1, IL-6, IL-10 and IL-18).

In addition, using Next Generation Sequencing (NGS) technology, a complete transcriptomic analysis will be performed, determining qualitative and quantitative variation in gene expression. If necessary, this analysis will be complemented by global transcriptomic analysis on a single cell.

Scholarship number 3

Topic: Health

Title of the project: Chronic kidney disease and cognitive impairment - Pathogenetic mechanisms.

Description of the activity: The project will focus on chronic kidney disease, and its relationship to the demonstrated cognitive impairment present in the majority of individuals affected, and manifested by deficits in memory, attention, language, and visuospatial skills. The pathogenesis is linked to the accumulation of uremic toxins in the blood, such as the sulphur compounds lanthionine, homocysteine and cystathionine, and to the deficiency of gaseous neuromodulators, such as hydrogen sulphide. Neuropsychological tests will be administered to subjects with chronic kidney disease. Biochemical analysis techniques, such as ELISA and spectrophotometric analysis, will be applied to measure different uremic toxins.

3 (three) funded under **Italian Ministerial Decree 117/2023** NRRP (M4C2 - "From Research to Enterprise") co-funded by the enterprises BIOGEM SCARL and INVENTIA SRL, as well as the University of Campania *Luigi Vanvitelli*.

Scholarship number 1

Topic: Biotechnology and Precision Medicine.

Title of the project: Innovative medical devices for tissue engineering (scholarship co-funded by INVENTIA SRL).

Description of the activity: The research will focus on the stimulation of tissue regeneration with natural plant extracts and develop scaffolds for the controlled release of natural substances.

The project includes a period of study and research at INVENTIA SRL (minimum 6 months and maximum 18 months) and a separate period abroad at a university or qualified research organisation for 6 months.

Scholarship number 2

Topic: Biotechnology and Precision Medicine.

Title of the project: Clinical applications of spatial transcriptomics (scholarship co-funded by BIOGEM SCARL).

Description of the activity: The research will focus on the use of spatial transcriptomics. Given the current resolution limitations of the technique, bioinformatic analysis will be used to integrate spatial transcriptomic data with single cell transcriptomic data in computer databases.

The technique offers the possibility of analysing formalin-fixed and paraffin-embedded (FFPE) samples, thus allowing the use of a wide range of pathological and non-pathological samples already present in research institutes and stored in biobanks.

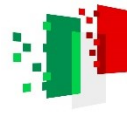
The widespread availability of FFPE samples will make it possible to investigate new aspects in the field of onconephrology, with particular regard to the study of tumours in patients with chronic renal failure. Specifically, by comparing the transcriptomic profile of cancer patients with and without chronic kidney disease, it will be possible to understand the mechanisms that regulate tumour progression in the conditions analysed.

The project includes a period of study and research at BIOGEM SCARL (minimum 6 months and maximum 18 months) and a separate period abroad at a university or qualified research organisation for 6 months.

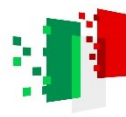
Scholarship number 3

<p>Topic: Biotechnology and Precision Medicine. Title of the project: The use of space proteomics to enhance precision medicine (scholarship co-funded by BIOGEM SCARL) Description of the activity: The objective of the project is to compare tissues from healthy patients and cancer patients in order to highlight a large number of altered proteins in space and to allow the generation of new hypotheses. By identifying proteins and their function, it is possible to identify the different expression patterns that define the complex mechanisms of the onset and progression of neoplasia. The research applies the quantitative MALDI mass spectrometry imaging (MALDI-MSI) technique, which offers several advantages in that it allows the visualisation of analyte distribution without the use of antibody markings. Compared to other mass spectrometry techniques such as HPLC-MS/MS, it allows the analysis and visualisation of different molecules while preserving their spatial distribution in the tissue as the tissue is analysed as is. Furthermore, it is capable of producing not only high spatial resolution images (up to 15µm) but also allows the simultaneous identification of thousands of different molecules such as peptides, proteins, lipids, and drugs in a single experiment. FFPE (Formalin-Fixed Paraffin-Embedded) tissue sections are going to be utilised. The project includes a period of study and research at BIOGEM SCARL (minimum 6 months and maximum 18 months) and a separate period abroad at a university or qualified research organisation for 6 months.</p>	
05 (five) WITHOUT SCHOLARSHIP	
24 (twenty-four) OVERALL TOTAL	
Procedure for admission tests	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.salutementaleefisica.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-mediche-cliniche-esperimentali</p>	
Other useful information	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.salutementaleefisica.unicampania.it/didattica/dottorato-di-ricerca-in-scienze-mediche-cliniche-esperimentali</p>	
Useful contacts	
Educational/scientific contact person	Prof. Armida MUCCI e-mail: armida.mucci@unicampania.it
Administrative contact person:	Dott.ssa Carmela MADDALONI email: carmela.maddaloni@unicampania.it

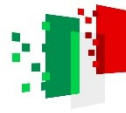
Annex number 16	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE OF NATIONAL INTEREST IN PUBLIC ADMINISTRATION AND INNOVATION FOR DISABILITY AND SOCIAL INCLUSION - Cycle XXXIX	
Coordinator	Prof. Francesca GIMIGLIANO <i>e-mail: francesca.gimigliano@unicampania.it</i>
Administrative headquarters of the Course	Department of MENTAL HEALTH AND PHYSICS AND PREVENTIVE MEDICINE
Doctoral School: Director:	Life Sciences Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	BIO/12 - ICAR/13 - ING-IND/10 - ING-INF/06 - IUS/01 - IUS/10 - IUS/20 - IUS/21 - M-EDF/01 - M-GGR/01 - M-PED/01 - M-PED/02 - M-PED/03 - M-PSI/01 - M-PSI/03 - M-PSI/05 - M-PSI/08 - M-STO/04 - MED/01 - MED/09 - MED/25 - MED/27 - MED/28 - MED/33 - MED/34 - MED/37 - MED/39 - MED/43 - MED/49 - SECS-P/02 - SECS-P/10
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Rehabilitation Medicine; • Mental Health and Psychological Well-being; • Ageing; • Pedagogy, Didactics and Special Pedagogy; • ICT and Bioengineering; • The Legal Domain.
COMPETITIVE POSITIONS OPEN	
41 (forty-one) SCHOLARSHIP GRANTS, of which:	
- 03 (three) scholarships financed by the University	
- 38 (thirty-eight) SCHOLARSHIPS with a compulsory topic of which:	
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 3.4 “Digital and environmental transitions”) financed by the PEGASO Telematic University</p> <p>Topic: Programme on Pedagogy, Didactics and Special Pedagogy Title of the project: Educational sustainability: Integration of new technologies for an environmentally friendly physicality from the perspective of health Description of the activity: Promoting educational sustainability from a perspective of health. Through the integrated use of innovative technologies, the development of solutions for an environmentally friendly physicality.</p>	
<p>4 (four) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1 Topic: Programme on Rehabilitation Medicine. Title of the project: New biomarkers of motor disability in frail and elderly patients with osteoporosis: the role of galectins. Description of the activity: The assessment of tissue and circulating galectin levels as predictive/diagnostic markers of motor disability in frail elderly patients with osteoporosis and potential therapeutic applications of their inhibition.</p> <p>Scholarship number 2</p>	



<p>Topic: Programme on Rehabilitation Medicine and Mental Health and Psychological Well-being. Title of the project: Evidence for disability. Description of the activity: The identification of the best available evidence in the treatment of individuals experiencing a physical or mental disability through systematic reviews of Randomised Controlled Trials and big data analysis.</p> <p>Scholarship number 3 Topic: Programme on Ageing Title of the project: Ageing. Description of the activity: Understanding the diseases associated with ageing, such as dysmetabolic, cardiovascular and neurocognitive diseases as well as major geriatric syndromes, frailty, and sarcopenia.</p> <p>Scholarship number 4 Topic: Programme on Rehabilitation Medicine and Mental Health and Psychological Well-being. Title of the project: Climate change and disability. Description of the activity: Researching the impact of climate change on persons with physical and/or mental disability.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Padua.</p> <p>Topic: Programme on Physical and Rehabilitative Medicine. Title of the project: Preventive and rehabilitation medicine in the management of the complex patient with disability. Description of the activity: The project is designed to build a treatment process with the application of rehabilitation programmes at an early stage for individuals with diabetes mellitus.</p>
<p>2 (two) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the "Magna Graecia" University of Catanzaro.</p> <p>Scholarship number 1 Topic: Programme on Physical and Rehabilitative Medicine. Title of the project: Efficacy of Mirror Therapy and Constraint Induced Movement Therapy on upper limb dexterity in patients with post-stroke hemiparesis. Description of the activity: Evaluating the effectiveness of neurorehabilitation techniques such as Mirror Therapy and Constraint Induced Movement Therapy to improve upper limb dexterity in patients with hemiparesis from stroke-related outcomes and therefore to improve the disability of these subjects.</p> <p>Scholarship number 2 Topic: Programme on Physical and Rehabilitative Medicine. Title of the project: Osteosarcopenia in patients with neurological diseases. Description of the activity: Assessing the negative impact that neurological diseases of rehabilitation interest can have on the musculoskeletal system in terms of osteoporosis and sarcopenia, in order to structure an appropriate therapeutic exercise for improving the disability of these subjects.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) financed by the PEGASO Telematic University</p> <p>Topic: Programme on Pedagogy, Didactics and Special Pedagogy.</p>



<p>Title of the project: Sport and New Technologies: Improving Health and Performance through Innovation.</p> <p>Description of the activity: Exploring the use of new technologies to improve health and performance in sports through innovative solutions for training, performance assessment and injury prevention.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Milan.</p> <p>Topic: Programme on Physical and Rehabilitative Medicine.</p> <p>Title of the project: Evidence for improving the condition of people with disability.</p> <p>Description of the activity: The identification of the best available evidence in the treatment of individuals experiencing disability through systematic reviews of Randomised Controlled Trials and big data analysis.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the Polytechnic University of Marche.</p> <p>Topic: Programme on Physical and Rehabilitative Medicine.</p> <p>Title of the project: Technology-aided rehabilitation for functional recovery in brain injuries.</p> <p>Description of the activity: The assessment of acceptability and usability of devices for what is known as "Technology-aided rehabilitation", in subjects with complex sensorimotor and cognitive disability, and the definition of predictive factors for the feasibility of using these devices for functional recovery.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the University of Foggia</p> <p>Topic: Programme on Physical and Rehabilitation Medicine, Ageing and ICT and Bioengineering</p> <p>Title of the project: Technology in the service of Rehabilitation.</p> <p>Description of the activity: The effectiveness of using new technologies in the rehabilitation care of patients with disability and frailty.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “NRRP Research”) funded by the European University of Rome</p> <p>Topic: Programme on the Legal Domain.</p> <p>Title of the project: Poverty, gender and disability. Intersectionality of risks and social exclusion.</p> <p>Description of the activity: The objective of the project is to identify models for the implementation, reinforcement and qualification of territorial social services that guarantee an integrated and multidimensional approach that is capable of implementing effective actions to counter the particular condition of women with disability as a result of discrimination related to gender and disability.</p>
<p>8 (eight) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Scholarship number 1</p> <p>Topic: Programme on the Legal Domain.</p> <p>Title of the project: Diversity management in Public Administrations. Good practices and future perspectives.</p> <p>Description of the activity: The research, on the subject of Diversity Management as a resource that allows the Public Administration to valorise diversity (including disability) and the individual potential</p>



of each individual, focuses on the European and Italian context in order to identify the good practices experimented and reflect on possible proposals for improvement.

Scholarship number 2

Topic: Programme on the Legal Domain

Title of the project: Disability Managers and social inclusion in Public Administrations. Application practices and legal perspectives

Description of the activity: The research plans to examine the function of the disability manager, who has obtained partial legal recognition in Italy (given that his or her appointment is specifically imposed in the case of public Administrations with more than 200 employees, while in private companies it is envisaged on a voluntary basis), in order to reflect on the contribution that this figure can offer in relation to the prevention of situations of fragility and disability in the workplace.

Scholarship number 3

Topic: Programme on the Legal Domain

Title of the project: Disability, social inclusion and effectiveness of rights in the multilevel protection system

Description of the activity: Starting from the new notion of disability, which no longer merely emphasises a person's deficit but encompasses his or her personal psycho-physical dimension in the socio-spatial context of reference, the research intends to focus on public interventions aimed at guaranteeing the effectiveness of the rights of persons with disability.

Scholarship number 4

Topic: Programme on the Legal Domain.

Title of the project: Health, social inclusion and disability in the NRRP: towards a new model of protection.

Description of the activity: With a view to promoting the autonomy and inclusion of persons with disability, the NRRP provides for the person with disability to be guaranteed the enjoyment of civil and social rights. From a perspective based on law, the research plans to examine the reforms able to achieve this objective, analysing them in the light of the Constitutional framework and the values contained therein.

Scholarship number 5

Topic: Programme on the Legal Domain.

Title of the project: Inclusion and cohesion in the NRRP and beyond: the contribution of the Third Sector.

Description of the activity: The research is designed to verify whether the full and final implementation of the NRRP, in which the importance of collaboration between public Administrations and third-sector entities with regard to issues of inclusion and cohesion is emphasised, will allow the effective implementation of collaborative processes aimed at a more careful analysis of the hardships and needs linked to the new phenomena of marginality.

Scholarship number 6

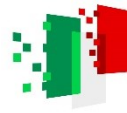
Topic: Programme on the Legal Domain.

Title of the project: Tax benefits for citizens with disability.

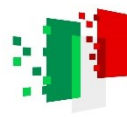
Description of the activity: Starting from the non-fiscal function of the tax system, aimed at the pursuit of social objectives and, therefore, not simply the allocation of public expenditure, the research aims to critically analyse the current tax benefits related to actions implemented for people with disability and their family members.

Scholarship number 7

Topic: Programme on the Legal Domain.



<p>Title of the project: Private instruments for asset allocation for the protection of people with disability. Description of the activity: The research is aimed at examining assistance measures in favour of persons with disability, with particular reference to negotiated asset allocation instruments designed to guarantee constant support for them during the time they are without family support.</p> <p>Scholarship number 8 Topic: Programme on the Legal Domain. Title of the project: The role of the support administrator in the protection of vulnerable persons: present situation and future prospects. Description of the activity: Starting from the inadequacy of traditional private instruments - interdiction and incapacitation - in providing an efficient response to the protection of vulnerable individuals, the research aims to examine the institution of support administration, introduced by Italian law number 6 of 2004, in order to define its current scope of application and consider its future scope.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Macerata.</p> <p>Topic: Programme on Pedagogy, Didactics and Special Pedagogy. Title of the project: Life projects and self-determination in persons with intellectual disability: assessment paths and intervention guidelines in personal services. Description of the activity: The research project aims to investigate the main assessment protocols for the self-determination of persons with intellectual disability.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the Federico II University of Naples.</p> <p>Topic: Programme on Pedagogy, Didactics and Special Pedagogy. Title of the project: Improving the living conditions of people with disability: from training to employment in the public administration. Description of the activity: The objective of the research project is to test, implement and validate customised itineraries for accompanying people with disability to work in Public Administration, starting from a context and functional profile analysis.</p>
<p>1 (one) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Palermo.</p> <p>Topic: Programme on the Legal Domain. Title of the project: Migration phenomena, the right to education and training and social inclusion. Description of the activity: The topic of the research, starting from the consideration of migratory phenomena, aims to verify the legal status of foreigners in our legal system with respect to social rights and, in particular, to trace the degree of effectiveness of the right to education and training, as an essential moment for implementing the social inclusion of migrants.</p>
<p>2 (two) funded under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the "Universitas MERCATORUM" Telematic University.</p> <p>Scholarship number 1</p>



Topic: Programme on ICT and Bioengineering.

Title of the project: User centred inclusive design.

Description of the activity: Advanced user-centred inclusive design models for the usability of products, and services for the use of sites of cultural interest by persons with disability and/or cognitive disability.

Scholarship number 2

Topic: Programme on ICT and Bioengineering.

Title of the project: User-centred inclusive design.

Description of the activity: Inclusive design models of lightweight integrated structural systems for the accessibility and enjoyment of sites of cultural interest by persons with disability and/or cognitive disability.

10 (ten) funded under **Italian Ministerial Decree 118/2023** NRRP (M4C1 – Inv. 4.1 “Public Administration”)

Funded by Scuola Superiore Meridionale.

Scholarship numbers 1, 2, 3 and 4

Topic: Programme on the Legal Domain

Title of the project: Disability studies: Private Law and Corporate Organisation.

Description of the activity: The study of disability using the intertwining of the disciplinary frameworks of Private Law - IUS/01 and Business Organisation - SECS/P10.

Scholarship numbers 5 and 6

Topic: Programme on the Legal Domain and Rehabilitation Medicine.

Title of the project: Strengthening Rehabilitation in Health Systems – Responding to the new WHA Resolution.

Description of the activity: the two scholarships (Private Law - IUS/01 and Business Organisation - SECS/P10) involve the study of disability using the intertwining of these two disciplinary frameworks.

Scholarship number 7

Topic: Programme on Rehabilitation Medicine and Mental Health and Psychological Well-being.

Title of the project: Technology in the service of people with disability.

Description of the activity: Researching the effectiveness of using technologies such as virtual reality on the functioning of people with physical and/or mental disability.

Scholarship number 8

Topic: Programme on Rehabilitation Medicine and Mental Health and Psychological Well-being.

Title of the project: Evidence for disability.

Description of the activity: The identification of the best available evidence in the treatment of individuals experiencing a physical and/or mental disability through systematic reviews of Randomised Controlled Trials and big data analysis.

Scholarship number 9

Topic: Programme on Rehabilitation Medicine.

Title of the project: Predisposition to the development of neurodegenerative diseases.

Description of the activity: Correlating genetic variants predisposing to the development of neurodegenerative diseases in professional athletes.

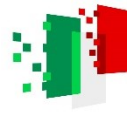
Scholarship number 10

Topic: Programme on Rehabilitation Medicine.

Title of the project: Biomarkers of postural control.

Description of the activity: Analysis of all factors interfering with postural posture, with a specific focus on people with disability.	
1 (one) under Italian Ministerial Decree 118/2023 NRRP (M4C1 – Inv. 4.1 "Public Administration") funded by the University of Cassino and Lazio Meridionale. Topic: Curriculum Legal Area Title of the project: The role of the Disability Manager in Public Administration Description of the activity: The project aims to investigate the role and duties (de iure condito and de iure condendo), of the disability manager within public administrations, on a legal level, also in order to train professional figures active in the field of diversity in general, providing the necessary skills to coordinate and manage problems related to the integration and working conditions of employees with disability.	
1 (one) funded by the Federico II University of Naples– SINAPSI Centre. Topic: Programme on Pedagogy, Didactics and Special Pedagogy. Title of the project: The guidance function of the support teacher in Italy: limits and potential Description of the activity: The aim of the research project is to analyse the orientation function of the support teacher in secondary school and to propose and validate a toolkit to support personalised orientation actions.	
Procedure for admission tests	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
These are going to be published on the Department's web page by July 20 2023 https://www.salutementaleefisica.unicampania.it/didattica/dottorato-di-interesse-nazionale-in-pubblica-amministrazione-e-innovazione-per-la-disabilita-e-l-inclusione-sociale	
Other useful information	
For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.salutementaleefisica.unicampania.it/didattica/dottorato-di-interesse-nazionale-in-pubblica-amministrazione-e-innovazione-per-la-disabilita-e-l-inclusione-sociale	
Useful contacts	
Educational/scientific contact person	Prof. Francesca GIMIGLIANO e-mail: francesca.gimigliano@unicampania.it
Administrative contact person:	Dott.ssa Alessandra DACE e-mail: alessandra.dace@unicampania.it

Annex number 17	
DESCRIPTIVE SHEET OF THE DOCTORAL RESEARCH COURSE IN PUBLIC HEALTH - Cycle XXXIX	
Coordinator	Prof. Umberto GALDERISI <i>e-mail: umberto.galderisi@unicampania.it</i>
Administrative headquarters of the Course	Department of EXPERIMENTAL MEDICINE
Doctoral School:	Life Sciences
Director:	Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors	MED/01 - MED/08 - MED/17 MED/42 - MED/43 - MED/44 - MED/45 - MED/46 - MED/50 - BIO/11 BIO/13 - IUS/09 - SECS-P/07
Training programmes (to be activated by the Faculty Board after admission of the successful candidates to the course, based on the number of requests made in the application form and following the order of the ranking list of merit)	<ul style="list-style-type: none"> • Epidemiological Methodology and Public Medicine; • Social Medicine; • Innovative Diagnostics; • Cellular and Molecular Biology in Regenerative and Reproductive Medicine; • Healthcare Economics and Management.
COMPETITIVE POSITIONS OPEN	
16 (sixteen) SCHOLARSHIP GRANTS, of which:	
- 04 (four) scholarships financed by the University	
- 02 (two) SCHOLARSHIPS RESERVED for graduates of international Universities	
- 10 (ten) SCHOLARSHIPS with a compulsory topic of which:	
<p>3 (three) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “PNRR Research”) funded by the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Promoting health with a One Health approach. Title of the project: Developing knowledge and skills aimed at balancing the requirements of equity, access to services and solidarity with available resources. Description of the activity: The research activity is aimed at improving systems for data collection and analysis, by integrating clinical and administrative data with other information from additional health-related data streams with a One Health approach; identifying factors that control the development or progression of infectious and chronic-degenerative diseases and that can be used as preventive/prognostic biomarkers and potential pharmacological targets for personalised medicine interventions; identify health promotion and prevention activities with evidence of efficacy and favourable cost-effectiveness ratios to meet health needs, characterised by increasing complexity due to the increase in chronicity, ageing and new social requirements. The programme is based at the University without prejudice to periods of study and research at qualified research centres (for a minimum of six months) and abroad (for a minimum of six months).</p>	
<p>3 (three) funded under <u>Italian Ministerial Decree 118/2023</u> NRRP (M4C1 – Inv. 4.1 “Public Administration”) funded by the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Administration of health and social services activities Title of the project: Planning, organisation, delivery and evaluation of health and social care service activities.</p>	



<p>Description of the activity: The research activity is aimed at the valorisation and implementation of management, accounting, leadership and communication skills, also with reference to the selection and development of human resources; at the valorisation and implementation of skills in identifying health and socio-medical needs and in guaranteeing the supply of services in view of the continuous evolution of the demographic and epidemiological context the enhancement and implementation of planning, organisation and management skills using the definition of user-oriented corporate strategies, the effectiveness of health and social-health interventions, as well as the economic evaluation of activities and the related planning, control and reporting tools. The programme includes training, study and research periods at the University and periods of study and research at qualified operational and scientific buildings of the Public Administration or research centres (for a minimum of six months) and abroad (for a minimum of six months).</p>
<p>2 (two) funded under NRRP - PNC (project code PREV-A-2022-12376981) funded by the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Prevention and reduction of health risks related to air pollution. Title of the project: Outdoor air and health: an integrated atlas to support decision-making and research: analysis from the cohorts provided by the Italian National Statistical Institute (ISTAT). Description of the activity: The research activity is part of specific objective number 5 of the PNC research project (expanding the cohorts of ISTAT). The general objective is to investigate questions of causation on the effect of air quality on health that require a longitudinal approach on a national level, by expanding the longitudinal surveys on health and mortality conducted by ISTAT with environmental data. Specifically, it involves assigning pollution estimates at the level of the census section to each individual surveyed in the 2011 census and at the level of municipalities to each individual surveyed in the ISTAT health surveys for the years 2000, 2005, and 2013. An analysis of the associations between outcomes, pollution and socio-economic determiners is planned on the various cohorts. The main results are 2012-2019 mortality in the census cohort, and the 2000-2019 mortality and hospitalisations up until the year 2014 in the ISTAT survey cohorts. A period of training and research at ISTAT is planned.</p>
<p>1 (one) funded under NRRP - PNC (project code PREV-A-2022-12376981) funded by the University of Campania <i>Luigi Vanvitelli</i>.</p> <p>Topic: Prevention and reduction of health risks related to air pollution Title of the project: Outdoor air and health: an integrated atlas to support decision-making and research: an integrated atlas of air quality and health Description of the activity: The research activity is part of the specific objective of the PNC research project n. 2 (integrated air quality and health atlas) and n. 3 (research and monitoring development). The general objective is the construction of a territorial atlas reporting on air quality and health outcomes in a system capable of coordinating the generation, processing, interpretation and use of available data. Specifically, it envisages the harmonisation in space and time of regional environmental data and the identification of health outcomes and the creation of maps and impact assessments for pollutants and outcomes considered with estimates of concentration-response functions. It also includes the verification of available data on non-conventional pollutants, the evaluation of data on the contribution of different emission sources to particulate matter and the analysis of non-consolidated health outcomes.</p>
<p>1 (one) funded under NRRP - PNC (project code PREV-B-2022-12376988) funded by the University of Campania <i>Luigi Vanvitelli</i></p> <p>Topic: Supporting the development of cities for healthier, more inclusive, safer, resilient and sustainable environments Title of the project: Sustainability for the environment and the health of citizens in Italian port cities</p>

<p>Description of the activity: The research activity is part of specific objective number 4 of the PNC research project (epidemiological surveillance). The general objective is the strengthening of epidemiological surveillance activities based on population registers, pathology registers, surveillance systems and the construction/updating of residential cohorts for the study of the association between exposure to environmental risk factors and health outcomes, also considering the socio-economic context and, where possible, individual or small area risk factors. A period of training and research is foreseen at the Department of Epidemiology and Prevention of the Region of Lazio.</p>	
<p>04 (four) WITHOUT SCHOLARSHIP</p>	
<p>20 (twenty) OVERALL TOTAL</p>	
<p>Procedure for admission tests</p>	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, Paragraph 8 of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
<p>Location and competition calendar</p>	
<p>These are going to be published on the Department's web page by July 20 2023 https://www.medicinasperimentale.unicampania.it/didattica/dottorato-di-ricerca-in-sanita-pubblica</p>	
<p>Other useful information</p>	
<p>For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.medicinasperimentale.unicampania.it/didattica/dottorato-di-ricerca-in-sanita-pubblica</p>	
<p>Useful contacts</p>	
<p>Educational/scientific contact person</p>	<p>Prof. Umberto GALDERISI <i>e-mail:</i> umberto.galderisi@unicampania.it</p>
<p>Administrative contact person:</p>	<p>Dott. Vincenzo LAUDANDO <i>e-mail:</i> vincenzo.laudando@unicampania.it</p>

Annex number 18	
DESCRIPTION SHEET OF THE RESEARCH DOCTORATE COURSE IN THE SCIENCES OF THE CRITICAL AREA - Cycle XXXIX	
Coordinator	Prof. Maria Caterina PACE e-mail: mariacaterina.pace@unicampania.it
Administrative headquarters of the Course	Department of WOMEN AND CHILDREN AND GENERAL AND SPECIALISTIC SURGERY
Doctoral School: Director:	Life Sciences Prof. Katherine ESPOSITO
Duration	3 years
Scientific and disciplinary sectors:	MED/41 - BIO/14 - MED/38 - MED/25
COMPETITIVE POSITIONS OPEN	
4 (four) WITH SCHOLARSHIPS, of which :	
- 03 (three) SCHOLARSHIPS financed by the University	
- 01 (one) SCHOLARSHIP reserved for graduates of international universities	
1 (one) WITHOUT SCHOLARSHIP	
5 (five) OVERALL TOTAL	
Procedure for admission tests	
<ul style="list-style-type: none"> - An assessment of qualifications, including the compulsory submission of a research project drafted in compliance with the call for applications; - An interview, which will be performed in compliance with article 6, paragraph 8, of the call for applications; - An international language, the knowledge of which will be tested during the interview: ENGLISH. 	
Location and competition calendar	
These are going to be published on the Department's web page by July 20 2023 https://www.dipdbc.unicampania.it	
Other useful information	
For all useful information, please consult the University website at https://www.unicampania.it/index.php/didattica/dottorati-di-ricerca and the following Department web page https://www.dipdbc.unicampania.it	
Useful contacts	
Educational/scientific contact person	Prof. Maria Caterina PACE e-mail: mariacaterina.pace@unicampania.it
Administrative contact person:	Dott.ssa Maria RUSCIANO e-mail: maria.rusciano@unicampania.it