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Rector's Decree

Call for public supplementary selection for admission to PhD course "Information and Communication Technologies" - XXXIX cycle - Academic Year 2023/2024, with awarding PhD fellowships funded by the NextGenerationEU programme - National Recovery and Resilience Plan (PNRR), Ministerial Decree no° 117/2023.

The Rector

HAVING REGARD to the University Statute of Autonomy;

HAVING REGARD to the University General Regulations;

HAVING REGARD to the University Teaching Regulations;

HAVING REGARD to the University Administration and Accounting Regulations;

HAVING REGARD to the University PhD Regulations;

HAVING REGARD to the University Code of Ethics and University Code of Conduct;

HAVING REGARD to the Law no° 476 of 13th August 1984;

HAVING REGARD to the Law no° 240 of 30th December 2010, in particular art. 19;

HAVING REGARD to the Ministerial Decree no° 226 of 14 December 2021;

HAVING REGARD to the Law no° 104 of 5th February 1992, as supplemented and amended by the Law no° 17 of 28th January 1999;

HAVING REGARD to the Republic Presidential Decree no° 445 of 28th December 2000;

HAVING REGARD to the Law no° 148 of 11th July 2002;

HAVING REGARD to the Legislative Decree no° 196 of 30th June 2003;

HAVING REGARD to the Ministerial Decree no° 270 of 22nd October 2004;

HAVING REGARD to the General Data Protection Regulation (GDPR) - Regulation (EU) 2016/679 of the European Parliament and of the Council of 27th April 2016 relating to the protection of natural persons with regard to the processing of personal data and rules relating to the free movement of such data;

HAVING REGARD to the Ministerial Decree no° 247 of 23rd February 2022, which increased the gross annual amount of the PhD fellowship;

HAVING REGARD to the Rector's Decree no° 374 of 1st March 2022, which issued the "Fees, Contributions and Exemptions Regulations", updated for the academic year 2023/2024 by the University Board of Directors in date 28th February 2023;

HAVING REGARD to the provisions of the Italian Ministry of Universities and Research (MUR), concerning the Procedures for Entry, Residency and Enrolment of Foreign/International students in Higher Education Courses in Italy for the academic year 2023/2024, available at the link: <https://www.studiare-in-italia.it/studentistranieri/>;

HAVING REGARD to the Law no° 33 of 12th April 2022 relating to the Provisions concerning simultaneous enrolment in two courses of higher education;

HAVING REGARD to the National Recovery and Resilience Plan (PNRR) document;



WHEREAS the PNRR is part of the Next Generation EU (NGEU) economic recovery project, developing around three strategic axes shared at European level - Digitisation and Innovation, Ecological Transition, Social Inclusion - and along six Missions, including Mission 4 "Education and Research";

ESTABLISHED that the Mission 4, Component 2 "From Research to Enterprise" intends to strengthen research and foster the dissemination of innovative models for basic and applied research conducted in synergy between universities and businesses; supporting innovation and technology transfer processes; enhancing research infrastructure, capital and innovation support skills;

HAVING REGARD to the "Guidelines for reporting to the actors implementing the Mission 4 Component 2 system initiatives" and the " Guidelines for information and communication actions by the actuators";

HAVING REGARD to the Ministerial Decree no° 117 of 2nd March 2023 awarding doctoral fellowships on the PNRR, Mission 4, Component 2, "From Research to Enterprise" - Investment 3.3 "Introduction of innovative doctorates that meet the needs of innovation companies and promote the recruitment of researchers from companies", by virtue of which the University of Calabria has been awarded co-funding for PhD fellowships;

HAVING REGARD to the note of MUR prot. no° 3992 of 2nd March 2023 on "Computerized procedure for the accreditation of PhD Courses - XXXIX cycle. Opening note";

HAVING REGARD to the "Guidelines for the accreditation of research doctorates pursuant to article 4, paragraph 3, of the regulation referred to in Ministerial Decree 14th December 2021, no° 226" issued with Ministerial Decree no° 301 of 22nd March 2022;

HAVING REGARD to the decisions of the Departments of reference of the University's PhD courses, concerning the approval of the renewal of courses for the academic year 2023/2024 - XXXIX cycle;

HAVING REGARD to the resolutions of the Academic Senate and the Board of Directors, held on 23rd and 30th May 2023 respectively, on the renewal and activation of PhD courses for the XXXIX cycle;

HAVING REGARD to the Rector's Decree no° 862 of 15th June 2023, with which has been issued and published the "Call for public selection for admission to PhD courses - XXXIX cycle – Academic Year 2023/2024, with awarding PhD fellowships funded by the NextGenerationEU programme - National Recovery and Resilience Plan (PNRR)";

WHEREAS the results of the ANVUR examination of the proposals for the renewal of the PhD Courses for the XXXIX cycle;

HAVING REGARD to the Rector's Decree no° 1118 of 3rd August 2023, with which the PhD fellowships referred to in Ministerial Decree no° 117 of 2nd March 2023 were distributed;

WHEREAS the measures financed by the above decrees must be:

- a) coherent with the objectives and objectives of Regulation (EU) 2021/241, with the general strategy and the Detail Sheet of the PNRR Component;
- b) aimed at the achievement of the results measured in relation to the milestones and targets that may be assigned to the Investment within the terms set by the Plan;
- c) in accordance with the principle "not causing significant damage" (DNSH) pursuant to article 17 of Regulation (EU) 2020/852, in line with the technical guidelines prepared by the European Commission (Communication of the European Commission 2021/C58/01);
- d) to address and bridge gender inequalities;
- e) in support of the participation of women and young people, also in line with the provisions of Decree-Law no° 77 of 31st May 2021 (c.d. Simplification Decree), as amended by conversion Law no° 108 of



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29th July 2021, concerning the management of the PNRR;

HAVING REGARD to the letters of commitment and/or the agreements concluded or under contract between the University of Calabria and the enterprises for the co-financing of research PhD fellowship of the XXXIX cycle, Ministerial Decree 117/2023;

CONSIDERING that the actual allocation of the PhD fellowships referred to in Ministerial Decree no° 117/2023 is subject to the outcome of the required eligibility checks of the MUR and ANVUR;

CONSIDERING necessary to provide for the issuing of the call for the supplementary selection notice for admission to PhD course "Information and Communication Technologies" - XXXIX cycle – academic year 2023/2024 with administrative headquarters at the University of Calabria;

DECREES

Art. 1 Call for public selection for admission to PhD course ICT

1. The University of Calabria announces the call for suppletive public selection for admission to PhD course "Information and Communication Technologies" for the academic year 2023/2024 - XXXIX cycle and the award of n. 16 PhD fellowships.

The PhD fellowships of this call for proposals are funded by the Ministerial Decree no° 117 of 2nd March 2023 under the National Recovery and Resilience Plan (PNRR) of the programme by the European Union NextGenerationEU, as specified in Annex A "Analytical Cards Doctoral Courses XXXIX cycle – Academic Year 2023/2024" which is an integral and substantial part of this call.

2. This call will be published on the website of the Ministry of Universities and Research, on the European website Euraxess and on the portal of the University of Calabria at the link: https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_PhD-Research.html and has the value of full notification.

3. For the PhD course, the information related to the Coordinator, the duration, the proposing Department (any other Departments involved), the CUN Areas and the Disciplinary Scientific Areas of reference, the research topics or the curricula of the course, the requirements for participation, the procedures for admission, the titles to be attached to the application for participation, the criteria for evaluating the tests, the number of positions and PhD fellowships with details of the funders and the research objectives/themes, also in relation to the individual curricula, if any, the diary of the tests, the possible contact for information and the course website, are reported in Annex A.

4. The positions financed by the funds of the Ministerial Decree no° 117/2023 are banished under condition of the approval of the ministerial financing. The doctoral PhD fellowships are activated within the framework of the subjects listed in the aforementioned decree and in compliance with the eligibility criteria set out in Ministerial Decree no° 117/2023.

5. Any changes, updates or additions to the content of this call will be announced, exclusively, with the publication on the portal of the University of Calabria at the link https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_doctorate-di-ricerca.html.

Any personal communications to candidates relating to this notice will be made by e-mail. For this purpose, the e-mail address indicated by the candidate in the online application shall be used. The University assumes no responsibility for the dispersion of communications dependent on inaccurate indications of personal contact details by the candidate or by failure or late communication of their change, nor by electronic errors.

6. The submission of the application for participation through the procedure referred to in art. 4 presupposes the candidate's knowledge of the rules contained in this call, in the University's Regulations on PhD and the Regulations on the source of funding under the National Recovery and Resilience Plan.



7. The start date of the PhD course "Information and Communication Technologies" of the XXXIX cycle is set at 1st November 2023.

Art. 2 Admission Requirements

1. They can apply for participation in the selection of admission to the PhD course referred to in the previous art. 1, without limitation as to age and/or nationality, persons who holds one of the following qualifications:

- a. Diploma of Degree (ex ante Ministerial Decree 509/1999);
- b. Master's Degree/Master's Degree (Ministerial Decree 509/1999 and Ministerial Decree 270/2004);
- c. Second level academic qualification issued by the institutions belonging to the AFAM sector;
- d. Degree obtained at foreign universities, legally recognized, provided that comparable duration, level and disciplinary field to the Italian qualification that allows access to the course.

Access to this call for selection of some of the PhD courses foresees the possession of specific master/specialist degrees (or equivalent), as indicated in the Annex A of this call.

2. Candidates who will achieve the title degree required in the paragraph 1 by the date of enrolment in the PhD course may also apply for participation in the admission notice. If the candidate is a PhD winner, he will be admitted "with reservation" and must submit, by the date of registration for the PhD course, by e-mail to dottorati@unical.it, the self-certification relating to the achievement of the title with attached copy of valid identity document. Failure to obtain the title within the indicated deadline will result in exclusion from the ranking list of merit.

3. Candidates who:

- previously have received a PhD fellowship or a fraction thereof;
- have already obtained a PhD.

may not apply for participation in this call.

Art. 3 Qualification obtained abroad

1. The suitability of the qualification obtained at foreign universities is ascertained, only for the purposes of admission to this selection, by the Selection Boards in compliance with the legislation in force in Italy and in the country where the qualification was issued, and treaties or international agreements on the recognition of qualifications for further studies.

2. In this case, applicants must submit, in the manner indicated in Article 4 below, the degree certificate, indicating the examinations taken and the study plan followed, both first and second level. The candidate can also attach the diploma supplement or the declaration of value on site or certificate of comparability issued by CIMEA or other ENIC-NARIC centers and any other documentation useful to assess the eligibility of the title held for the chosen PhD course. These documents, if they are not written in Italian or English, must be accompanied by a sworn translation in Italian or English. The Selection Boards will assess the eligibility of the foreign qualification on the basis of the documentation submitted and therefore may exclude the candidate even if there is insufficient evidence for the evaluation.

3. Candidates holding a foreign qualification are admitted to the selection with reservation, which can be dissolved only when, if winners, will produce the diploma supplement or declaration of value on site or certificate of comparability CIMEA or other ENIC-centers NARIC, as provided by art. 8.

Art. 4 Application for Admisssion

1. The application for selection must be submitted using only the appropriate online procedure available on the page: <https://unical.esse3.cineca.it/>.



2. The electronic procedure for the submission of the application for online admission will be closed at **12:00 a.m.** (midday, Italian time) on **4th September 2023**.
3. The telematic procedure provides for preliminary registration for those who are not in possession of a student matriculation of the University of Calabria, in order to obtain credentials allowing access to the next step of filling in the application for admission to selection.
4. Candidates who are already registered must access the Reserved Area using their existing credentials. Candidates are invited to update the data already present in the register, in particular the place of residence, the telephone number and the e-mail address, which will be delivered any communications related to the competition.
5. The application for admission to the selection is deemed to have been correctly submitted only after the completion of the electronic procedure and can no longer be modified online.
6. The date of submission of the application for admission to the selection shall be certified by the computerised system which, at the end of the deadline for submission, will no longer allow access to and submission of the application.
7. There is no payment of an admission fee.
8. The online admission procedure requires the upload of the following documents in pdf format:
 - self-certification (Self-Declaration Affidavit) of the right of access pursuant to art. 47 of Republic Presidential Decree 445/2000 (Annex B) exclusively for academic qualifications obtained in U.E countries;
 - documentation required for the evaluation of candidates with an academic qualification obtained abroad (see art. 3 of the present call for proposals);
 - self-certification of exams taken during the academic career for candidates not yet in possession of the title qualification;
 - research project, of a maximum length of 16,000 characters (including spaces), unless otherwise required in the PhD course schedule to which the candidate intends to participate in, in compliance with the specifications set out in Annex A;
 - the candidate's curriculum vitae et studiorum;
 - a copy, front/back, of a valid identity document;
 - a copy of the Italian tax code, exclusively for Italian candidates;
 - any additional title qualification that are subject to evaluation, as specified in "Annex A" to this call.
9. All titles, documents and publications deemed useful for the purposes of the competition procedure must be attached in pdf format with a maximum size of 20 MB; exceptionally, any documentation that the candidate should not be able to attach can be sent by certified e-mail (PEC) to the address amministrazione@pec.unical.it or delivered by hand to the Protocol Office of the Central Administration, Via Pietro Bucci cubes 7-11 b, Arcavacata di Rende (CS), on weekdays from 10:00 to 12:00, always in compliance with the deadline of this notice. In addition, candidates who wish to supplement or amend the application or annexes may, in the same way, submit them, together with a signed application for admission and a photocopy of a valid identity document, within the mandatory deadline of expiry of the notice. If the annexes are not received by the deadline and in the manner indicated, only the documents entered by the computer procedure will be evaluated. The University assumes no responsibility for any telematic errors attributable to third parties.
10. Applications for admission to selection made in a manner other than that described above will not be considered.
11. It is the responsibility of the candidate to ensure the correct conclusion of the computer procedure; in this regard, this University declines any responsibility for any malfunctions of the computer system close to the deadline.



12. Candidates with proven disability, pursuant to Law no° 104/1992 as supplemented by Law no° 17/1999, may request, in relation to their disability, the necessary aids and any additional time for completing the test. Applicants with specific learning disabilities in accordance with Law No. 170/2010 in relation to the type of test shall be granted an additional time of 30 per cent more than that defined. Candidates with disabilities, if they intend to use the aids provided by Law no° 104/1992 as supplemented by Law no° 17/1999, must also report it during the online application, indicating the type of aid required.

13. All candidates are admitted to the selection subject to verification of the requirements of the notice, which will be carried out pursuant to art. 43 of Republic Presidential Decree no° 445/2000. The University may, therefore, at any time order the exclusion of candidates from the selective procedure. The University, for its own institutional reasons, can also verify the veracity of the substitute declarations of certification submitted by the candidates: anyone who makes false statements is punished in accordance with the penal code and special laws on the subject.

14. The University reserves the right to adopt, even after the selection process, measures to exclude candidates who do not meet the requirements or who have not complied with the requirements of the call.

Art. 5 Selection board

1. The Selection Board for the admission to PhD course shall be appointed by the Rector in accordance with the University PhD Regulations of the University of Calabria.
2. The Selection Board shall be responsible for the entire evaluation procedure for applications, the preparation of the minutes, the formulation of the ranking list and the award of PhD fellowships.
3. The composition of the Selection Board will be published on the portal of the University of Calabria at the link https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_doctorate-di-ricerca.html.

Art. 6 Admission tests

1. Admission takes place in accordance with the modalities specified in the Annex A, an integral part of this decree.
2. The diary of the admissions tests, set out for the PhD course in Annex A, shall constitute notification to the persons concerned. Any changes or additions to the exam schedule will be published exclusively on the portal of the University of Calabria at the web address indicated in Annex A for the course.
3. Failure to submit to the admission tests will be considered as a waiver of selection.
4. Candidates must show one of the following valid identification documents in order to take the competition tests: identity card, passport, car licence with photograph, firearms permit, identification card - with a photograph and a stamp or other equivalent signature - issued by a State Administration.
5. The selective procedure, aimed at verifying the candidate's aptitude for scientific research, consists of an evaluation of the candidates' qualifications, supplemented, in accordance with the provisions of each course in Annex A, by an oral test.
6. In the doctorate sheet are indicated the points available for each individual test, the award criteria and the minimum thresholds for admission to subsequent tests.
7. The Selection Board shall, prior to the securities valuation operations, designate the Chairman and the Secretary of the Minutes and set the criteria for the evaluation and scoring of each individual item (research project, curriculum vitae et studiorum, any certifications, any publications, etc.). In the case of candidates not yet in possession of a PhD qualification, the Selection Board will have to take into account the self-certified academic career at the time of the application in order to assess their educational background.
8. The oral test is public and includes the verification of knowledge of one or more foreign languages.
9. Applicants resident or domiciled abroad and all candidates who demonstrate, giving adequate reasons to the Selection Board, the impossibility to go in physical presence in the place and on the scheduled date



for the oral test, to request the performance of the same electronically. In such cases, the candidate must make a request by sending a PEC (www.unical.it/pec) to the Department proposing the PhD course listed in the PhD schedule (Annex A), as well as to the e-mail address dottorati@unical.it as indicated in the PhD schedule. The application must be accompanied by a copy of a valid identification document. Applicants must ensure the use of a webcam to allow the Selection Board to identify themselves and must be available on the day and time set out in the test log in Annex A. It is up to the Selection Board to agree with applicants a precise time for the start of the interview. For the purposes of identification and otherwise excluded from the selective procedure, each candidate is required, before the interview begins, to identify themselves, presenting the same identity document already transmitted as an attachment to the e-mail and the online application. The lack of connection, the candidate's unavailability on the specified day or time or the failure to provide the submitted identification document constitute grounds for exclusion from the selective procedure. The University declines any responsibility for the possibility that technical reasons prevent the smooth conduct of the oral interview.

10. At the end of the evaluation, the Selection Board, on the basis of the score reported by each candidate, prepares the merit rankings. The Selection Board shall then allocate the awards, taking into account the position in the ranking list, the number of awards, the subject of the research project submitted by the candidate and/or the suitability of the candidate to develop the research topic of the PhD fellowships submitted.

11. According to the national legislation in force, each candidate may not receive more than one PhD fellowship at the same time.

12. For the assignment of the posts referred to in this call, in case of equal score in the general ranking of merit, the assessment of the economic situation (ISEE of the candidate) prevails.

13. The documents relating to the competition procedure are sent to the Rector by the Selection Board.

14. Candidates shall be granted access to the documentation of the insolvency proceedings, in accordance with current legislation.

Art. 7 Admission to PhD course

1. The Rector approves the acts of the selection and decrees the ranking list for the admission of candidates.

2. The ranking list will be published on the portal of the University of Calabria at the link https://unical.portaleamministrazionetrasparente.it/pagina874_tc-7_dottorati-di-ricerca.html.

3. Candidates will therefore not receive any personal communication.

4. Candidates are admitted to the course according to the ranking drawn up by the Selection Board until the places put in competition for each doctorate are exhausted. In the event of any waiver by those entitled before the start of the course, as many candidates will take over according to the order of the ranking drawn up by the Selection Board, always in compliance with the qualifications assigned. In the event of a useful placement in more than one ranking list, the candidate will have to exercise option for only one doctoral course.

5. This selection provides for the allocation only of places covered by PhD fellowship. Therefore, the renunciation of the PhD fellowship implies the renunciation of the doctoral course.

Art. 8 Registration procedures

1. The winners must register, through the procedure available at <https://unical.esse3.cineca.it/>, in the terms indicated at the same time as the publication of the Rector's Decree approving the acts of the selection. Failure to complete enrolment will result in forfeiture of the right to admission to the doctoral course.

2. The fee for attending the doctoral course, to be paid by all PhD students, includes the regional fee for



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the right to study, the stamp duty and the insurance premium pursuant to "Fees, contributions and exemptions regulations updated for the academic year 2023/2024", to which please refer.

3. The non-Community winners, after matriculation, must deliver to the PhD Sector of the Research, Innovation and Social Impact Area, within a reasonable period agreed with the Sector itself, a copy of the entry visa for study/university or residence permit.

4. Non-EU citizens applying for a visa must register on the University website <https://www.university.it/index.php/dashboard>, under item "International students", to apply for an entry visa. Registration is only completed upon the issue of the entry visa for study in Italy, the exclusive competence of the Italian Diplomatic Representations abroad, regardless of the suitability acquired.

5. Applicants with a foreign qualification admitted to the course, if they have not submitted it during the admission phase, must submit to the PhD Sector of the Research, Innovation and Social Impact Area, within a reasonable time agreed with the Sector itself, penalty blocking of the career and subsequent forfeiture, the declaration of value on the spot of the qualification, issued by the Italian Diplomatic Representation of the country to which the title refers. As an alternative to the declaration of value on the spot, it is possible to present the supplement diploma in English, issued by the same institution that issued the qualification, drawn up according to the model developed by the European Commission, by the Council of Europe and UNESCO/CEPES, or the certificate of comparability of CIMEA or ENIC-NARIC centres. If the "Declaration of Value" submitted by the candidate proves that the qualification is not valid in the country of achievement for enrolment in a course similar to the Doctorate, the interested person loses his or her doctoral course.

6. In the event of the waiver of those entitled, the remaining vacancies are assigned to those who hold a useful position in the ranking list of merit, with convocation by e-mail, pursuant to art.6 of this notice.

7. The University reserves the right to carry out appropriate checks on the veracity of the content of the winner's declarations. If the content of the statements is not true, the winner will forfeit the benefits resulting from the measure issued on the basis of the false statement.

Art. 9 PhD fellowships

1. The amount of the PhD fellowship is € 16,243.00 per year gross of the social security contributions paid by the PhD fellowship holder. The PhD fellowship is exempt from the payment of local tax on personal income and income (IRPEF) and is subject to the payment of INPS social security contributions under separate management, two thirds to be borne by the University and one third by the PhD fellowship holder. The PhD students enjoy the protection and related rights. The PhD fellowship holders will have to enroll in the separate management INPS.

2. The limit of total gross annual personal income to be eligible for the PhD fellowship is € 15,000.00. The determination of such income shall include income of property origin and emoluments of any other nature, including those of an occasional nature. The income refers to the tax period for the calendar year of the greatest use of the PhD fellowship (for the academic year 2023/2024 the year 2024). Exceeding the income limit in one of the academic years in which the PhD fellowship is used leads to the loss of the right to PhD fellowship for the year in which the income event incompatible with the grant occurred. In this case there will be an obligation to return any monthly payments already received during the academic year.

3. The PhD fellowship is awarded in instalments on a monthly basis postponed, has an annual duration and is renewed annually for the duration of the course, provided that the PhD student has completed the activities foreseen in the previous year and has been admitted by the Board of Teachers the following year.

4. PhD fellowship may not be cumulated with research grants or other PhD fellowships for any title conferred, except with those awarded by national or foreign institutions useful for supplementing training or research activities with stays abroad.



5. The amount of the PhD fellowship is increased by 50 percent for periods of stay abroad at universities or research institutes previously authorized by the Teaching Board and supported by a certificate of the Host Institution, not less than 30 consecutive days and a total of not more than 12 months, extendable up to 18 months for doctorates in co-supervision of thesis with foreign universities and for those activated in associated form pursuant to article 3, paragraph 2 of Ministerial Decree. no° 226/2021. The PhD student is required to certify the effective stay abroad, otherwise they will be refunded. The surcharge may not be applied for stays spent in the country of origin or the country of residence of doctoral candidates.

Art. 10 Rights and duties of PhD students

1. Without prejudice to the rights and obligations provided for by the current University Regulations on Doctorates and the Ministerial Decree no° 226/2021, the acceptance of the PhD fellowships financed by the PNRR implies the fulfilment of the obligations laid down in the relevant Ministerial Decrees.
2. Admission to the doctorate involves an exclusive and full-time commitment. Doctoral candidates are obliged to attend the doctoral courses with assiduity, to carry out all the study and research activities in the structures intended for this purpose and in accordance with the procedures established by the Teaching Board, to submit to the Faculty Board, at the end of each course year, an oral or written report on the activity and research carried out and to comply with anything else established by the College itself.
3. Each PhD student is guaranteed a budget for research activities in Italy and abroad of not less than 10% of the cost of the Ministerial PhD fellowship.
4. Recipients of PhD fellowships funded by Ministerial Decree no° 117/2023 shall comply with the following obligations:
 - provide periods of study and research in the enterprise from a minimum of six (6) months to a maximum of eighteen (18) months, even if not continuous, over the three-year period;
 - provide periods of study and research abroad, even if not continuous, from a minimum of six (6) months to the maximum limit provided for in art. 9, co. 3, of D. M. n. 226/2021, over the three-year period;The periods of study and research indicated in the two preceding paragraphs are distinct and must be carried out in separate subjects.
5. The PhD students are required to read the University Regulations on Research Doctorates of the University of Calabria and to periodically consult the web portal, in particular the page <https://www.unical.it/didattica/didattica/offerta-formativa/dottorati/>.

Art. 11 Final examination and qualification

The title of Doctor of Research ("Dr. Ric. or Ph.D.") is awarded by the Rector of the University of Calabria at the end of the course following public discussion, before a Commission appointed by the Rector himself, a research thesis that contributes to the advancement of knowledge or methodologies in the chosen field of research, as provided for by the PhD University Regulations.

Art. 12 Properties of results

1. Intellectual property rights on the possible results achieved by the PhD student, including, but not limited to, software, industrial inventions that can be patented or not, know-how, models, data and data collections, are regulated in accordance with current legislation, the University Regulations and according to what is established in the individual agreements with the University, Companies or Bodies involved.
2. The PhD student has the obligation to communicate without delay to the Coordinator the achievement of the results, committing himself not to disclose them and not to use them without the prior authorization of the University. In the event that the PhD student cooperates in research groups, he or she may be invited to sign a specific commitment to the recognition of intellectual property rights and confidentiality in relation



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to information, data and documents of a confidential nature that you should become aware of in carrying out your activities at and/or on behalf of the University.

Art. 13 Processing of personal data

1. Pursuant to the art. 13 of the General Data Protection Regulation (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016), applicants are informed that the processing of personal data provided by them when participating in the selection or otherwise acquired for this purpose by the University of Calabria is aimed solely at the performance of the competitive activities and will be carried out by the persons responsible for insolvency proceedings, also by the Selection Board, at the University of Calabria, with the use of procedures including computerised, in the ways and within the limits necessary to pursue the aforementioned purposes, even in case of possible communication to third parties. The provision of such data is necessary to verify the requirements for participation and the possession of securities and their non-disclosure may preclude such verification.
2. The data collected by the University of Calabria, for the aforementioned purposes, will be processed through an automated database even after the conclusion of the selective procedure for the purposes related to the academic career management of the winners. They can also be used, in aggregate form and for statistical purposes, also by the MUR. The personal data provided by the candidates will be communicated to the administrative structures of the University of Calabria and to the Public Bodies directly interested in the legal and economic position of the winning candidates.
3. Candidates are granted the rights referred to in Arts. 15 and ss. of the aforementioned Regulation 2016/679, in particular, the right to access their personal data, to ask for their rectification, cancellation, limitation of processing, as well as to oppose their processing, by sending requests to the University of Calabria.

Data subjects who believe that the processing of personal data referred to them occurs in violation of the provisions of the Regulation have the right to lodge a complaint with the Guarantor for the protection of personal data, as provided by art. 77 of the same Regulation, or to appeal to the appropriate courts (art. 79 of the Regulation).

4. All documentation and information regarding the protection of personal data of the University of Calabria are available at the following link: <https://www.unical.it/privacy/>.
5. The data controller is the University of Calabria, via Pietro Bucci, 87036 Arcavacata di Rende (CS), tel. (+39) 0984 4911.
6. The contact details of the Data Protection Officer (RDP) are: via Pietro Bucci, Cube 7/11, 87036 Arcavacata di Rende (CS), tel. (+39) 0984 493918; email: rpd@unical.it.

Art. 14 Responsible for the proceedings

According to the Law of August 7, 1990, n. 241, the person responsible for the procedure of this call for proposals is the Head of the PhD Sector of the Research, Innovation and Social Impact Area - University of Calabria (e-mail: dottorati@unical.it).

Art. 15 Final rules

1. As far as not explicitly specified in this selection notice, the provisions provided for by current legislation on the subject, the University Regulations on PhD Programmes, the PNRR, as well as the relevant ministerial decrees of implementation, apply.
2. This call for proposals is translated into English, but in case of disputes the legal text will be in Italian.

The Rector
Nicola Leone



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Within this notice the terms relating to persons appear only in the masculine. They refer indiscriminately to women and men. Formulations respectful of gender identity have been renounced in order not to compromise the readability of the text and satisfy the need for its simplicity.

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ANNEX A
Analytical Tables PhD Courses
Cycle 39th - Academic Year 2023/2024

Synthesis Available Positions				
No°	PhD Course	Coordinator	Available positions	Pages
1	Information and Communication Technologies	Prof. Giancarlo Fortino	16 (sixteen) positions with PhD fellowship granted by the D.M. 117/2023	12-15



PhD Course in “Information and Communication Technologies”

Coordinator	Prof. Giancarlo Fortino – Department of Computer Science, Modeling, Electronics and Systems Engineering - DIMES – Via Pietro Bucci, Arcavacata di Rende (CS) – Phone: +390984.494063 – e-mail: g.fortino@unical.it
Duration	3 years
Main Department	Department of Computer Science, Modeling, Electronics and Systems Engineering – DIMES
Subject Areas	Electronics, Electromagnetic Fields, Telecommunications, Automatic Control, Computer Science, Computer Engineering, Electrical and Electronic Measurements, Principles of Chemical Engineering, Numerical Analysis, Operations Research, Sciences of the book and document, Electrical engineering, Private law.
Research Topics	<p>The curriculum is multidisciplinary and strongly oriented to the integration and development of new systems of Information and Communication Technology (ICT). The main research topics are listed below:</p> <ul style="list-style-type: none"> • Design of Internet of Things (IoT) systems. • Cybersecurity. • Big Data analysis techniques and applications. • Artificial intelligence. • Wearable computing and m-health systems. • Modeling and simulation for reliability analysis of IoT systems. • Software engineering methodologies for the development of complex distributed software systems. • Models and algorithms for social networks. • Management and analysis systems of Big Data and scalable processing: distributed systems, parallel systems, cloud computing architectures and systems, provisioning models. • Knowledge Management: document management, knowledge extraction, integration and modeling, formalization methodologies, taxonomy classification, thesauri and ontologies, distributed data management, data mining and data warehousing. • Simulation and optimization: models and algorithms. • Mathematics for machine learning. • Microsystems: design, development and characterization of intelligent MEMS devices. • Development of low power and high performance circuits and systems for 3D image processing. • Photovoltaic conversion: models and technologies for solar cells and intelligent systems for energy management, conversion and storage. • High performance, energy efficient integrated circuits for logic and memory applications. • Nanodevices for logic and memory applications. • Modeling and design of spintronic nanodevices. • Systems and techniques for the management of infrastructures for electric mobility. • Reconfigurable antennas.



	<ul style="list-style-type: none"> • Smart antennas and their integration. • Advanced techniques for the measurement of electromagnetic fields. • Electromagnetic diagnostics and biomedical applications. • Radar systems for the environmental monitoring. • Electronic circuits for RF applications. • Monolithic integration of transmitters and receivers. • Efficient energy management in wireless sensor networks. • Cognitive networks and 5G systems. • Network technologies, protocols and architectures for IoT systems. • Vehicle networks and new generation protocols for smart cities. • Control and estimation for agent-based interconnected network systems. • Control strategies resilient to cyber-attacks in network control systems. • Secure navigation schemas and environment reconstruction for autonomous robot teams. • Techniques and devices for navigation, guidance and control in autonomous submarine vehicles. • Techniques and devices for submarine acoustic communications and localization. • Non-destructive evaluation of materials. • Electronic measurement systems. • Fault detection and isolation and control reconfiguration techniques in dynamical systems. • Synchronization methods for IoT-based distributed measurement systems. • IoT-based distributed measurement systems for structural monitoring. • Food engineering. • Legal Informatics 	
Requirements of Partecipation	<ul style="list-style-type: none"> - Italian university Master's Degree (Laurea ante DM 509/ 1999, Laurea Specialistica/Magistrale ex DM 509/1999 and DM 270/2004). - Equivalent Degree awarded by an accredited foreign university. 	
Application Procedures	<p>Qualification assessment and oral examination. The knowledge of the english language will be assessed during the oral examination.</p>	
Assessable qualification (mandatory documents)	<ul style="list-style-type: none"> - Research project; - Curriculum vitae, including a copy of Bachelor's and Master's Degree (in Italian or English), and the list of examinations taken with grades and final mark. 	
Assessment Criteria	Total Maximum Score 60/60	
	Qualification assessment	Total Maximum Score 30/30
	Research project	Maximum Score: 10
	Curriculum vitae	Maximum Score: 20
	Oral examination	Maximum Score 30
	Discussion on the proposed research project and on the disciplines of interest for the doctorate. Foreign candidates can take the exam via skype.	



	<p>Minimum score required for the admission to the oral admission and for the oral examination: 21 pt</p>
<p>Positions and PhD fellowships</p>	<p>16 (sixteen) positions with PhD fellowship granted by the D.M. 117/2023, in particular:</p> <ul style="list-style-type: none"> ▪ n. 1 PhD fellowship co-financed by the enterprise SISEM s.r.l., topic: Optimization of Mobile Telecommunication Networks; ▪ n. 1 PhD fellowship co-financed by the enterprise CLOR s.r.l.s., topic: Development of a measurement system for the design of an active positioning aggregate on a collaborative robotic system; ▪ n. 1 PhD fellowship co-financed by the enterprise ROBINIA s.r.l.s., topic: Software architecture for measurement system node for the dynamic control of an anthropomorphic robot; ▪ n. 1 PhD fellowship co-financed by the enterprise RED YARD RESEARCH s.r.l., topic: Development of measurement and monitoring system for intelligent escape routes; ▪ n. 4 PhD fellowships co-financed by the enterprise MINDWAY s.r.l., topics: <ol style="list-style-type: none"> a. Deep Learning Methods for Wearable Medical Sensors/Devices and Applied Artificial Intelligence; b. Deep Learning Methods for IoT Sensors/Devices and Applied Artificial Intelligence; c. Advanced and Innovative Communication Systems and Protocols in MANET/Heterogeneous Networks; d. LINC (linear amplification using nonlinear components) Technology Transmitter; ▪ n. 2 PhD fellowships co-financed by the enterprise MARE ENGINEERING GROUP s.p.a, topic: (2 PhD fellowships, same topic): Embedded diagnostic monitoring systems for predictive maintenance; ▪ n. 2 PhD fellowships co-financed by the enterprise ITHEA s.r.l., issue (2 PhD fellowships, same topic): AI techniques based on generative AI and vertical Large Language Models in the context of Industry 5.0; ▪ n. 1 PhD fellowship co-financed by the enterprise ELETTRA MICROWAVE s.r.l., topic: Study, analysis and implementation of innovative microwave technologies, aided by 'machine learning' procedures, for electromagnetic diagnostic applications in the biomedical field; ▪ n. 1 PhD fellowship co-financed by the enterprise EARTHAUTOMATIONS s.r.l., topic: Development of a system for measuring and monitoring the position of mobile rovers in an indoor/outdoor environment; ▪ n. 1 PhD fellowship co-financed by the enterprise DTT s.c.a.r.l., topic: The purpose of the PhD is to address topics related to network architecture, and/or precision timing, and/or custom Hardware development for the DTT tokamak. This could include the optimization of the kernel of the O.S. (usually Linux), the network stack & configuration for the distributed real-time Plasma Control System (PCS), the customization and implementation of a precision timing protocols (e.g. IEEE1588/WhiteRabbit) and the development of front-end electronics in critical environments, by comparing different solutions and investigating pros and cons of each of them;



	<ul style="list-style-type: none"> n. 1 PhD fellowship co-financed by the enterprise ARTEMAT s.r.l., topic: Algorithms based on machine learning techniques and syntactic/semantic interpretation of texts written in natural language. <p>Note: Student research projects must focus on exactly one of the above project topics.</p>			
Agenda	Description	Date	Time	Room
	Evaluation of Qualification (applicant presence not required)	September 13, 2023		http://dottorato.dimes.unical.it/
	Oral Examination	September 15, 2023	09:00 a.m. CEST	Seminar Room of the DIMES, University of Calabria, Arcavacata di Rende (CS), Italy
	The results of the exam will be posted on the PhD website: http://dottorato.dimes.unical.it/			
Information	g.fortino@unical.it			
PhD Website	http://dottorato.dimes.unical.it/			



ANNEX B
Self-Declaration Affidavit
(Art. 47 D.P.R. 28th December 2000, no° 445)

*The undersigned _____ Fiscal Code: _____
Place of birth _____ Date of birth _____ Sex M/F _____ Residence (city) _____ prov. _____
via _____ n. _____ cap _____

I understand that any incorrect information and false statements are subject to the penalties provided, according to art. 76 of the D.P.R. 28 December 2000, n. 445, pursuant to and for the purposes of D.P.R. n. 445/2000, and on its own responsibility: Hereby declare To be in possession of the following access title pursuant to art. 2 of the selection notice: *(Please indicate precisely: exact name of the course, date of graduation and grade, University, list of exams with marks if required and for candidates not yet in possession of the qualification)*

Degree _____ achieved on _____ with vote _____ at _____

List of exams and grades (possible) _____

A copy of the following identity document is attached: _____

The undersigned also declares to be informed, pursuant to and for the purposes of Legislative Decree no° 196 of 2003 and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 that the personal data collected will be processed, also by computer, exclusively in the context of the procedure for which this declaration is made.

*This statement may relate to states, personal qualities or facts that are directly acquainted with the person concerned, as well as states, personal qualities and facts relating to other subjects of which he or she has direct knowledge. This statement must provide proof of any qualifications (eg qualifications, examinations, professional qualifications, etc.) that are not attached to the application, as self-certification. For the titles attached (eg documents issued by a public authority, copies of publications, copies of parchments or certificates of study or service qualifications, etc.) must in the same declaration state declare that they are in conformity to the original copy. Lastly, a copy of a validation document must be dated, signed and attached.

N.B. - Subscribing to the aforementioned statements is not subject to authentication where it is assigned in the presence of the employee. If this declaration is sent or filed directly by a person other than the candidate, Photostatic copy, front and rear, of a document of the identity of the subscriber must also be produced. Only photographic identity documents issued by a state administration will be considered valid.

Place and date, _____

Declared by (Legible signature)
