

PhD Programme Table - 39th cycle
Call for Applications for further PhD positions
funded by Next Generation EU - NRRP ex M.D. 117/2023 and 118/2023
and from other sources - PhD Programmes (39th cycle)
A.Y. 2023/2024



Section "Available Positions and Scholarships" integrated on 02/08/2023

PROGRAMME'S NAME	ELECTRONICS, TELECOMMUNICATIONS AND INFORMATION TECHNOLOGIES ENGINEERING
DURATION	3 years
PROGRAMME START DATE	01/11/2023 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Aldo Romani (aldo.romani@unibo.it)
PhD POSITIONS	7
ADMISSION PROCEDURE	Qualifications and Research proposal evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Position linked to a specific research topic
1	PhD Scholarship PNRR ex M.D. 117/2023	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by NXP SEMICONDUCTORS NETHERLAND B.V. BRANCH OFFICE ITALIA	Innovative solutions for Battery Management Systems (BMS) and predictive maintenance sensing techniques for novel battery chemistry
2	Research grant	Provided by the Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi" with funds made available by the project HORIZON EUROPE - DECICE (ref. Dott. Andrea Bartolini) - CUP J33C22004230006 - GA 101092582. The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €19,367 per year	Digital Twin Technologies for a Sustainable Computing Continuum
3	Research grant	Provided by the Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi" with funds made available by the project HORIZON EUROPE e H2020-JTI -progetti GraphMassivizer (ref. Dott. Andrea Bartolini) CUP J33C22004220006 - GA 101093202 and by the project REGALE (ref. Dott. Andrea Bartolini) CUP J55F21001080002 - GA956560. The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €19,367 per year	A secure and distributed middleware for green computing

4	PhD Scholarship PNRR	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) PE14, Code PE00000001 CUP J33C22002880001	Characterization and behavioral modelling of electronic components for 5G/6G applications
5	PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) - Public Administration	ICT for public policy objectives
6	PhD Scholarship PNRR ex M.D. 117/2023	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by STMicroelectronics S.r.l.	Algorithms and Architectures for Aldriven Engine Control in Electric Vehicles
7	Research grant	Provided by "Ercole De Castro" Advanced Research Center on Electronic System- ARCES with funds made available by the project HORIZON EUROPE - HORIZON-CL4-2023-DIGITAL-EMERGING-01-11 (ref. prof. Elena Gnani) - GA 101135571. The research grant will have a duration of 12 months, renewable up to 36 months, and gross recipient amount of €19,367 per year	Modeling and simulation of Dirac coldsource FETs for ultra-low power applications

The number of positions and scholarships may be incremented in case additional funding becomes available, notwithstanding the terms of the application process as detailed in Art. 3 of the Call for Applications. Any amendment, update or integration of the Programme Table will be published, even after the Call for Applications has expired. Any further PhD positions shall be integrated in the PhD Programme Table within ten days before the oral examination.

All PhD positions winners shall fulfill the learning and research obligations decided by the Academic Board and the obligations foreseen in the relevant regulations, funding schemes and eventual agreements, and in the Call for Applications. Moreover, applicants awarded with PhD scholarships funded by Next Generation EU shall fulfill specific obligations foreseen in the relevant funding scheme, in the relevant regulations and in the Call for Applications.

Admission Exams

	DATE AND TIME	RESULTS
Qualifications and research proposal evaluation	Applicants' participation is not required	Available from 04/09/2023**
Oral examination	Date: starting from 07/09/2023 – 9.00 a.m. CEST* Place: Remotely, using Microsoft Teams	Available from 12/09/2023**

* In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral examination detailed schedule shall be made available on the webpage [Studenti Online](#) together with the results of the qualifications and research proposal evaluation. **During the oral examination, applicants may express their interest in one or more positions linked to specific research topics.**

** The **results of the admission exams** will be available on the webpage [Studenti Online](#) (select "summary of the requests in progress" > "see detail" and open the .pdf file at the bottom of the page). **No personal written communication will be sent to applicants concerning the examinations results.**

Required and Supporting Documents to be attached to the application

All the documents listed below **shall be drawn up in English or in Italian**. In case of documents originally issued in any other language (e.g. identity document, qualifications), an official translation is required.

Only qualifications obtained **during the last 5 calendar years** shall be taken into consideration, except for the University Degree. The Admission Board will assess the relevance of the supporting documents to the PhD Programme.

REQUIRED DOCUMENTS	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	No specific CV format is required
Degrees	Documents attesting the awarding of the first and second cycle degrees, the exams taken and the marks obtained (see Art. 3 of the Call for Applications)
Research Proposal	<p>Multi-annual research proposal, with special emphasis on the activities to be completed during the first-year course. The proposal must meet the following requirements:</p> <ul style="list-style-type: none"> - it must mention on the cover page the main research topic the applicant is interested to and the proposal is about; - it cannot exceed 20,000 characters, including spaces and formula possibly used. This figure does not include: the title of proposal, the outline, references and images (such as graphs, diagrams, tables, etc. - if present); - it must include: the state of the art; description of the proposal; expected results; articulation of the proposal and implementation times; outline of the proposed findings assessment criteria; references. <p>The research proposal that successful applicants shall carry out during their PhD career may possibly differ from the one proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.</p>
SUPPORTING DOCUMENTS	
Personal Statement	The statement shall include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests , that make the applicant suitable for the specific PhD Programme (3000 characters maximum, including spaces).
Reference letter/s	No more than 2 reference letters signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest in the scientific research. Letters shall be uploaded following the procedure detailed in the Call for Applications (Art. 3.2).
Publications	Lists of publications (i.e. monographs, articles on scientific journals), minor publications (conference papers, etc.), abstracts and posters presented during national and international conferences, etc.
Other documents	<ul style="list-style-type: none"> - Postgraduate vocational programmes and/or specialisation programmes relevant to the PhD Programme - Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects - Work activity - Curricular and non-curricular training internships - Documents attesting the applicant's foreign languages proficiency - Periods of study abroad, completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes) - Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.)

Evaluation criteria*

Scores will be expressed in points out of 100, as follows.

1. Qualifications and research proposal evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

Qualifications evaluation	Second cycle degree (Master's) final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	12 points max
	Publications	5 points max
	Other evaluable documents	12 points max
Research proposal evaluation	Scientific value and ground-breaking nature of the proposal	7 points max
	Structure of the proposal	7 points max
	Proposal feasibility	7 points max

2. Oral examination

Minimum score for eligibility: 30 points, Maximum score 50 points

English language proficiency	5 points max
Research proposal presentation	35 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	10 points max

Oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions.

The oral examination is carried out in English.

* Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme > "More information".