

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	DATA SCIENCE AND COMPUTATION
ASSOCIATED PARTNERS <i>Pursuant to art. 3 para 2 lett. b) of the MD n. 226/2021</i>	Istituto Italiano di Tecnologia – IIT INFN
DURATION	3 years
PROGRAMME START DATE	01/11/2023 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Daniele Bonacorsi (daniele.bonacorsi@unibo.it)
PhD POSITIONS	7
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
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 Automobili Lamborghini Spa	Data Science: Big Data ed Artificial Intelligence as innovation accelerators in modern super sports cars
2	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 Automobili Lamborghini Spa	Data Science: Machine Learning and Artificial Intelligence applied to Customers and Super Sport Vehicles Data to enable new business models and elevate the Customer Experience
3	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 CINECA	Data-driven Analysis and Codesign of NextGeneration HPC Systems
4	PhD Scholarship	Funded by the Department of Pharmacy and Biotechnology with funds made available by the Health Ministry, Mission 6, Component 2, Investment 2.1 “Rafforzamento e potenziamento della ricerca biomedica del SSN”, National Recovery and Resilience Plan (NRRP), pproject “PNRRMR1-2022-12376067 “Multiomic strategies to implement the diagnostic workflow of rare diseases”, PI prof. Alfredo Brusco, CUP UO4:J33C2200405000	Computational methods for the study of rare diseases

5	PhD Scholarship	Funded by Istituto Nazionale di Fisica Nucleare - INFN	Computational Physics
6	PhD Scholarship	Funded in the framework of the research training projects "Territorio: Transizione tecnologica, culturale, economica e sociale verso la sostenibilità" - (PR. FSE + 2021/2027– DGR n. 509 del 03/04/2023) - CUP J33C23000610006	Artificial Intelligence and Machine Learning systems to support 6G networks
7	PhD Scholarship	Funded by Istituto Giannina Gaslini	Development and application of artificial intelligence algorithms for the study of rare diseases in the hemato-oncological field

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 01/09/2023**
Oral examination	Date: starting from 05/09/2023 – 9.30 a.m. CEST* Place: In presence, Aula BP-2B, Department of Physics and Astronomy, Viale Bertini Pichat 6/2, Bologna. Remotely, using Microsoft Teams	Available from 12/09/2022**

* 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). Applicants are required to indicate the Weighted Average Mark (WAM) for each degree submitted.
Research proposal	Brief research statement (2 pages maximum in Times New Roman 11, with references including maximum 20 articles)

SUPPORTING DOCUMENTS	
Publications	Lists of publications (i.e. monographs, articles on scientific journals), minor publications (conference papers, book's chapters etc.), abstracts and posters presented during national and international conferences, etc.
Other documents	<ul style="list-style-type: none"> - Postgraduate vocational training programmes relevant to the PhD Programme main research topics - Teaching activity carried out at university level - 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 or non-curricular professional internships - 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	First cycle degree Weighted Average Mark (WAM) - 50% Second cycle degree Weighted Average Mark (WAM) - 50% Or Single cycle degree Weighted Average Mark (WAM) - 100% Or "Vecchio ordinamento" Italian degree (pre-1999 reform) average mark - 100% For degrees awarded abroad – CGPA - 100%	25 points max
	Publications	4 points max
	Postgraduate scholarships, research grants, research activity carried out in Universities, public or private bodies, in the last 5 years and after being awarded a second cycle degree	2 points max
	Other qualifications attesting the applicant's training and skills	3 points max
	Participation in conferences as a speaker or author/co-author of original contributions	1 points max
Research proposal evaluation	Scientific value and ground-breaking nature, structure and feasibility of the proposal	15 points max

2. Oral examination

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

English language proficiency	10 points max
Research proposal presentation	15 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	25 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.

During the oral examination, the applicant's English language proficiency shall be assessed.

The oral examination is carried out in Italian or in English.

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