


**PhD Programme Table - 39th cycle**  
**Call for Applications for the admission to the PhD programmes (39<sup>th</sup> cycle) A.Y. 2023/2024**  
**for scholarships funded by Next Generation EU – NRRP ex M.D. 117/2023 and M.D. 118/2023 and from other sources**



Section “Available Positions and Scholarships” integrated on 19/06/2023	
PROGRAMME’S NAME	<b>DATA SCIENCE AND COMPUTATION</b>
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 ( <a href="mailto:daniele.bonacorsi@unibo.it">daniele.bonacorsi@unibo.it</a> )
PHD POSITIONS	13
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

**Available Positions and Scholarships**

Pos. n.	Financial Support	Description	Positions linked to research topics
1	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department of Computer Science and Engineering	
2	<b>PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration</b>	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	Data analysis techniques for applications in the public administration
3	<b>PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration</b>	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	Data science models and tools for industry and public administration
4	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Fisica Nucleare - INFN	Computational Physics
5	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Fisica Nucleare - INFN	Computational Physics
6	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Fisica Nucleare - INFN	Computational Physics
7	<b>PhD Scholarship</b>	Funded by Fondazione Istituto Italiano di Tecnologia (IIT)	
8	<b>PhD Scholarship</b>	Funded by Fondazione Istituto Italiano di Tecnologia (IIT)	
9	<b>PhD Scholarship</b>	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
10	<b>Research grant</b>	Provided by the Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi" with funds	Graph Processing Methodologies for

		made available by the project Horizon Europe - GraphMassivizer (ref. Dott. Andrea Bartolini) GA101093202 - CUP J33C22004220006. The research grant will have a duration of 12 months, renewable up to 36 months, and gross recipient amount of €19,367 per year	Operational Data Analytics in HPC systems
11	<b>PhD Scholarship</b>	Funded by Istituto Italiano di Tecnologia (IIT)	Genomics and Bioinformatics
12	<b>PhD Scholarship</b>	Funded by Istituto Italiano di Tecnologia (IIT)	Personalized Medicine
13	<b>PhD Scholarship</b>	Funded by Istituto Italiano di Tecnologia (IIT)	Computational Chemistry & Physics

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
<b>Qualifications and research proposal evaluation</b>	Applicants' participation is not required	Available from <b>07/07/2023**</b>
<b>Oral examination</b>	<b>Date:</b> starting from <b>10/07/2023 – 9.30 a.m. CEST*</b> <b>Place:</b> In presence, Aula BP-2B, Department of Physics and Astronomy, Viale Bertini Pichat 6/2, Bologna. Remotely, using Microsoft Teams	Available from <b>21/07/2023**</b>

\* 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	
<b>Identity document</b>	Valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae</b>	No specific CV format is required
<b>Degrees</b>	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.
<b>Research proposal</b>	Brief research statement (2 pages maximum in Times New Roman 11, with references including maximum 20 articles)
SUPPORTING DOCUMENTS	
<b>Publications</b>	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.

<b>Other documents</b>	<ul style="list-style-type: none"> <li>- Postgraduate vocational training programmes relevant to the PhD Programme main research topics</li> <li>- Teaching activity carried out at university level</li> <li>- 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</li> <li>- Work activity</li> <li>- Curricular or non-curricular professional internships</li> <li>- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.)</li> </ul>
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## 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

<b>Qualifications evaluation</b>	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
<b>Research proposal evaluation</b>	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”.