

INFORMATION TECHNOLOGIES			
CYCLE	XXXVIII		
COORDINATOR	Prof. Marco LOCATELLI email: marco.locatelli@unipr.it Department of Engineering and Architecture		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/01/2023		

**RESEARCH TOPICS** (The candidate **MUST mandatorily** indicate one research topic in the form ANNEX A and submit a RESEARCH PROJECT in the relevant field)

- Electronics instrumentation and electrical drives
- Computer systems and automatic control
- Telecommunications and electromagnetic fields

#### **TRAINING OBJECTIVES**

The course aims at educating the future Ph.D.'s so that they will enter the research world with an active role, within both universities and industries.

## ADMISSION REQUIREMENTS

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:

- Laurea specialistica or Laurea magistrale (second cycle master's degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree within the deadline set for enrollment, that is **by 21.12.2022** 

POSITIONS PUT OUT TO COMPETITION		With Scholarship	1
	2	Reserved to holders of scholarship within specific international mobility programs	1

## Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Competition notice)

During the Oral Exam, applicants may express and/or confirm their interest of being assigned a scholarship linked to a specific research topic. The Examination Board will evaluate their eligibility based on specific competences, experience and specific aptitudes of the applicants.

N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholarship financed by the Department of Engineering and Architecture (funds Project HORIZON Europe n. 101080128 "Quantum Internet Alliance (QIA)")	Study and development of compilation and execution management services for distributed quantum computing

	Reserved to HOLDERS OF SCHOLARSHIP WITHIN SPECIFIC INTERNATIONAL MOBILITY PROGRAMS				
N°	N° Agreements/Cooperations/Mobility Programs				
1	Reserved to holders under the Agreement with INES-RUHENGERI, Institute of Applied Sciences, Ruhengeri, Rwanda				



ADMISSION PROCEDURES		Assessment of QUALIFICATIONS: up to 70 points (a minimum score of 30 points shall be required to be admitted to the Oral Exam) ORAL EXAM: up to 50 points Minimum score for ELIGIBILITY: 70/120
Foreign Language	Language the fluency of which shall be assessed during the Oral Exam: <b>ENGLISH</b> .  The evaluation of the knowledge of this language will be oral and will consist of a brief interview on a technical topic (for example a translation of a scientific text).	
CANDIDATES ADMITTED TO THE ODAL TEXT CAN TAKE THE EXAM IN DESENCE		

## CANDIDATES ADMITTED TO THE ORAL TEXT CAN TAKE THE EXAM IN PRESENCE OR REMOTELY IN AUDIO AND VIDEO TELECONFERENCE

(Candidates who intend to take the Oral Exam remotely must submit request, to this purpose, as per the model attached to the competition notice)

### THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

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LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS T	O BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 5 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorun	No specific CV format is required (see art. 4 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		
Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 4 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		
Research Project	Max 10.000 characters, written in English, it will have to focus on an original research topic and structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results, argumentation.  It does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board. However, this project must be prepared after having contacted and consulted one of the research groups related to the PhD course in Information Technologies (information on the research groups and their contacts can be found at <a href="https://dia.unipr.it/en/node/3080">https://dia.unipr.it/en/node/3080</a> ).  Failure to submit the project will result in exclusion from procedure for admission to the course.		
FURTHER QUALIFICATIONS THAT MAY BE ATTACHED TO THE APPLICATION, IF IN POSSESSION OF THE APPLICANT (only qualifications attested by a document drawn up in Italian or in English)			
Scientific Plinlications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.		
Reference Letters	Maximum 2 letters and must be sent directly by the signer to the address e-mail: <a href="marco.locatelli@unipr.it">marco.locatelli@unipr.it</a> (The candidate, therefore, must not upload them through the procedure of the competition online registration)		



# Other experiences (training, work, research, teaching, etc.)

- Periods of study abroad, outside the country of origin (e.g., Erasmus programme or other similar mobility programmes)
- Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)

EVALUATION CRITERIA				
QUALIFICATION			EVALUTATION CRITERIA	POINTS
Curriculum Vitae et studiorum			Evaluation of the marks of the exams and of the master's degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same  It will also be evaluated the congruence of the degree obtained	Up to 25 points
Abstract of the Master's degree thesis		e	with the PhD themes.  It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics	Up to 5 points
Research Project			Points relating to the research project shall be allocated on the basis of the following criteria:  O Scientific value and originality of the proposal: max 10 points O description and structure of the proposal: max 10 points O proposal feasibility: max 10 points	Up to 30 points
Scientific publications			Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.	Up to 5 points
Reference Letters			Evaluation of the judgments reported in the reference letters.	Up to 2 points
Other experiences			Duration evaluation (for scholarships and internships), score (for the GRE test), prestige (for awards)	Up to 3 points
ORAL EXAM			EVALUATION CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		ability entific eneral	<ul> <li>knowledge of the foreign language: max 5 points</li> <li>research project presentation: max 25 points</li> <li>general knowledge of issues connected to the PhD course: max 20 points</li> </ul>	Up to 50 points
SCHEDULE OF THE ADMISSION EXAMS				
ORAL EXAM	DATE	5 Dece	mber 2022	
	TIME	04:00 PM (Italian Time)		
	PLACE	Scienti Parco A	Department of Engineering and Architecture Scientific Engineering Headquarters Parco Area delle Scienze, 181/A – Campus Universitario 43124 PARMA - ITALY	



## **OTHER INFORMATION**

For foreign candidates, the admission examinations may be held in English at the candidate's choice.

For foreign candidates all documents written in a language other than Italian will have to be translated into English, otherwise they will not be evaluated