




INFORMATION TECHNOLOGIES	
<b>CYCLE</b>	<b>XLII</b>
<b>COORDINATOR</b>	Prof. Alberto BONONI email: <a href="mailto:alberto.bononi@unipr.it">alberto.bononi@unipr.it</a> Department of Engineering and Architecture
<b>DURATION</b>	3 years
<b>START DATE</b>	01/11/2026
<b>POSITIONS AVAILABLE</b>	<b>9</b>
<b>ADMISSION PROCEDURES</b>	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY
<b>ADMISSION REQUIREMENTS</b>	Regardless of age and citizenship, applicants may apply if they hold at least one of the following qualifications: <ul style="list-style-type: none"> <li>• a Master's degree (Laurea Magistrale or equivalent);</li> <li>• a degree awarded under the previous Italian system;</li> <li>• an equivalent academic qualification obtained abroad, recognized as suitable for admission to the PhD programme.</li> </ul> Applicants who have not yet graduated may also apply, provided that they obtain their degree by <b>31 October 2026</b> .
<b>TRAINING OBJECTIVES</b>	
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.	
<b>RESEARCH AREAS</b>	
<ul style="list-style-type: none"> <li>• Electronics instrumentation and electrical drives</li> <li>• Computer systems and automatic control</li> <li>• Telecommunications and electromagnetic fields</li> </ul>	

Positions with Scholarship		
N°	<i>Funding entity</i>	<i>Research Topic, if any</i>
2	University of Parma (Ministerial funds, University funds and Cariparma Foundation)	
1	Fully funded by Cariparma Foundation	
Positions with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)		
N°	<i>Funding entity</i>	<i>BOUND RESEARCH TOPIC</i>
1	partially funded by University and Cariparma Foundation funds and co-funded by the Department of Engineering and Architecture (funds Prof. Cova Contract <b>POSE ICO</b> )	Modelling of power electronic devices for the development of new diagnostic techniques applicable to high-power press-pack components (Tristrors, GTO, IGCT)
1	partially funded by University and Cariparma Foundation funds and co-funded by the Department of Engineering and Architecture (funds Prof. Bononi, Project <b>BONONI_A_ECO_RB</b> )	Study of spectral hole burning in doped-fiber optical amplifiers



<b>1</b>	partially funded by University and Cariparma Foundation funds and co-funded by the Food and Drug Department (funds Prof. Giuseppe Di Cesare, Project <b>DICE_G_23_MUR_FORMS_01</b> (FORMS FIS-2023-01129 - Avviso MUR FIS2 D.D. n.1236 del 1-8-2023, CUP D53C25000790001) Prof. Bononi, Project <b>BONONI_A_ECO_RB</b> )	Retargeting and Generation of Human Communicative actions in Social Robots
<b>1</b>	partially funded by University and Cariparma Foundation funds and co-funded by the Company E80 Group S.p.A.	3D Reconstruction of AGV Payload Using an UAV
<b>2</b>	Funded by the Department of Engineering and Architecture (funds Prof. Amoretti, <i>Quantum Internet Alliance - Phase2</i> , - QIA-Phase2, nell'ambito del bando HORIZON-CL4-2025-03-SGA, del programma <i>Horizon Europe</i> – Progetto finanziato dall'Unione Europea, CUP D53C26001130006) 	<ol style="list-style-type: none"> <li>1) Design and simulation analysis of novel quantum internet use cases)</li> <li>2) Development of software tools and APIs for open access quantum internet pilots)</li> </ol>

## ADMISSION ASSESSMENT

**Assessment of QUALIFICATIONS:** up to 70 points  
(a minimum score of 40 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 50 points  
**Minimum score for ELIGIBILITY:** 70/120

## ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit **a motivated REQUEST** as per the model attached to the competition announcement)

**The ORAL test involves the presentation and discussion of the research project** by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

**Foreign Language**  
the fluency of which shall be assessed during the Oral Exam

**ENGLISH**

The entire interview will be in English, and will also serve as a test of your proficiency in this language.

## SCHEDULE OF THE ADMISSION EXAMS

<b>ASSESSMENT OF QUALIFICATIONS</b>	It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam. <b>Publication on the website constitutes official notification. No individual communication will be sent to candidates by email.</b>	
<b>ORAL EXAM</b>	<b>DATE</b>	8 <sup>th</sup> September 2026 (with possible extension in the following days)
	<b>TIME</b>	09:00 am (Italian Time)
	<b>PLACE</b>	MEETING ROOM – Building 2 Department of Engineering and Architecture SCIENTIFIC ENGINEERING HEADQUARTERS Parco Area delle Scienze, 181/A – Campus Universitario 43124 PARMA - ITALY



<b>FURTHER INFORMATION</b>	<p><b>The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. <u>The PhD research topic will be assigned by the Academic Board.</u></b></p> <p><b>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</b></p>
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<b>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</b>		
<b>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</b>		
<b>ANNEX A</b>	(art. 3.2 of the Competition notice)	
<b>Identification Document</b>	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
<b>Curriculum Vitae et studiorum</b>	No specific CV format is required (see art. 3.2 of the Competition notice)	
<b>Abstract of degree thesis</b>	<b>Abstract of the second cycle master's degree thesis.</b> Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)	
<b>Academic Qualifications</b>	<b>Certificates and academic transcript of records for both Bachelor' and Master' degrees</b> containing the following details for each degree held: (art. 3.2 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).	
<b>Research Project</b>	<p>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.</p> <p><u>It does not represent a constraint with respect to the following choice of the doctoral thesis</u>, 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>).</p> <p>It will have to focus on an original research topic (<b>unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project</b>)</p> <p><b>Failure to submit the project will result in exclusion from procedure for admission to the course.</b></p> <p>In accordance with the <a href="#">Guidelines for the responsible use of Artificial Intelligence in education and research</a>, the candidates must explicitly state whether they have used Generative Artificial Intelligence systems in the production of the research proposal attached to their application form, specifying which tools were used and for which parts of the document. During the oral examination, the Admission Board will assess the candidate's full mastery of the content included in the document and their ability to justify the methodological and scientific choices made in the project.</p>	
<b>LIST OF EVALUABLE QUALIFICATIONS</b>		
(only qualifications attested by a document drawn up in Italian or in English)		
<b>Curriculum Vitae et studiorum</b>	<p>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</p> <p>It will also be evaluated the congruence of the degree obtained with the PhD themes.</p>	<b>Up to 25 points</b>



<b>Graduation thesis</b>	It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics	<b>Up to 5 points</b>
<b>Research Project</b>	Points relating to the research project shall be allocated on the basis of the following criteria: <ul style="list-style-type: none"> <li>○ Scientific value and originality of the proposal</li> <li>○ description and structure of the proposal</li> <li>○ proposal feasibility</li> </ul>	<b>Up to 30 points</b>
<b>Scientific Publications</b>	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc. 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.  <i>Only publications of which a copy has been included among the qualifications presented will be evaluated and not any publications cited exclusively in the curriculum and / or in the form of a list.</i>	<b>Up to 5 points</b>
<b>Reference Letters</b>	Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them. <b>It must be sent directly by the signer to the address e-mail: <a href="mailto:alberto.bononi@unipr.it">alberto.bononi@unipr.it</a></b> (The candidate, therefore, must not upload them through the procedure of the competition online registration).	<b>Up to 2 points</b>
<b>Other experiences (training, work, research, teaching, etc.)</b>	Duration evaluation (for scholarships and internships), score (for the GRE test), prestige (for awards)	<b>Up to 3 points</b>
<b>EVALUATION ORAL EXAM</b>		
<b>Interview Program</b>	<b>Evaluation CRITERIA</b>	<b>POINTS</b>
<b>The ORAL EXAM includes the presentation of the research project</b> and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul style="list-style-type: none"> <li>○ knowledge of the foreign language</li> <li>○ research project presentation</li> <li>○ general knowledge of issues connected to the PhD course</li> </ul>	<b>Up to 50 points</b>