



INFORMATION TECHNOLOGIES	
Cycle	XXXVI
Coordinator	Prof. Marco LOCATELLI Department of Engineering and Architecture email: marco.locatelli@unipr.it
Duration	3 years
Starting date of the PhD program	01/11/2020
Participation with positive results in international calls	PROGETTO UE H2020 – MSCA ITN "Innovation Training Networks" ITN-ETN "PHAST" project 860185 <ul style="list-style-type: none">Integrated liquid biopsy for cancer diagnostics via genomic markers detection"
Research Topics	
<ul style="list-style-type: none">Electronics instrumentation and electrical drivesComputer systems and automatic controlTelecommunications 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: <ul style="list-style-type: none">- 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 Undergraduate applicants may also submit applications with the obligation of getting their degree by October 31st 2020 .	
POSITIONS PUT OUT TO COMPETITION	
With Scholarship	10
Without Scholarship	1
Reserved to holders of Research Grant	1
Reserved to employees of companies having an "Industrial Doctorate" arrangement	2
TOTAL	14



Positions with University Scholarship		
N°	Funding entity	Research Topic, if any
3	Scholarship Ministerial funds	---
1	Scholarship University funds	---
1	Scholarship co-funded by Fondazione Cariparma	---
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Call for applications)		
<p>During the Oral Exam, applicants may express their interest in being assigned a scholarship dedicated to a specific research topic to the Examination Board. The Board will express its judgement on eligibility to be assigned the scholarship in consideration of the specific competences, experience and specific aptitudes of the applicants.</p>		
N°	Funding entity	BOUND RESEARCH TOPIC
1	Funded by the Department of Engineering and Architecture	<ul style="list-style-type: none"> • Computer Vision applications for Autonomous Driving
1	Funded by the Department of Engineering and Architecture	<ul style="list-style-type: none"> • Motion planning and coordination of autonomous vehicles in industrial environments
1	Funded by the Department of Engineering and Architecture	<ul style="list-style-type: none"> • Innovative Drone-based Communication and Navigation Systems
1	Funded by the Department of Engineering and Architecture	<ul style="list-style-type: none"> • Design and implementation of 5G V2X
1	Funded by the Department of Engineering and Architecture	<ul style="list-style-type: none"> • Active control of in-vehicle acoustic regions
Position reserved to holders of Research Grant		
N°	Subject area of the research	
1	Computer Technologies for Precision Agriculture	
Position reserved for "Industrial Doctorate" (according to art. 2 paragraph 2, lett. e) of Ministerial Decree n. 45/2013)		
N°	Company/Institution	
1	Reserved to employees of cFederal-Mogul Powertrain Italy S.p.A.	
1	Reserved to employees of Sidel S.p.A.	
ADMISSION PROCEDURES		
<p>Assessment of QUALIFICATIONS: up to 70 points (a minimum score of 30 points shall be required to be admitted to the Oral Exam)</p> <p>ORAL EXAM: up to 50 points</p> <p>Minimum score for ELIGIBILITY: 70/120</p>		
Foreign Language	<p>Language the fluency of which shall be assessed during the Oral Exam: ENGLISH. 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).</p>	
<p>APPLICANTS SHALL TAKE THE EXAM REMOTELY.</p> <p>For further details please refer to the relevant provision laid down in art. 7 of the Call for applications.</p>		
<p>THE INTERVIEW MAY BE HELD ALSO IN ENGLISH</p>		



LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

Mandatory documents to be attached to the on-line application

- **ANNEX A** (art. 5 of the Call for Applications)
- Scanned Copy of a **valid identification document** with photo
- **Curriculum Vitae et studiorum** (art. 4 of the Call for Applications)
- **Abstract of the second cycle master's degree thesis.** Undergraduate applicants may submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)
- **Certificates and academic transcript of records for both Bachelor' and Master' degrees** containing the following details for each degree held: (art. 4 of the Call for Applications):
 - 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)

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)

- **Research Project:** The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focus on an original research topic and it shall be 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;
- **Scientific Publications:** 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: marco.locatelli@unipr.it (The candidate, therefore, must not uploading them through the procedure of the competition online registration);
- **Academic qualifications:** First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD programme
- **Mobility experience abroad** (e.g. Erasmus or similar);
- **Any other document** certifying the applicant's training and abilities (grants, awards, etc.)

EVALUATION CRITERIA

QUALIFICATION	EVALUTATION CRITERIA	POINTS
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark (mandatory qualification) It will also be evaluated the congruence of the degree obtained with the PhD themes.	Up to 25 points
Graduation thesis	Abstract of the master's degree thesis (even if not yet discussed as long as countersigned by the supervisor). (mandatory qualification). It will also be evaluated the consistency of the Master's Degree thesis with the doctoral programme research topics.	Up to 5 points



Research Project	<p>Max 3 pages, either in Italian or English. It must present an original research topic and be structured as follows: introduction of the problem within the scientific framework, relevance of the topic, expected results, motivations.</p> <p>The candidates are strongly invited to browse the research topics of the Ph.D. programme at the web site https://dia.unipr.it/it/node/2833 in order to prepare a research project compatible with them.</p> <p><i>It does not represent a constraint with respect to the following choice of the doctoral thesis</i></p>	Up to 30 points
Scientific publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.	Up to 5 points
Reference Letters	<p>A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities.</p> <p>They must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it</p>	Up to 2 points
Other qualifications	Grants, test GRE, awards, apprenticeships etc	Up to 3 points
ORAL EXAMINATION	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	<ul style="list-style-type: none"> ○ knowledge of foreign languages: max 5 points ○ research project presentation: max 25 points ○ general knowledge of issues connected to the PhD course: max 20 points 	Up to 50 points
SCHEDULE OF THE ADMISSION EXAMS		
ORAL EXAM	DATE	17 September 2020 (with possible extension in the following days)
	TIME	09:00 am (Italian time)
	PLACE	remotely using the Microsoft Teams platform
OTHER INFORMATION	<p>For foreign candidates, the admission examinations may be held in English at the candidate's choice.</p> <p>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</p>	