INFORMATION TECHNOLOGIES	
Cycle	**XXXV**
Coordinator	Prof. Marco LOCATELLI Department of Engineering and Architecture email: marco.locatelli@unipr.it
Duration	3 years
Starting date of the PhD program	01/11/2019

Research Topics

- 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 programs
Undergraduate applicants may also submit applications with the obligation of getting their degree by **October 31st 2019.**

POSITIONS PUT OUT TO COMPETITION	
With Scholarship	7
Without Scholarship	2
Covered by High Intership and Research Agreements	1
TOTAL	**10**

Positions with University Scholarship		
N°	*Funding entity*	*Research Topic, if any*
3	Scholarship Ministerial funds	---
1	Scholarship co-funded by Fondazione Cariparma	---

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Call for applications)		
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.		
N°	***Funding entity***	***BOUND RESEARCH TOPIC***
1	Funded by the Department of Engineering and Architecture	• Computer Vision applications for Autonomous Driving
1	Funded by EMILIA ROMAGNA REGION	• MAN3DP: Mapping And Navigation based on 3D Perception
1	Funded by EMILIA ROMAGNA REGION	• Information Engineering - ICT for Intelligent and Sustainable Cities - Smart City regional coordination 4.0
The assignment of the aforementioned scholarship funded by Emila Romagna Region is subject to the declaration of residence or domicile of the beneficiary in Emilia-Romagna		

Position Covered by High Intership and Research Agreements		
N°	***Company/Institution***	***BOUND RESEARCH TOPIC***
1	Elettric80 S.p.A.	• Advanced perception and sensor fusion techniques applied to navigation of industrial autonomous vehicles

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: **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).

Possibility of videoconference for candidates residing or temporarily abroad (the relevant request shall be submitted using the form attached to the competitive examination announcement)	**YES**
THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	

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):
  o University that granted the degree
  o Type of degree (first cycle/second cycle/single cycle)
  o Name of the degree programme
  o Date of graduation
  o Final mark
  o List of exams and corresponding scores (academic transcript of records)
  o 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 degreee 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 traning 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	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. The candidates are strongly invited to browse the research topics of the Ph.D. programme at the web site phd.dii.unipr.it in order to prepare a research project compatible with them. *It does not represent a constraint with respect to the following choice of the doctoral thesis*	**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	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. They must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it	**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	o knowledge of foreign languages: max 5 points o research project presentation: max 25 points o general knowledge of issues connected to the PhD course: max 20 points	**Up to 50 points**

SCHEDULE OF THE ADMISSION EXAMS		
ORAL EXAM	**DATE**	16 September 2019 (with possible extention to 17 September 2019)
	TIME	09:00 am
	PLACE	Meeting Room – Building 2 - Scientific Branch of Engineering Parco Area delle Scienze, 181/A – 43124 PARMA - ITALY
OTHER INFORMATIONS		It is possible to give the admissione exams in English and *via Skype* under request and under approval of the admission board. It is compulsory to specify the skype account in the curriculum. **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**.