

LAW, SCIENCE AND TECHNOLOGY

Section "Positions and scholarships" integrated on 22/06/2020

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Starting date of the PhD Programme	01/11/2020
Duration	3 calendar years
Language of the PhD Programme	English
Mandatory stay abroad	Yes (12 months)
Associated partners pursuant to art. 2, para 2, lett. c) of the M.D. n. 45/2013	University of Turin

Research topics of the PhD Programme

1. Human Rights and Ethical Principles in new and emerging technologies
2. Ethics and law in Genetics
3. Biotechnology and law
4. Biobanks, DNA and research
5. E-health and Privacy by Design applying AI and Big Data
6. Privacy and eHealth information systems
7. Ethical, Legal and Social Issues in Health
8. Semantic Web and Legal ontologies modelling
9. Legal Analytics and AI for Legal Sources
10. Legal Design techniques for transparency
11. Data Science for Law
12. Digital Humanities and legal sources
13. LegalXML for legal document and knowledge modelling
14. Information Systems for eJustice, eGovernment, and eLegislation
15. Computational models of legal and ethical reasoning
16. Intelligent Information extraction and NLP of legal resources
17. e-Discovery and data mining in Legal domain
18. Legal knowledge extraction using ML
19. Formal Models of Norms and Legal Reasoning Logic-based models of norms and legal knowledge
20. Legal reasoning, including argumentation and reasoning
21. Argumentation systems
22. Game theory as applied to the law
23. Normative Multi-Agent Systems and e-Institutions Regulatory Compliance
24. Automotive Self-driving system and liability
25. Regulation of Robotics and Related Ethical Issues
26. Privacy and Security with New Technology Cybercrime and Computer Forensics
27. Computer forensics and security
28. e-Business and Consumer Law
29. e-Governance and e-Democracy social modelling
30. IPR and New Technology
31. Protection of children online for a safer Internet
32. Digital citizenship and vulnerability of the minor digital identity
33. Blockchain for legal domain
34. eDemocracy: theoretical and technical models
35. Artificial intelligence and democracy in the data society
36. Artificial intelligence and eJustice: legal and technical solutions
37. Big Data governance and law regulation balancing economical and individual rights

PhD positions

Position n.	Financial Support	Description	Positions linked to research subjects
1	PhD Scholarship	Funded by the University of Bologna general budget and co-funded by Centro Alma Human AI	
2	PhD Scholarship	Funded by the Department of Legal Studies and co-funded by Centro Alma Human AI	
3	PhD Scholarship	Funded by the Department of Legal Studies and co-funded by Centro Alma Human AI	
4	PhD Scholarship	Funded by the University of Turin	

5	PhD Scholarship	Funded by the University of Turin	
6	PhD Scholarship	Funded by the University of Turin	
7	PhD Scholarship	Funded by Centro Alma Human AI	AI & ML to support Reg Tech and Wealth Tech innovations
8	Inter-sectoral doctorate	Position reserved for employees of the Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (IRST) s.r.l., IRCCS	
9	PhD Scholarship	Funded by Fondazione Carisbo	

Positions with scholarship: The yearly gross percipient amount of the scholarships is 17.500€.

Positions linked to specific research subjects: Applicants must indicate if they want to access to the position linked to a specific research subject, on the cover page of the research projects. Taking into account the preferences expressed by the applicants and with due consideration of the applicants' skills and expertise, the Admission Board will establish if the applicants may be considered eligible for the allocation of the position linked to a specific research subject. The abovementioned position shall be awarded on the exclusive basis of the sub-ranking list relating to the research topic.

Description of the specific research subject: AI & ML to support Reg Tech and Wealth Tech innovations

The main purpose of the PhD is to identify and develop innovative AI and ML solutions for RegTech (eg algorithms for AML, etc.) and Wealth Tech (eg innovative investment management algorithms, Robo Advisory). In the context of the course, the PhD student will develop the proposed solutions to empirically validate them and provide evidence of the quality /accuracy of the study carried out.

Admission requirements

Please, see art. 2 of the Call for applications.

Mandatory documents to be attached to the application

Please, see art. 3 of the Call for applications.

Further qualifications that may be attached to the application, if in possession of the applicant (only qualifications attested by documents drawn up in Italian, English, French, German and Spanish shall be considered as valid and assessed by the Admission Board)

- No more than 2 reference letters signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest for the scientific research.
Please, note that the above letters cannot be uploaded by applicants. When filling the online application form on <http://studenti.unibo.it>, applicants will be only allowed to provide the email accounts of the requested academic/professional. The latter shall receive an email from the University of Bologna providing for the instructions for uploading. Only letters in pdf format submitted before the expiry date and time of the Call shall be accepted.
- Minimum 1, maximum 3 multi-annual research projects, with special emphasis on the activities to be completed during the first-year course. The research project must meet the following requirements:
 - o It must indicate on the cover page the research topic covered by the research project proposal and for which the applicant is applying (each research project must focus on a single research topic. Projects without the indication of the research topic in the cover page will be assigned zero points);
 - o It cannot exceed 20.000 characters, including spaces and formula possibly used. This figure does not include: the title of project, the outline, references and images (such as graphs, diagrams, tables etc - where present);
 - o It must include: the state of the art; description of the project; expected results; lead-time for implementation; references.

The research projects that successful applicants shall carry out during their doctoral career may possibly differ from the project proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.

- Motivational letter. This must include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests, that make the applicant suitable for the specific PhD Programme (3000 characters maximum, including spaces).
- List of the publications (monographs, articles published on scientific journals).
- List of the minor publications (conference papers, volume's chapters, etc.).
- List of the abstracts and posters presented during national and international conferences, etc.
- Professional Master courses completed in Italy (1st or 2nd level), relevant to the PhD Programme.
- Postgraduate vocational training programmes/specialisation programmes relevant to the PhD Programme.
- Summary of the thesis defended within the framework of Specialization Schools Programme (1000 characters maximum).
- Teaching activity carried out at university level.
- 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.
- Work activity.
- Vocational internships.
- Curricular and non-curricular training and guidance internships.
- Title attesting the knowledge of the English language: TOEFL, IELTS, Cambridge, ESOL or B1.

- Study periods completed by students outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes).
- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc).

Admission exams (art. 4 of the call for applications)

Examination type	Schedule (please, note that applicants shall not receive any communication concerning the exams schedule)	Examination results publication (please, note that applicants shall not receive any communication concerning the publication of results)
Qualifications and research project evaluation	Non-presential.	The results of the qualifications and research project evaluation shall be available online starting from the 18/06/2020 at the page http://studenti.unibo.it (please, select "summary of the requests in progress" - "see detail" and open the pdf file "risultati valutazione titoli e progetto")
Oral examination	Date	The results of the oral examination shall be available at the webpage http://studenti.unibo.it starting from 30/06/2020 (please, select "summary of the requests in progress" - "see detail" and open the pdf file "risultati prova orale")
	Time	
<p>25/06/2020 In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral exam schedule shall be made available at the webpage http://studenti.unibo.it together with the results of the qualifications and research project evaluation</p> <p>9.00 a.m. (local time)</p> <p>Applicants shall take the exam remotely. For further details please refer to the relevant provision laid down in art. 4 of the Call for applications.</p>		

Evaluation criteria

Points will be allocated to applications out of a total of 100 on the basis of the following weighting:

1. Qualifications and research project

In order to be admitted to the oral exam, applicants who are not applying for the PhD scholarships financed by the University of Turin, who are not English native speakers or who have not obtained a Master's degree in English must have:

- attached to the application a title attesting the knowledge of the English language (TOEFL, IELTS, Cambridge or ESOL or B1);
- obtained a minimum score of 30 points in the evaluation of qualifications and research project.

Only qualifications relating to the last 5 years shall be taken into consideration, with the exception of the University Degree (Diploma di laurea). Please, note that qualifications must be consistent with the PhD Programme.

Points relating to qualifications shall be allocated on the basis of the following criteria:

- Graduation final mark (7 points corresponding to 110 with honors, 5 points from 110 to 105; 3 points from 104 to 100; 0 points if the final mark is less than 100). Undergraduates shall be evaluated on the basis of the Weighted Average Mark (WAM): 30 = 7 points; 29 = 5 points; 28 = 3 points; WAM less than 28 = 0 points.
- Motivational letter: max 5 points
- Publications: max 5 points
- Reference letters: max 5 points
- Other qualifications: max 2 points.

Points relating to the research projects shall be allocated on the basis of the following criteria:

- scientific value and ground-breaking nature of the proposal: max 11 points;
- description and structure of the proposal: max 5 points;
- proposal feasibility: max 10 points.

For applicants who have attached to the application more than one research project, the score assigned will be the average of the scores assigned to each project.

2. Oral examination

- Minimum for inclusion in the final ranking list :30 points
- Maximum: 50 points

Oral examination includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of the issues connected to the PhD programme. The oral examination is carried out in English.

Points relating to the oral examination shall be allocated on the basis of the following criteria:

- knowledge of English language: max 5 points
- research project presentation: max 20 points

- general knowledge of issues connected to the PhD programme: max 25 points

Possible evaluation sub-criteria will be available on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information” at the bottom of the page in the section “Notices”.

Final ranking list and enrolment (arts.6 and 7 of the call for applications)

After the publication of the results of the oral exam, the final ranking list will be available on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information” at the bottom of the page in the section “Notices”.

Following the publication of the final ranking list, successful applicants must enrol on <http://studenti.unibo.it> by the deadline indicated on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information”.