



Erasmus  
Mundus



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

Joint International Doctoral Degree in  
**Law, Science and Technology**  
(LAST\_JD)

**HANDBOOK** <sup>for</sup>  
**APPLICANTS**  
**2012/2013**

excellence

scholarships

mobility



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# INTRODUCTION

*Welcome to LAST-JD!*

*"Law, Science and Technology"* is a doctoral program funded by the European Union under the Erasmus Mundus Joint Doctoral scheme. It is structured around an unique collaboration between university-based researchers in the field of ICT Laws, Bioethics & Biolaw and Legal Informatics from different EU countries (Italy, Spain, Lithuania, Luxembourg and Germany). The partnership will foster intercultural dialogue and disseminate the best research in law, science and technology to the wider community.

LAST-JD is a different kind of doctoral program. It is international in structure and requires all students to study in different European and non-European countries. It is also international in conception, because all research projects will have a comparative angle. Most importantly, it is based on collaboration with non-academic institutions which not only contribute to the study program, but also offer work placements to all students.

This handbook is for you, student of this program, and is intended to give you important information and guidance that you will need over the next three years. This handbook presents information about the Joint International doctorate program in "Law, Science and Technology".

This is the first edition of the handbook and while we have tried to anticipate the information that you might need, it will not answer all your questions. So if you have any problems or questions that are not addressed in these pages, please contact the relevant person from the section containing contact details, or any other colleague involved in LAST-JD at any of the universities where you are studying. LAST-JD is a new initiative in doctoral studies, and this handbook is expected to grow in contents and in length over the coming years. If you have any suggestions for additions, modifications, and etc., please let the LAST-JD staff know. Meanwhile, please consult this handbook in conjunction with the program website [www.last-jd.eu](http://www.last-jd.eu), which will be updated regularly. Thanks in advance for your contributions to this ongoing process.

*We wish you all the best as you embark on your journey!*

*Prof.ssa Monica Palmirani*

LAST-JD Coordinator

# THE LAST-JD CONSORTIUM

## THE DEGREE-AWARDING PARTNERS

LAST-JD is a collaboration between six Universities:

- *University of Bologna*
- *University of Turin*
- *Universitat Autònoma de Barcelona*
- *Mykolas Romeris University*
- *University of Luxembourg*
- *University of Tilburg*

These six institutions are the degree-awarding universities and together form the *LAST-JD consortium*.



The LAST-JD doctoral program has been approved by the highest authority within each university (Vice-Chancellor, Rector or President) and all five members have signed a Consortium Agreement, a binding contract between the five partners.

## ASSOCIATE PARTNERS

The Associate Partners of LAST-JD represent professional stakeholders in the program. The involvement of academic and non-academic stakeholders related to the field is central to the purpose of LAST-JD.

First of all, “Law, Science and Technology” is a wide field of study, and the current consortium covers only some of the possible topics. Therefore we have included prospective new partners in the long term from higher education as associate partners, so that they can play a role in teaching activities and offer internships, seminars and co-supervision of Ph.D. thesis.

Secondly, the research centres (public or private non-profit centres) improve the quality of the student research path. They can promote events, courses and conferences with the aim of bringing together humanist and scientific disciplines around a key topic.

Thirdly, we have included industrial partners that will promote the program and host internships. Their main role will be to host candidates for internships and to provide input on topics of interest for the industrial sector. They have also expressed an interest in employing candidates.

### *ASSOCIATED ACADEMIC CENTRES*

- CELLS, Germany
- BIOETHICS AND LAW OBSERVATORY, OBD, Spain
- UNIVERSITY OF PITTSBURGH, INTELLIGNET SYSTEM PROGRAM, Usa
- UNIVERSITY OF RENMIN, INTELLECTUAL PROPERTY ACADEMY, China
- UNIVERSITA' DEGLI STUDI DEL PIEMONTE ORIENTALE, DIPARTIMENTO PER L'IMPRESA E IL TERRITORIO, Italy

### *ASSOCIATED RESEARCH CENTRES*

- EUROPEAN GENETICS FOUNDATION, Italy
- FRAUNHOFER, FOKUS, Germany
- ITTIG, Italy
- INSTITUTO DE INVESTIGACION EN INTELIGENCIA ARTIFICIAL, IIIA, Spain
- NICTA, Australia
- NEXA, Italy

## INDUSTRIAL PARTNERS

Our industrial partners are:

- IBM, Business and Innovation Development sector
- CELI, a high-tech enterprise specialized in automated processing of texts
- NEXEN, a business consultant branch of Gruppo Engineering
- NOMOTIKA, a new spinoff of University of Torino specialising in Legal Informatics
- AUGEOS, a high-tech firm working in risk and compliance management
- ASCAMM, a technology centre
- VICOMTECH, applied research centre for Interactive Computer Graphics and Multimedia
- SUNRISE VALLEY, Science and Technology Park
- S21sec, digital security services

Their main role will be to host candidates for internships and to provide input on what topics are of interest for the industrial sector. They have also expressed an interest in employing candidates.

Each partner plays a different role within the LAST-JD programme. They may contribute to knowledge transfer by offering seminars on an occasional basis, offering short-term research visits or internships at their institutions. Individuals of the collaborating institutions are also invited to attend seminars and lectures organized within the program or join research projects by co-authoring papers or acting as additional advisors. They may collaborate on the development of the curriculum in general, suggesting topics for courses, seminars and thesis. They can help candidates to develop their Doctorate Training and Supervision Plan (DTSP). They may also provide employment opportunities by offering internships to interested candidates.



# THE LAST-JD PROGRAM

The Joint International Doctoral Degree in “Law, Science and Technology” is an interdisciplinary integrated doctorate designed to address new challenges in legal, socio-ethical and technical domains arising from the information society and newly emerging technologies. There are rapidly evolving sectors of Information Technology and Life Sciences that need legal and ethical instruments for avoiding malpractices and for shaping policies and strategies in conducting scientific research and disseminating its results to industry and society. New opportunities are emerging for using Information Technology to face the complexity of law in contemporary society. This requires a set of interdisciplinary competencies that are usually lacking in the graduate market due to a lack of vision, strategy and expertise.

LAST-JD aims to address the problem of fragmentation in this interdisciplinary area, in Europe in particular, by setting up a robust doctoral program that looks at the impact of European cultural identities on ethical, medical and legal debate, as well as at the specifics of European regulations.

## STRUCTURE

The program covers three different research fields:

1. **BIOETHICS AND BIOLAW**, which looks at legal and ethical issues surrounding advancements in biology and medicine;
2. **ICT LAW**, which addresses legal risks and opportunities in ICT,
3. **LEGAL INFORMATICS**, essentially ICT techniques applied and adapted to the legal domain.

This program promotes European excellence, innovation and competitiveness in critical legal and ethical fields such as the regulation of privacy, genomics and bio-banking, e-government, e-health, e-commerce, the right to free speech on the internet and Intellectual Property Rights (IPR) for new technologies. It also furthers the design of new software to support the legal profession, including systems based on explicit representation of laws and regulations in computable form, and the topic of “check compliance” with international, European and national legal frameworks. LAST-JD offers an innovative and up-to-date integrated program that empowers candidates to carry out cutting-edge research in different subjects such as bioethics, law and computer science for topics that require a genuine interdisciplinary approach. Upon completion of the doctorate program, participants will be able to pursue exciting careers as:



- legal professionals in several specific ICT domains, e.g., privacy experts for biobanks or web sites; IPR experts on software, databases, robotic and genetic innovations; media law experts for web marketing companies and broadcasters; experts in patenting nanotechnology;
- government officials able to manage innovative ICT and eGovernment, eJustice, eParliament projects;
- members of ethics committees who analyse ICT innovations and produce policy documents;
- computer forensics experts in government or non-government departments;
- security experts who can advice on privacy and data management topics;
- legal knowledge engineers for modelling normative knowledge in different applications;
- team leaders who can manage research or applicative ICT projects in a holistic way;
- leaders or researchers in specialised laboratories such as medical genetic centres, nanotechnology centres, robotic laboratories, and high tech software houses where Artificial Intelligence is applied.

## MOBILITY

Mobility is a requirement of this program in order to ensure that all students can benefit from the specific expertise available at partner universities in departments of different kinds (law, computer science, bioethics, genetics). Mobility also helps students familiarize themselves with local languages and the different cultural and legal systems of the EU. This is of fundamental importance for students to exploit and to adapt their research to EU law. Depending on the student's research path, they will study at four of the following consortium Universities, five centres of excellence and innovation in law or computer science, namely:

- *University of Bologna*, CIRSFD, Italy
- *University of Turin*, Department of Computer Science and Law Faculty, Italy
- *Universitat Autònoma de Barcelona*, Institute for Law and Technology, Spain
- *Mykolas Romeris University*, Department of e-Business, Lithuania
- *University of Luxembourg*, Department of Computer Science, Luxembourg
- *University of Tilburg*, Institute for Law, Technology and Society (TILT)



In addition, associate partners provide expertise on specific topics, seminars, internships and co-supervision of candidates. Extra-European associate partners ensure a link with a leading high technologies and research centres as well as an international perspective. Industrial partners host internships, creating opportunities for applied research as well as opening up links that may lead to future employment for the Ph.D.s.

In Bologna, doctoral candidate will take courses that aim to develop analytical skills and provide methodological insights. In Turin they will study courses at basic level. In Barcelona, Luxembourg, Vilnius and Hannover, they will take advanced courses, most of which will be held by international scholars. These courses will be aligned as much as possible with the doctoral candidates' fields of specialization. During the last year of the program, the doctoral candidates will benefit from close supervision of their thesis and will present their work at dedicated seminars. In the last year of the program, candidates will move to one of the partner universities where they will work hand in hand with their thesis supervisor and will have the participate in the research community.

The use of a dedicated social networking website as well as tools for long distance collaboration such as Skype or Adobe Connect will be supported and promoted so as to reduce the risk that the supervisor and/or the co-supervisor fail to coordinate their work on the doctoral candidate's thesis.

At all stages of the Ph.D. Program, the universities will support the mobility of candidates, drawing from their extensive experience in hosting foreign students.

Doctoral candidates holding an Erasmus Mundus fellowship must:

- perform their training/research periods in at least two European universities situated in at least two European countries represented in the consortium; for Category B fellowship holders, two of the countries visited during the EMJD activities must be different from the country in which the doctoral candidate has obtained his/her last university degree;
- spend most of the doctorate period in the European universities represented in the consortium or among the associated partners. However, if the EMJD consortium includes third-country full and/or associated partners:

Category A fellowship holders can spend a training/research/fieldwork period of a maximum duration of one semester (or 6 months, cumulative or consecutive) in these countries, provided the country is different from the student's country of origin; periods in excess of this duration may not be covered by the EMJD fellowship.

Category B fellowship holders can spend up to one year (cumulative or consecutive) of their doctorate activities in these countries; periods in excess of this duration may not be covered by the EMJD fellowship.

## ADMISSION TO LAST-JD

All applicants must be able to demonstrate a capacity to carry out independent research, to follow a mobility track useful for improving the research path and to have adequate training and ability to pursue the proposed course of study.

### ADMISSION CRITERIA

#### - *Degree*

Admission to the program is *open* to applicants who have received:

→ a 2nd Level Master Degree (**120 ECTS** after **180 ECTS** of bachelor)

*or*

→ a Single Cycle Degree (minimal **300 ECTS**)

*or*

→ a comparable university degree (Second Cycle qualification), required by the partner universities for **admission to Ph.D studies**.



The title must be obtained at the deadline indicated in the *call for application*. Will not be taken into consideration positions still open even if the title were to be achieved by the beginning of the PhD program.

#### - *Language*

The candidate shall speak **English**.

For those who studied in countries where the English is the **official language**, is required an official letter stating that your university studies were undertaken in English.

If the candidate is **non-native English** speaker, is required a recognized international English test Certificate obtained in the last three years before the deadline indicated in the *call for application*.

The English Language Proficiency is required according to the following criteria:

IELTS min: 6.5; TOEFL min: 220 CBT, 550 PBT, 80 iBT; TOEIC min: 780, Cambridge min. C.A.E, Trinity min. GESE and ISE Intermediate, GRE min. Verbal Reasoning. 480, Quantitative Reasoning 600, Analytical Writing 4.0.

### **- Category**

*Erasmus Mundus* LAST-JD Program consists of two categories of candidates:

#### **\* Category A**

Doctoral candidates who come from a country other than “a Member State of the European Union, an EEA-EFTA State (i.e. Iceland, Norway and Lichtenstein), and who are not residents nor have carried out their main activity (studies, work, etc.) for more than a total of 12 months over the last five years in one of these countries.

#### **\*Category B**

Any doctoral candidate who do not fulfil the Category A criteria defined above.

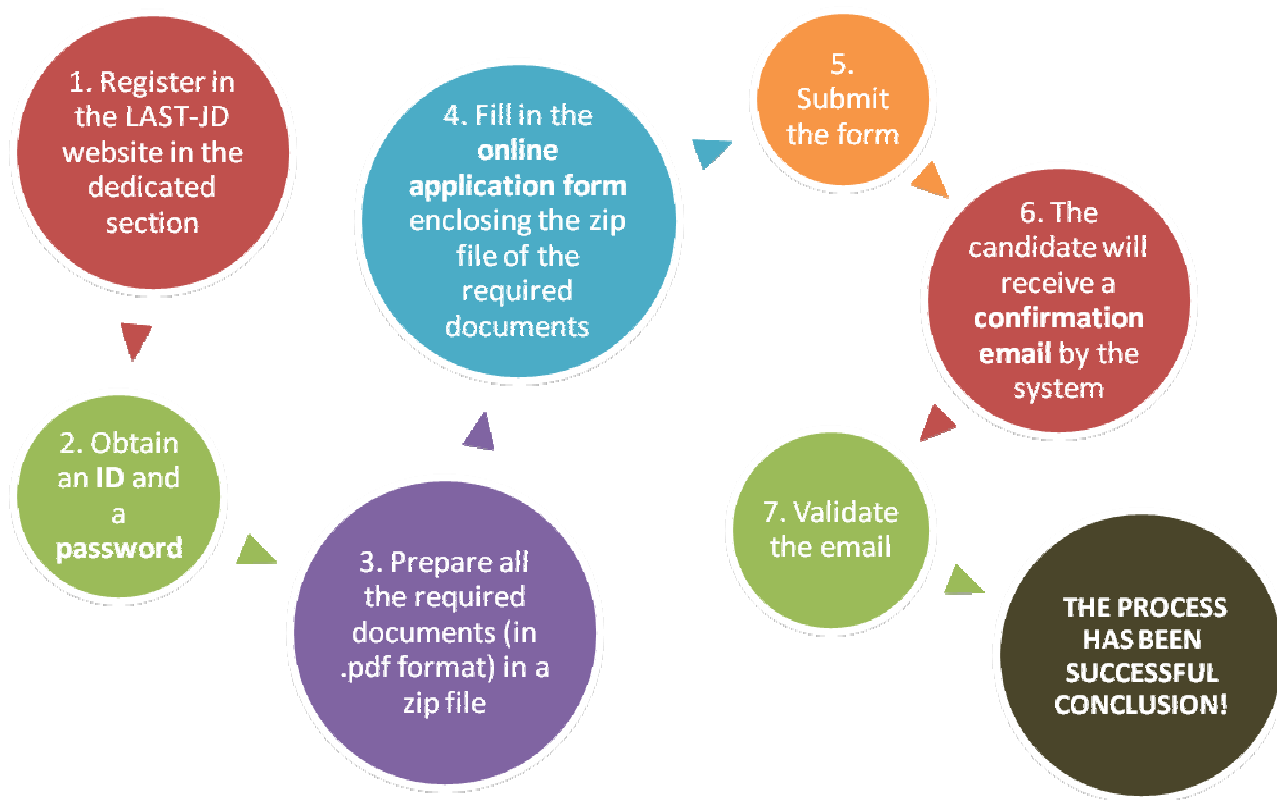
A candidate must decide on his/her own to which category, A or B, he/she belongs according to the information in his/her possession. A candidate will self-certify that he/she is entitled to be in a certain category rather than in another in the application form and when he/she will apply for the fellowship. If a candidate has two citizenships and hence could belong to any of the two categories, he/she must choose one category.

☒ It is very important to choose the category in the correct way. The application can not be changed or repeated, and will not be taken into consideration those applications that do not meet the criteria for the category selected by the candidate.

## APPLICATION PROCESS

The application process is ONLINE and it's divided into several stages. The candidate must:

1. **Register** in the LAST-JD website in the dedicated section
2. Obtain an **ID** and a **password**.
3. Prepare all the required documents (in .pdf format) in a zip file.
4. Fill in the **online application form** enclosing the zip file of the required documents.
5. Submit the form.
6. The candidate will receive a **confirmation email** by the system.
7. Validate the confirmation email.



✓ A fundamental step for the successful conclusion of the application process is the preparation of all the required documents. The “*Call for application*”, usually published in October/November, contains all the useful details so as to help the future candidates to prepare all the documents correctly.

## FELLOWSHIPS

There are excellent fellowship opportunities for students accepted to the LAST-JD. These fellowships are given to the highest ranked PhD candidates for the duration of the Ph.D. program (three years). The offer of scholarships depends on the category to which the candidate belongs.

\* **Category A fellowships** can be awarded to doctoral candidates, selected by LAST-JD consortium, who come from a country other than a Member State of the European Union, an EEA-EFTA State (i.e. Iceland, Norway and Lichtenstein) and who are not residents nor have carried out their main activity (studies, work, etc.) for more than a total of 12 months over the last five years in one of these countries.

✓ The only exception to this rule applies to doctoral candidates who have previously received an **Erasmus Mundus Masters Fellowship** in order to follow an **EMMC**. This exception has to be proved by documentations by the candidate.

\* **Category B fellowships** can be awarded to any doctoral candidate selected by LAST-JD consortium, who does not fulfil the Category A criteria defined above.

Each year the number of available fellowships for each category will differ and the exact number of fellowships foreseen for specific year will be announced together with the *call for application*.

The candidate who wants to apply for fellowship will have to indicate it in the application form: the candidate will have to define clearly the category he/she belongs to. If a candidate will think he/she does not satisfy the formal requirements to belong to category A, but yet has previously received an **Erasmus Mundus Masters Fellowship** in order to follow an **EMMC** (Erasmus Mundus Master Course), he/she will have to provide for all the documentation concerning this Erasmus Mundus master fellowship, which will have to include the official letter from EACEA or the invitation letter from the University/Universities involved in the EMMC.

Only candidates who have been accepted to the LAST-JD Program are eligible for a fellowship.

The procedure of assignment of fellowships takes into account the criteria of geographical and gender balance, and respects equal opportunities: this is why no more than two students from a single country may receive an LAST-JD fellowship. There is also a criterion related to the research areas of LAST-JD program that are “Bioethics and Biolaws”, “ICT Laws” and “Legal Informatics”.

The competition for fellowships is very high, and so we strongly encourage the candidates to apply for other funding (external funding) through candidates' own local, national or regional institutions, and also via fellowship/grant-finder web sites, such as

*Fellowshipportal.eu*

*Fellowships-Links.com*

*www.fellowshipnet.info*

and others.

## SELECTION PROCESS

Selection process is carried out by the LAST-JD Selection Committee and is based on candidate's qualifications and an interview with him/her. The overall goal of this process is to establish candidate's aptitude for scientific research.

### - *Call for application*

*Call for application* will be active in October/November and will remain open until January/February. Hence the candidates will have enough time to get (translate and certify) all the necessary documents, ask for recommendation letters, write the research project and get ready to carry out the whole admission procedure correctly. We highly recommend to read carefully the *call for application*, to be sure to meet all the requirements and to meet them not later than the deadline foreseen by the call itself, to prepare all the necessary documents, to meet the deadlines (the documents sent by regular mail have to reach LAST-JD program within the deadline established in the call for application: the date on the postmark will not be taken into account).

### - *The Application form*

The Application Form must be filled in **correctly, entirely** and must be **signed**.

The Applicants have to choose first of all:

- The **CATEGORY** (A or B) chosen on the basis of the requirements contained in the "call for application"

- The **RESEARCH AREA**

- **CITIZENSHIP** and **GENDER**

The Application Form must include, under the candidate's responsibility and at the **risk of exclusion** from the public selection, the following information:

- The candidate's full name, date and place of birth, citizenship, place of permanent address, currently address, contact telephone number, e-mail address and Skype id. It is important to fill in the field related to *permanent address, currently address* and *citizenship* correctly so as to ensure the correct choice of the category;
- The candidate's preferred area of the doctoral course, as defined in the "Call for Application". The candidate shall rank four (4) of the LAST-JD research areas chosen, ordering them from 1 (the most preferred area) to 4 (the least preferred area) in his/her application form. In the call for application (annex) will be list some preferred topics and general topics.
- The type of degree held, date, grade and name of the last awarding university, including the list of exams taken, translated into English.
- Other information required for the purpose of the selection.
- The request for a scholarship.

Application shall also include some required documents, that are:

- Curriculum Vitae, dated and signed, in European format.
- Degree certificates translated in English (first diploma, bachelor, second level Master degree). For the admission to LAST-JD is important to check if the title allows the applicant to enrol in a Ph.D program.
- The Draft research project (no more than 5000 words)
- A Motivation letter stating why you would like to attend the LAST-JD program and how this program will help you in your work and career. This letter should only contain your personal motivation for attending this program, your professional goals, your personal career objectives and how this program will help you achieve them.
- Recommendation letter, better two.
- English test result as indicated in the "call for application".
- Eventually, the request for the fellowship (with the documentations concerning).
- Other qualifications, related to the program.



→ Photo (for the identification).

→ Copy of a valid passport.

The Application form (filled in and signed ) and all the documents must be in English.

If the candidate fills in the application form online, the latter form must be filled where the space for the data is foreseen. The candidate must prepare a zip file with all the required documents in .pdf format and must be uploaded on the website.

The original documents (Application form, filled in and signed, and all the documents required) can be also send by regular mail in a single envelope, and should reach the following address within the deadline:

**LAST-JD**  
**CIRSFID, University of Bologna**  
**Via Galliera 3,**  
**Bologna, 40121**  
**Italy**

☒ **ATTENTION – DEADLINE:** the deadline refers to the date of the physical delivery of your documentation to the address indicated above (we will not take into account the date on the postmark). Please, bear in mind this notice and send your documentation as early as to ensure its arrival within the deadline. We will not consider the applications which will arrive after the deadline.

- ***Admission of the application. The eligibility check***

All the applications will be opened after the deadline.

Application content and evaluation criteria are:

- the **completeness** of the application and attachments (whether the application form is attached, whether it is completed fully, partially or not completed at all, whether the application form is signed, whether all the required documents are attached, etc.)
- the presence of **academic title(s)** for application to Ph.D. program;
- whether the application arrived in **time**.

### - ***Valuating title and application***

Once the LAST\_JD Selection Committee will label the application as admissible, the next phase of evaluation process is that of academic title(s) - and other documents - evaluation: the maximum score is 100, while the minimum is 75:

- Title evaluation: max 100, threshold: 75:
- Academic potential (class rank, GPA, etc...): max. 30;
- Relevance of Master-level degree to the research themes of the LAST-JD programme: max.10;
- Quality of home institutions having awarded the Bachelor-level degree and/or Master-level degree (according to the ranking list published on the web site <http://www.webometrics.info>): max. 5;
- Other aspects of curriculum vitae (multiple degree, work experience, professional qualification, autonomy in the research, etc.): max. 5;
- English level: acceptable/non-acceptable;
- Motivation letter: max. 10;
- Preferred research topic and Draft research project: max 30;
- Letters of recommendation: max. 10;

Candidates who will receive less than 75 will not be admitted to the next phase, the oral interview.

### - ***Interview***

Interview will be held by the LAST-JD Selection Committee: the maximum score is 100, the minimum is 75.

In order to sustain the interview, candidates will be asked to exhibit the same identity document attached to the application or other valid identification document in which they result clearly identifiable. The interview will be carried out with the help of Skype and the candidate will have to provide for it at his/her premises.

During the interview, the LAST-JD Selection Committee will evaluate candidate's level of preparation in the field that he/she will indicate as her research field, his/her capacity to carry out an integrated research project, and to stand up to the mobility program adapted to his/her research.

The LAST-JD Selection Committee will also pay attention to candidate's English fluency.

### **- *Results***

During the whole selection process, The LAST-JD Selection Committee will make public the partial results for the candidates. First of all the Committee will publish online the list of eligible and not eligible candidates; then - once the evaluation of academic title(s) and application form will be over - the Committee will publish online the list of candidates selected for the interview (the details of the interview will be also published online).

At the end of the selection process, the final lists of candidates admitted to the LAST-JD Program will be published online.

The final lists will include:

- Main list for category A and main list for category B: the candidates listed here are admitted to the LAST-JD Program according to the number of available fellowships;
- Reserve list for category A and reserve list for Category B;
- List of candidates without fellowships;
- List of not selected candidates.

Each candidate will be contacted personally about the outcome of his/her participation in the selection process to LAST-JD Program.

### **- *Appeal procedure***

LAST-JD Program invites all the candidates to follow the admission procedure via website ([www.last-jd.eu](http://www.last-jd.eu)) and to check his/her email for any official communications.

Once the results will be published online and the candidate will receive an official communication about the outcome of his/her application, he/she will have 24 hours to appeal to the Committee sending it via email to [last-jd@unibo.it](mailto:last-jd@unibo.it) specifying in the email's subject "Requesting an appeal relating to the admission's procedure".

Once received the request of appeal, the LAST-JD Selection Committee, on behalf of the LAST-JD Consortium, will send the outcome of the appeal and the reasons for rejecting/accepting it within 2 working days.

- ***Final procedure***

The main and reserve lists will be send to EACEA for the final approval.

EACEA will check the admission's procedure, its results and the applications for fellowships and only then will communicate to LAST-JD Selection Committee its official decision. Only once the official approval will reach the LAST-JD Consortium, the latter will communicate the outcomes of their applications to the candidates. LAST-JD will send by email (or by regular mail if the candidate applies for such a mode) an official Acceptance Letter. In case the student is awarded an Erasmus Mundus Scholarship, he/she will receive both the Acceptance Letter from the first host University (University of Bologna) and the Scholarship Selection Letter from EACEA. On receiving the original of the Letter of Acceptance is it possibly to apply for the visa.

The candidates will be asked to formally accept the position via fax; the candidates will have to declare whether they accept the fellowship they asked for.

## RESEARCH THEMES

LAST-JD program is structured in three alternative tracks:

- **ICT LAW**
- **BIOETHICS AND BIOLAW**
- **LEGAL INFORMATICS**

It is important for a better organization of the selection and for a right classification of the characteristic of the researcher, to choose an area of research. Below a list of generic topics divided by research area.

### ***Bioethics and Biolaw***

The course in Bioethics and Biolaw requires the study of very different components including Ethics, Philosophy, Applied Ethics, Medicine, Law and Biolaw. Key topic areas are:

- ***Genetics.*** Recent developments in medical genetics will be explored from the perspective of genetic counselling and analysing the scientific, technical, ethical, and legal implications involved in applying this technology. Ethical and psychological issues will be considered in genetic counselling and in controversial clinical cases: the focus is on communication with the family, genetic testing, risk perception and assessment, prenatal, predictive, and pre-symptomatic diagnostics. The main legal issues are (a) genetic privacy, concerned with protecting genetic data and identifying measures for ensuring such protection to an adequate degree, and (b) intellectual property, with a focus on the patentability of biotechnological inventions. In particular, students are required to understand International & European regulations on biotechnology.
- ***Nanotechnology and nanomedicine.*** This is a technology in which molecule-sized medical devices are produced and used. We look at the benefits and risks, with a focus on the ethical and the legal issues involved. We consider the impact of nanotechnologies on diagnostic, therapeutic, and regenerative medicine, paying particular attention to tools and strategies for risk management and analysis, as well as the precautionary principles and the way in which these new technologies are perceived by society at large.

- ***Environmental ethics.*** Ethics concerned with the environment, the human species, and relations among humans.
- ***Internet, ethic and human rights.*** The first United Nations World Summit on the Information Society (WSIS), held in December 2003, recognized the connections between information technology and human rights with a Declaration of Principles. Critical issues are the digital divide (which produces a knowledge divide, a social divide, and an economic divide), freedoms to expression, right to privacy.

BIOETHICS&BIOLAW
Human Rights and Ethical Principles in New and Emerging Technologies.
Doctor-patient Relationships: confidentiality, informed consent, research and experimentation
Public Health Ethics and Policymaking
Global Health Justice
Human Assisted Reproductive Technologies
End-of-life Decision Making: legal and ethical issues
Ethics and Law in Genetics: genetic testing, screening, gene therapy and personalized medicine
Biotechnology and Patent Law: stem cells and gene patents
Biobanks, DNA and Research
E-health and Privacy by Design
Private-public Interactions in Health Care Provision
Ethical, Legal and Social Issues in Genetic Counselling

## ***ICT Law***

The course in ICT Law aims at investigating the following areas of interest: Private ICT Law; Public ICT Law; Constitutional ICT Law; International ICT Law; Labour ICT Law; Cyber Law; Historical-epistemological, philosophical-theoretical-legal and logical foundations of Legal Informatics. In the area of the ICT Law we study the following topics:

- ***Intellectual Property Rights (IPR) in the Information Society.*** Software, databases, multimedia, opensource software and open standards, Digital Rights Management (DRM)

and technological protection measures, protection of users' rights, Internet and new media (electronic publishing, linking, framing, P2P), domain names.

- ***Electronic signatures and documents.*** Use of cryptography-based electronic signatures for identification and confidentiality purposes, the legal and evidentiary force of electronic documents, electronic and optical archiving, electronic invoicing.
- ***E-commerce.*** Provision of information-society services, validity of online contracts, consumer protection, e-contract integrity and authenticity, contracts made by software agents, electronic procurement, providers' liability.
- ***Privacy and data protection.*** Processing of personal data and protection of the privacy rights of natural and legal persons, data processing made through electronic means, security aspects and technological measures, Privacy Enhancing Technologies.
- ***Legal aspects involving intelligent agents and multi-agent systems.*** Legal nature of intelligent agents and multiagent systems, civil and criminal liability of agents in e-commerce, knowledge management and business networks, use of information collected by agents, negotiations and e-contracts made through agents.
- ***Dispute resolution and management in virtual environments.*** Alternative management and resolution of disputes supported by ICT-based interactions, and online dispute resolution.
- ***Security and trust in open systems.*** Violation and rationalisation of trust, impact of security and trust on e-commerce and ICT-based interactions, ICT solutions to security and trust management.
- ***Virtual Organisations.*** Technical and legal aspects in ICT-enabled collaboration between enterprises for the achievement of specific business goals.
- ***Virtual and electronic institutions.*** Adoption of regulative and constitutive norms and legal concepts (such as obligation, permission, and prohibition) for governing agent interactions in multiagent systems and their encapsulation in infrastructural abstractions.



- ***Social network and the Web 2.0.*** New ethical and legal issues arising from social networks that involve IPR issues regarding multimedia material, privacy issues from user profiling, security issues concerning the usage by third parties of information in social networks, human right issues when the information affects fundamental human rights.
- ***Cybercrime.*** Understanding criminal acts committed with the help of computers requires knowledge of the technology as well as specific areas of criminal law on topics such as: hacking, spreading of viruses, (virtual) child pornography, and other illegal content on the internet. Procedural criminal law deals with various investigative powers, from placing wiretaps and authorizing officers to search for data on computer systems and networks and find digital traces. We will discuss the current state of the law as well as future developments, looking for gaps in the legislation and ethical dilemmas.

ICT&LAW
Privacy and Security with New Technology (including biobanks, genetic data, eHealth, identity management)
Cybercrime and Computer Forensics
Cybersecurity and Cyberwarfare
e-Business and Consumer Law
e-Governance and e-Democracy Social Modelling
IPR and New Technology (Digital Right Management, nanotechnologies, open data and open source licences, creative commons, multimedia)
Alternative Dispute Resolution and On-line Dispute Resolution
Cloud Computing Modelling and Regulation
A Comparative Perspective on ICT Law
Constitutional Crowd Sourcing
Management of Geopolitical Social Crises
Regulation of Robotics and Related Ethical Issues
Contracts and ICT
Protection of Children Online
Technology Regulation: fundamental issues

## ***Legal Informatics***

The Legal Informatics track will cover AI and Law, Legislative Informatics, Legal Information Systems, Computer Forensics. Key topic areas are:

- ***eGovernment.*** The group considers eGovernment holistically, not as a temporary phenomenon, but as a modus operandi that involves ICT and public law; reengineering processes in the public administration; document management and legal knowledge management and communication; identification tools; eLearning for the public administration (TRIAS project<sup>1</sup>, offering a European Master in eGovernment); eHealth, XML standards for managing the I-Care project<sup>2</sup> Electronic Medicine Records; analysing the legal aspects of telemedicine, and Information Systems for the health.
- ***ICT Legal Sources Modelling.*** Students will acquire a strong background in modelling legal resources with legal XML standards and Semantic Web techniques for managing and updating the law; developing legal information systems in different environments and different languages, with different legal traditions and using different standard techniques (DTD or XML-schema), using a legal drafting editor capable of managing the entire lifecycle of the legislation process; eLegislation, eParliament and eParticipation for modelling the document management flow; creating legal ontologies and Semantic Web models; XML-isation project in Parliament (European Parliament, Pan-African Parliament, Latin American Parliament); XML legal knowledge modelling of legislation and judgments for legal reasoning.
- ***eLearning.*** eLearning theory and platforms for eCourses in ICT and Law; Web 2.0 for Law eLearning tools such as blogs, wikis, YouTube, etc.
- ***Computer forensics.*** The usage of computers in everyday life means there is more digital evidence available which can be used in civil and criminal cases. Europe does not have a long tradition of this science, but in the USA, well-known protocols have been defined and used in court. Europe needs to improve knowledge of appropriate techniques and legal procedures.

- **Logic formalisation of norms and legal reasoning.** Logic formalisation of norms is a traditional topic in the AI and Law community. Legal reasoning tools include argumentation, defeasible logic, deontic logic are only some topics to work in this field.
- **Legal information systems.** Courts, parliaments and public administrations work more efficiently if they use legal information systems for justice, government, and healthcare modernization.

LEGAL INFORMATICS AND AI&LAW
Semantic Web and Legal Ontologies Modelling
Information Retrieval and Database Techniques in the Legal Domain
Legal Document Modelling and Representation including Open Data, XML, and Standardization
Computer Forensics
Information Systems for eJustice, eGovernment, and eLegislation
Computational Models of Legal and Ethical Reasoning including Educational Applications
Intelligent Information Extraction and NLP of Legal Resources
e-Discovery and Data Mining in the Legal Domain
Formal Models of Norms and Legal Reasoning
Logic-based Models of Norms and Legal Knowledge (e.g. for case law)
Legal Reasoning, including Argumentation and Reasoning about Evidence
Argumentation and Argumentation Systems
Game Theory as Applied to the Law
Normative Multi-Agent Systems and e-Institutions
Regulatory Compliance
Robot and Intelligent System ethics

Every year, will be published in the “*call for application*” a list of preferred research topics. If the candidates chose one of these instead of the generic topics, this choice will be taken into account during the selection phase.