### PhD programme “Regionale Pegaso” joint with the University of Pisa, University of Firenze and University of Siena

#### President:
Prof. Paolo Ferragina

#### Department:
Department of Computer Science - Largo B. Pontecorvo 3 56127 Pisa

#### Admission requirements:
All Master’s degrees

#### Outcome of the selection procedure:
Ranking of candidates for the whole PhD programme

<table>
<thead>
<tr>
<th>PhD Positions Available</th>
<th>Positions available 17</th>
<th>of which 13 with grant</th>
<th>4 without grant</th>
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<tbody>
<tr>
<td><strong>Supernumerary positions</strong></td>
<td>Pursuant to Article 6 of the competition announcement, candidates who are eligible for the competition to be admitted in supernumerary must forward, to the email address <a href="mailto:concorsodottorato@unipi.it">concorsodottorato@unipi.it</a>, Annex C after having held the interview but no later than three days thereafter on the date of the latter.</td>
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5 grants financed by Università di Pisa

2 grants financed by Regione Toscana “Pegaso — Year 2019 POR FSE 2014/20” (with 6 months stay abroad)

1 grant financed by Regione Toscana “Pegaso — Year 2019 POR FSE 2014/20” ("International" with 12 months stay abroad)

1 grant financed by Regione Toscana “Pegaso — Year 2019 POR FSE 2014/20” on subject “Design of algorithms, models, methodologies, languages, tools and software platforms for the crawling, management, mining and visualization of big data, coming from several sources, such as health, biomed, logistics, Web, Social Networks and Industry 4.0” without 6 months stay abroad, but it is mandatory to carry out an experience of at least 3 months of training / research in an applicative context, such as a company, a public research institution, another public institution (non-university)

1 grant financed by Regione Toscana “Pegaso — Year 2019 POR FSE 2014/20” on subject “Design of algorithms,
models, methodologies, languages, tools and software platforms for cyber-security, including technologies for 2D/3D recognition” without 6 months stay abroad, but it is mandatory to carry out an experience of at least 3 months of training / research in an applicative context, such as a company, a public research institution, another public institution (non-university)

<table>
<thead>
<tr>
<th>Grant No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Grant financed by ISTI FAEDO on subject “Design and development of highly usable human/robot interaction”</td>
</tr>
<tr>
<td>1</td>
<td>Grant financed by ISTI FAEDO on the areas of interest to the ISTI FAEDO of the CNR <a href="http://www.isti.cnr.it">http://www.isti.cnr.it</a>;</td>
</tr>
<tr>
<td>1</td>
<td>Grant financed by IIT</td>
</tr>
</tbody>
</table>

### Selection criteria:

#### Curriculum

The curriculum, signed and accompanied by a copy of a valid identification document, must be uploaded **only** during the application process. The curriculum must provide information about the candidate’s academic education as well as his/her professional and research experience. **The candidate must attach any document useful for the assessment of his/her curriculum.**

Candidates are required to upload their documents: transcripts of the exams, the Master's thesis or some of its parts. In particular the summary, publications etc, either in Italian or in English; the list of any other training and/or research experiences in Italy or abroad; prizes or awards. It is also advisable to highlight research, training and/or professional experiences related to the topic Industry 4.0, Big Data e/o Cyber-security.

The candidate who intends to submit to the evaluation of the Selection Board any document related to his/her academic records held at the University of Pisa, must make an explicit request of acquisition “through office” in the aforementioned curriculum.

**During the online application process**, the candidate is also required to indicate, the names and contacts (email address and phone number) of 2 professor or scholar/researcher available to provide and upload references **by 5 June 2019**, following the instructions directly provided via e-mail to the professor or scholar/researcher.

**Minimum grade: 30 out of 40**

The list of candidates who are invited to take an interview will be published at [http://dottorato.unipi.it/](http://dottorato.unipi.it/) “Admissions” should take place at least five days before the interview.

### Interview

The interview will assess the candidate’s knowledge, her/his aptitude for research, openness to academic experiences in Italy and abroad, and an interest in scientific deepening.

During the interview, the Selection Boards verify the knowledge of the English language. Furthermore, the candidates must certify this knowledge (comparable at least to the level B2) before acceptance.
of the PhD grant "Pegaso" through:
1. internationally recognized certification (e.g. Cambridge English Language Assessment, TOEFL, IELTS) at the B2 level of the Common European Framework for Languages (cfr. http://www.cli.unipi.it/files/equipollenze/inglese_equip?lang=it);
2. certification of a Language Centre of the University of any Italian or foreign university;
3. certification issued by the University's Language Centre (CLI) of Pisa provides dedicated sessions of language certification that will be published at http://dottorato.unipi.it/index.php/it/.

**Minimum grade:** 40 out of 60

The test schedule (where applicable) and venue, will be published the 30 of May 2019 at http://dottorato.unipi.it/ - "Admission and enrolment".

**Web conference:** YES
Candidates wishing to attend the videoconference are required to upload the form in attachment D, during online procedure. The Selection Boards will examine any request received after 29 May 2019 and will evaluate their acceptance, also considering the required technical times for the videoconference interview organisation.

<table>
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<tr>
<th>Guidelines for the presentation of the PhD Research project</th>
<th>Required: YES</th>
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<td>• to be illustrated at the interview</td>
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</table>

The candidate must upload the research project during the online application process **by the deadline of the announcement**. In order to highlight the capacity to carry out the project, the research project will discuss it during the interview.

The research project must indicate the research areas of interest of the candidate and must include a brief description of the scientific activities carried out and the reasons why you are going to access the PhD course. The candidate is asked to point out any scientific and/or application links with the theme "Industry 4.0", Big Data e/o Cyber-security.

The description of the research project should not be longer than 4000 characters (excluding spaces).

**INFO:**

**Overview and objectives of the PhD course:**
The PhD in Computer Science aims to train researchers and innovators in Information Science and Technology. For this purpose, PhD students are involved since the beginning in the research activities carried out in the proponent Departments, they are invited to attend monographic courses and international PhD schools, as well as to spend study and research periods in academic and industrial laboratories and research centers in Italy and abroad. Specific attention will be devoted in the PhD courses and research activities onto the main multidisciplinary areas in which ICT is involved and
contributes, and for which the PhD in Computer Science already has successfully trained researchers and established strong relationships for research projects, internships and job placements with prestigious ICT companies worldwide in the area of BioInformatics and Smart Health, Big Data and Web, Artificial Intelligence and Machine Learning, Cyber-Security, Smart Communities and Industria 4.0, ecc. At the end of the PhD, students will be able to contribute to the definition of new models and theories for computation and information processing; new systems, algorithms and platforms for the organization, storage (compressed) and processing-mining-searching of (Big) data; new languages and tools to support emerging programming paradigms, such as the ones in the area of Artificial Intelligence, Machine Learning Big Data, ICT infrastructures (e.g. Datacenter, Internet of Things, Cloud and Fog computing, ecc.), Cyber Security, etc. Additionally, they will be able to exploit the opportunities offered by the ICT in techno-social networks; promote and master the interdisciplinary dialogue; analyze complex systems at scientific, biological and social level; understand and guide the impact of ICT innovations in these areas. Eventually our PhD students will have the opportunity to attend the PhD+ course on "Research Valorization, Innovation and Entrepreneurial mindset", launched by UniPI since 2011, teaching and training students on those soft skills with seminars on business modeling and planning, IP protection and valorization, communication tools and techniques, fund raising from public and private bodies, start-up creation, and so on.

Website:
(https://www.di.unipi.it/phd)