

# INDUSTRIAL DOCTORAL PROGRAMME

## IN

### SMART COMPUTING

*Coordinator prof. Paolo Frasconi*



**GIOVANI SI**



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE



Regione Toscana



*Pegaso Scholarships 2018 are financed with the resources of the POR FSE TOSCANA 2014/2020 in the frame of the Tuscany Region Project "Giovani SI" ([www.giovanisi.it](http://www.giovanisi.it)) for the autonomy of young people*

#### TECHNOLOGICAL AREA

#### ADMINISTRATIVE OFFICE

Department of Information Engineering

#### Regione Toscana Pegaso Project 2018

University of Florence  
University of Pisa  
University of Siena

#### INDUSTRIAL AGREEMENTS

KKT s.r.l. – Florence  
Subsidiary of Fleetmatics Italia s.r.l – (a Verizon Company)

#### CURRICULA

NO

#### POSITIONS AVAILABLE: 15 + 1 reserved for employees of KKT s.r.l.

Positions with scholarship: 12

Positions without Scholarship: 3\*

\* standard ranking only

#### Ranking List for STANDARD POSITIONS scholarships available: 7

4 – University Florence  
3 – Regione Toscana **Pegaso Scholarships 2018**

#### Ranking List for SPECIFIC RESEARCH TOPICS SCHOLARSHIPS positions available: 5

3 – Regione Toscana **Pegaso Scholarships 2018**

1. "Natural Language Processing by Deep Learning"
2. "Network Monitoring and Management in the Future Internet"
3. "Machine Learning Methods for Quantitative Evaluation"

1 – University of Florence – **Fondo Pluriennale Piano Strategico 2018**  
"Analysis and interpretation of 4D microscopy data"

1 – Fondazione Bruno Kessler (FBK)  
"Building Quality Event-centric Knowledge Graphs from Text"

#### INDUSTRIAL DOCTORAL PROGRAMME – RESERVED POSITION: 1

1 – position reserved for employees of KKT s.r.l.

#### STUDY/RESEARCH PERIODS ABROAD

YES – for Pegaso Scholarships 2018 only

#### MANDATORY PERIOD REQUIRED

6 months

<p><b>DOCUMENTS TO BE ENCLOSED WITH THE APPLICATION</b></p>	<p><b>MANDATORY DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>• Copy of the Identification Document</li> <li>• <a href="#">Replacement Declaration Form</a></li> <li>• Curriculum vitae</li> <li>• Transcript of records of M.Sc. degree</li> <li>• Title of the M.Sc. thesis</li> <li>• Abstract of the M.Sc. thesis</li> <li>• Research project</li> </ul> <p><b>OPTIONAL DOCUMENTS</b></p> <ul style="list-style-type: none"> <li>• List of publications</li> <li>• PDF copy or a chapter of the M.Sc. thesis (if available)</li> </ul>
<p><b>REFERENCE LETTERS</b></p>	<p>A section is provided in the online application to specify the e-mail addresses of two professors/researchers willing to provide information about candidates training path and activities performed within a scientific field related to the Ph.D. course.</p>
<p><b>RESEARCH PROJECT</b></p>	<p>The research proposal should be written in English and should be submitted as a PDF file. The length may not exceed 12,000 characters. The research proposal should describe a three years project having a high potential for a novel scientific contribution in any area related to smart computing. In the proposal, briefly summarize the state-of-the-art, identify one or more open problems, explain why solving these open problems is significant, and describe a research plan, possibly addressing the associated risk factors and strategies for dealing with insuccess.</p> <p>The research proposal needs not to be directly related to one of the reserved research topics (see below) for which you may want to apply. In facts, this proposal will not be even used to bound you to do research in any particular area, it just serves the purpose of assessing your technical writing skills, your ability to envision sensible long-term research goals, and your ability to plan and evaluate research activities.</p>
<p><b>MODALITY OF EVALUATION</b></p>	<ul style="list-style-type: none"> <li>• <b>Evaluation of curriculum vitae, research project</b>, publications and other qualification documents</li> <li>• <b>Interview</b> as detailed in the section below <b>“Evaluation Marks”</b></li> </ul>
<p><b>LANGUAGE FOR THE EXAMINATION</b></p>	<p><b>English</b> for all applicants</p>
<p><b>SKYPE INTERVIEW</b></p>	<p><b>YES</b> – possible for residents abroad only</p>
<p><b>FURTHER INFORMATION ABOUT EXAMINATIONS</b></p>	<p>Note on applications for the “specific research topic scholarships”:</p> <p>A subset of the available positions will be reserved to the specific research topics listed below. To be considered for one of these positions, please select one or more of them during the application process. Since we strive to fill as many of these positions as possible, by applying for one or more reserved positions you may significantly increase your chances of being accepted in the program. You may apply for as many reserved positions as you wish. During the interview, there will be one additional test for each reserved positions you</p>

have applied for. Passing the test is a necessary (but not sufficient) condition for accessing the corresponding reserved position. Failing one or more of these tests will not reduce your chances of being accepted for the remaining (non-reserved) positions.

There are additional thematic positions (not reserved) that do not require a specific test.

Topics are listed at <http://smartcomputing.unifi.it/procedures.html#positions>

EVALUATION MARKS	parameter	minimum score	maximum score
	Curriculum vitae, publications, qualification documents	27/120	40/120
	Research proposal	27/120	40/120
	<b>Applicants scoring at least 54/120 on the above parameters will be shortlisted for interview</b>		
	Interview (including a discussion of the research proposal) in English language	26/120	40/120
	<b>Candidates with an overall score below 80/120 cannot be admitted to the program</b>		

- THEMATICS**
- Artificial Intelligence
  - Computer Networking
  - Computer Vision
  - Computer Architectures
  - Conversational Agents
  - Data Analysis and Social Network Data Analysis
  - Fog/Edge computing in IoT
  - Embedded and Cyber-physical Systems
  - Machine Learning
  - Neuroinformatics
  - Pervasive Sensing & Computing
  - Quantitative evaluation and verification of concurrent systems
  - Security and Privacy in Smart Systems
  - Software architectures and engineering methods

Further information available at the following web page:  
<http://smartcomputing.unifi.it/>

EXAMINATION SCHEDULE			
	DATE	TIME	PLACE
<b>INTERVIEW</b>	3 August 2018	9:30 a.m.	Department of Information Engineering Via Santa Marta,3 – Florence Meeting Room

The list of candidates admitted to the interview and the final ranking will be published online at:  
<https://www.unifi.it/p11361.html>