

## **DOCTORAL PROGRAMME**

## IN

## **MATHEMATICS, COMPUTER SCIENCE, STATISTICS**

Coordinator prof. Paolo Salani

| SCIENTIFIC AREA   |   |  |  |
|---|---|--|--|
| ADMINISTRATIVE OFFICE   | Department of Mathematics and Computer Science "U. Dini"  |  |  |
| PARTNERS INSTITUTIONS   | University of Perugia<br>Istituto Nazionale di Alta Matematica "F.Severi" (INDAM)   |  |  |
| CURRICULA   | <ol> <li>Mathematics</li> <li>Computer Science</li> <li>Statistics</li> </ol>   |  |  |
|   | POSITIONS AVAILABLE: 14 Positions with Scholarship: 12 Positions without Scholarship: 2* * standard ranking only  |  |  |
| RANKING LIST FOR<br>STANDARD POSITIONS<br>SCHOLARSHIPS<br>AVAILABLE: 8                | <ul> <li>3 – University of Florence</li> <li>3 – University of Perugia</li> <li>2 – Istituto Nazionale di Alta Matematica "F Severi" (INDAM)</li> </ul>   |  |  |
| RANKING LIST FOR SPECIFIC<br>RESEARCH TOPICS<br>SCHOLARSHIPS POSITION<br>AVAILABLE: 1 | Department of Statistics, Computer Science, Applications "G. Parenti" - Progetto Ministeriale "Dipartimenti di Eccellenza 2018-2022" Thematic: "Data Science" The Ph.D. student will be involved in the development of innovative statistical learning methods, and computationally efficient algorithms, for the analysis of high-dimensional data and data with complex structures to support research in substantive fields.   |  |  |
| RANKING LIST FOR<br>RESERVED POSITIONS<br>SCHOLARSHIP<br>AVAILABLE: 3                 | University of Florence These positions are reserved to applicants who have obtained in a foreign University the degree required to be admitted to the Ph.D courses. The reserved positions not allocated will be made available as standard positions in the main ranking list.   |  |  |
| STUDY/RESEARCH PERIODS<br>ABROAD  | Not mandatory   |  |  |
| DOCUMENTS REQUIRED FOR THE ADMISSION (under penalty of exclusion)                     | <ul> <li>Copy of the Identification Document</li> <li>Replacement Declaration Form self-declaration for:         <ul> <li>Italian Degree required for the access</li> <li>transcript of records with marks (for those candidates whose degrees will be awarded within the 31<sup>st</sup> October 2019)</li> <li>acknowledgment of compliance for any other qualification documents enclosed with the application</li> </ul> </li> </ul> <li>Foreign Degree required for the access (those candidates whose degrees will be awarded within the 31<sup>st</sup> October 2019 shall enclose the list of the examinations completed with marks)</li> |  |  |

| DOCUMENTS REQUIRED FOR<br>THE EVALUATION | <ul> <li>MANDATORY         <ul> <li>Curriculum vitae</li> <li>Research Project</li> </ul> </li> <li>OPTIONAL         <ul> <li>List of publications</li> <li>Any other qualification document</li> </ul> </li> </ul>   |  |
|--|---|--|
| REFERENCE LETTERS                        | 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.   |  |
| RESEARCH PROJECT                         | The research project, consisting of 5,000 characters maximum, may be discussed and evaluated during the interview, and will contribute to the evaluation of the aptness of the applicant for research.  |  |
| MODALITY OF EVALUATION                   | STANDARD POSITIONS AND SPECIFIC POSITION  • Written examination  • Interview along with the evaluation of the curriculum, of the research project and of the scientific qualifications documents  RESERVED POSITIONS  • Evaluation of the curriculum, of the research project, and of the scientific qualifications documents  • Interview  As detailed in the section below "Evaluation Marks"   |  |
| OTHER LANGUAGE FOR THE EXAMINATIONS      | English   |  |
| SKYPE INTERVIEW                          | YES — only for candidates not resident in Italy who apply for reserved positions  |  |
| FURTHER INFORMATION                      | The written examination is a comprehensive exam that assesses the knowledge of basic concepts of the involved disciplines. Examples previous written examinations can be found at:  https://www.dimai.unifi.it/vp-140-ammissione-al-dottorato.html  The interview is aimed to evaluate the basic preparation and the research potential of the candidate and to discuss the research project, curriculur and other possible qualifications. In the case of applicants for the "Da Science" position, the interview will have an additional part regarding the specific topic. |  |

| STANDARD POSITIONS AND SPECIFIC POSITION               |         |         |  |  |
|--|---------|---------|--|--|
| parameter  | minimum | maximum |  |  |
| parameter  | score   | score   |  |  |
| Written examination                                    | 40/60   | 60/60   |  |  |
| Interview: curriculum vitae, scientific                |         |         |  |  |
| qualification documents, research                      | 40/60   | 60/60   |  |  |
| project  |         |         |  |  |
| Eligibility is achieved with a minimum score of 80/120 |         |         |  |  |

## **EVALUATION MARKS**

| RESERVED POSITIONS   |                  |                  |  |  |
|--|------------------|------------------|--|--|
| parameter  | minimum<br>score | maximum<br>score |  |  |
| Curriculum vitae, scientific qualification documents, research project | 40/60            | 60/60            |  |  |
| Interview  | 40/60            | 60/60            |  |  |
| Eligibility is achieved with a minimum score of 80/120                 |                  |                  |  |  |

Further information available at the following web page: https://www.dimai.unifi.it/vp-26-dottorati.html

| EXAMINATIONS SCHEDULE                    |                            |                                   |  |  |  |  |  |
|--|----------------------------|-----------------------------------|--|--|--|--|--|
|  | DATE                       | TIME                              | PLACE  |  |  |  |  |
| STANDARD POSITIONS AND SPECIFIC POSITION |                            |                                   |  |  |  |  |  |
| WRITTEN EXAMINATION                      | 8 <sup>th</sup> July 2019  | 12:30 p.m.                        | Department of Mathematics and Computer Science   |  |  |  |  |
| INTERVIEW                                | 10 <sup>th</sup> July 2019 | 09:00 a.m.                        | Viale Morgagni 67/A – Florence   |  |  |  |  |
| RESERVED POSITIONS                       |                            |                                   |  |  |  |  |  |
| INTERVIEW                                | 11 <sup>th</sup> July 2019 | from 09:00 a.m.<br>(italian time) | Department of Mathematics and<br>Computer Science<br>Viale Morgagni 67/A – Florence<br>(or by Skype) |  |  |  |  |

The list of candidates admitted to the written examination will be published at the following web page: <a href="https://www.unifi.it/p11549.html">https://www.unifi.it/p11549.html</a>

The list of candidates admitted to the interview will be published at the following web page: <a href="https://www.dimai.unifi.it/vp-26-dottorati.html">https://www.dimai.unifi.it/vp-26-dottorati.html</a>

The final ranking will be published online at the following web page: <a href="https://www.unifi.it/p11549.html">https://www.unifi.it/p11549.html</a>