

PROFILE

PHD PROGRAMME IN COMPUTER SCIENCE AND MATHEMATICS

Subject area CUN: 01 Mathematics and Computer Science, 09 Industrial and information Engineering

Coordinator: Prof. Maria Francesca COSTABILE

Administrative office: Dipartimento di Informatica – Università di Bari Aldo Moro

Duration: 3 years

Number of available positions: 9

- 5 positions with scholarships funded by the University; 2 of these have a priority for graduates from foreign Universities.
- 1 position with scholarship funded by InnovaPuglia S.p.A
- 1 position with a “higher education apprenticeship contract” for graduates under the age of 30, for Curriculum 1 Computer Science. The contract is established with Expriva S.p.A, an enterprise whose main location is in Molfetta (BA) and aims at developing research on the following topic:

C1. Human Behavior Understanding Through Computer Vision

The research will investigate on real-time automatic recognition of human behaviours through video cameras available on the market. Based on the human vision system, the research will analyse the state of the art of the available computer vision and machine learning methods from both theoretical and experimental perspective. Various problems are related to human behaviour recognition: a) detection of the portion of the scene of interest for the phenomenon to understand; b) extraction of information about the object/person of interest; c) classification of the behaviour. In particular, the research will focus on improving algorithms for detecting the motion of specific objects and persons, as well as on vision-based and speech-based algorithms able to detect human emotions and engagement, in order to improve human behaviour understanding.

- 1 position for employees of the company FINCONS S.p.A., for Curriculum 1 Computer Science, according to the Italian law “articolo 11 del D.M. n. 45/13”, for carrying out research on the topic **Usable Security**;
- 1 position without scholarship.

Curricula:

1. Computer Science (Scientific Subject Code: INF/01, ING-INF/05)
2. Mathematics (Scientific Subject Code: MAT/03, MAT/05, MAT/06, MAT/08)

Even if the PhD programme is organized in the two curricula mentioned above, the admission procedure is only one and the available positions will be assigned according to the ranking obtained by the applicants, until all positions are covered and by taking into account the reserved positions. Thus, the applicants do not have to provide their choice of the curriculum in the attachment A), which is an integral part of this call for applications.

Admission procedure (ordinary positions, including the one with apprenticeship contracts and the one for employees of the company FINCONS S.p.A.)

Applicants will be evaluated on the basis of: a) the documents presented with the application, b) a written exam, c) an oral exam that will also include the assessment of the applicant’s knowledge of English. The

admission to the oral exam depends on the positive result of the written exam.

Foreign applicants for ordinary positions can choose Italian or English language for their admission exam.

For what concerns the applicants to the position with an apprenticeship contract, during the oral exam the Committee will also ask questions about the research topics described in C1 above, with the aim of assessing the eligibility to this position. Applicants interested in this position with an apprenticeship contract have to fill and sign Attachment B) and attach it to the application.

For what concerns the applicants to the position sponsored by FINCONS S.p.A., during the oral exam the Committee will also ask questions about the research topic **Usable Security**, with the aim of assessing the eligibility to this position. Applicants interested in this position have to fill and sign Attachment A) and attach it to the application.

Admission exam dates, time and place:

Written exam: 9th September 2019 at 03:00 p.m., *Room Hume – Dipartimento di Informatica – 2nd floor*

Oral exam: 11th September 2019 at 12:00 p.m., *Room Consiglio – Dipartimento di Informatica – 7th floor*

Address: Dipartimento di Informatica – Università di Bari Aldo Moro – Via Orabona, 4 – 70 125 Bari, Italy

Positions reserved to graduates at foreign Universities Applicants will be evaluated on the basis of: a) the documents presented with the application, b) an interview in which, among other things, they will discuss a research project (written in English, max 500 words) presented with the application. The interview, which will be in English or Italian depending on the applicant's choice, can be conducted via Skype and the applicant has to provide a Skype ID in the application.

The results of the interview will be combined with the evaluation of the application documents to create a ranking. In case the 2 scholarships will not be assigned to graduates at foreign Universities, they will be awarded to the next students in the ranking of ordinary positions.

Interview date: 10th September 2019; the exact time will be communicated via email to each applicant.

For more information, see <http://dottorato.di.uniba.it>