

## TITLE

Research and development of novel algorithms, methods and software tools for the integration and analysis of data produced by high throughput biological experiments.

## DESCRIPTION

We seek a talented Ph.D. student to take part to the newly established computational biology and bioinformatics activities at the High Performance Computing and Networking Institute. The appointed individual will focus on the development of novel algorithms and methodologies, and their implementation in computational pipelines, for the integration and analysis of genomics data. The focus is on statistical machine learning and data mining techniques for the analysis of biological experiments, particularly on next-generation sequencing data (DNA-seq, RNA-seq, ChIP-seq, etc). The student will integrate the developed pipelines in a software support tool for more accurate diagnosis and personalised treatment plans. He/she will also be engaged in collaborative research projects within the Institute and beyond, potentially resulting in high profile publications. He/she will be encouraged to develop his/her own research interests in areas related to the Institute activities.

## SELECTION CRITERIA

### Eligibility Criteria

- Academic degree: Applicants shall have a master degree in applied **mathematics, statistics, computer science or related disciplines**, corresponding to the second level of studies
- Mobility rule: There will be no nationality restrictions. Applicants can be from any Country. However, according to the mobility rule, at the time of the application deadline researchers should not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the reference date. Compulsory national service and/or short stays such as holidays will not be taken into account.
- Research experience: Applicants shall, at the time of the application deadline, be in the first four years (full-time equivalent research experience) of their research careers and not yet awarded a doctoral degree.

Full-Time Equivalent (FTE) Research Experience will be determined from the date when a researcher obtained the degree which would formally entitle him or her to embark on a doctorate, either in the country in which the degree was obtained or in Italy, irrespective of whether or not a doctorate is or was ever envisaged.

### Evaluation Criteria

Step 1 -Evaluation of documentation provided by the candidate: a) Academic record and training b) Research activities c) CV/motivation letter; d) Level of English; e) Reference letters

Step 2 -Interview : a) Scientific knowledge in the field of interest; b) Research experience in the field of interest c) Motivation d) English proficiency.