

**RESEARCH PROGRAM NO. 38**

**The assessment criteria for the qualifications and the interview will be affixed:** on 2.3.2020 at 9.00 in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

**The results of the qualification assessment as well as the names of the candidates admitted to the interview will be affixed:** on 2.3.2020 at 12.00 in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

**The interview will be held:** on 2.3.2020 at 13.00 in Dipartimento di Matematica (DIMA), Via Dodecaneso 35, Genova.

**Such a notice is equivalent to notification to all intents and purposes. All the candidates, who have not received notification of their exclusion, must sit for the exam, without prior notice, at the examination centre.**

*As regards candidates, who are not resident or domiciled in Italy, and those, who are resident or habitually domiciled at a distance of more than 300 Km from the selection centre, the interview, if requested, can also be held by electronic means (SKYPE video conference call) promptly contacting Prof. Michele Piana via the email address: [piana@dima.unige.it](mailto:piana@dima.unige.it)*

**Scientific coordinator:** Prof. Michele PIANA

**NO. 1 research fellowship - Duration 1 year – Annual pre-tax amount: € 23.250,00**

**Title:** Computational methods for data analysis in biomedicine.

**Description:** This project is focuses on the development of computational methods for data and image analysis in biomedicine. The kind of techniques considered rely on the theory of ill-posed inverse problems, the automatic identification of correlations, the development of pattern recognition and machine learning methods. Applications are concerned with biochemical data, time series and images (both morphological and functional) with specific reference to the oncological setting. This position is part of the COENZYM project, funded by the Italian Associazione per la Ricerca sul Cancro and aimed at the assessment of the impact of chemotherapy on the patients' cellular metabolism

**Scientific disciplinary sector:** MAT/08 ANALISI NUMERICA

**Place:** Dipartimento di Matematica (DIMA)

**Required degree:**

Dottorato di ricerca in Matematica, Matematica Applicata, Fisica.

**Subjects of the interview:**

The interview will mainly assess the candidate's knowledge about regularization methods for the numerical solutions of inverse problems and machine learning problems, with focus on image reconstruction and image processing.

The candidate will need to prove his/her knowledge of the english language.