CIC bioGUNE
CENTER FOR COOPERATIVE RESEARCH IN BIOSCIENCES

[bcam]
basque center for applied mathematics

PhD Position in Mathematical Modelling for Cancer Research

- **Tracking development of resistance to anti-cancer therapy through mathematical modeling**

  The goal of the project is to derive an efficient mathematical approach for tracking development of resistance to anti-cancer therapy using genomic information. The proposed project includes statistical analysis of the available real data; building a predictive model and implementing it in the in-house software package; simulations and post-processing of the simulation data. The work will be done in close collaboration with mathematicians at biologists at:

  CIC bioGUNE: https://www.cicbiogune.es/research/groups

  [bcam]: http://www.bcamath.org/en/research/lines/MSLMS

- **PIs in charge**

  María del Mar Vivanco, Principal Investigator at CIC bioGUNE
  https://www.cicbiogune.es/people/mdmvivanco

  Elena Akhmatskaya, Ikerbasque Professor at [bcam]
  http://www.bcamath.org/en/people/eakhmatskaya

- **Salary and conditions**

  The gross annual salary of the fellowship will be 18.000 €.

  It will be your own responsibility to make your yearly income declaration at the Bizkaia Treasury Agency.

  There is a moving allowance for those researchers that come from a research institution outside the Basque.

  Country from EUR 1,000 to EUR 2,000 gross.

  Free access to the Public Health System in Spain is provided to all employees.

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- **Duration**

  3 years.

- **Deadline**

  March 29th 2019 14:00 CET (UTC+1)

- **How to apply**

  The selected candidate must have applied before the application deadline online at the webpage http://www.bcamath.org/en/research/job

  The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their scientific profile.

  The candidate will take part in a collaborative Project between **[bcam]** http://www.bcamath.org/en and **CIC bioGUNE** https://www.cicbiogune.es/

  His/her workload will be evenly distributed between both research centres and he/she will be supervised by E. Akhmatskaya (**[bcam]**) and M. dM. Vivanco (**CIC bioGUNE**).

  Required documents:

  - ✓ CV
  - ✓ Letter of interest
  - ✓ 2 recommendation letters

- **Requirements**

  Bachelor's or master's degree in Applied

  - ✓ Mathematics
  - ✓ Computational Statistics
  - ✓ Machine
  - ✓ Learning
  - ✓ Data Science
  - ✓ Computational Biology
  - ✓ Computational Physics or
  - ✓ Computer Sciences.

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- **Skills and track-record**
  - ✓ Applicants must have an excellent academic record.
  - ✓ Good communication and interpersonal skills.
  - ✓ Ability to effectively communicate and present research ideas to researchers with different backgrounds (mathematicians and bioscientists).
  - ✓ Ability to clearly present and publish research outcomes in spoken (talks) and written (papers) form.
  - ✓ Good command of spoken and written English.

- **Scientific Profile**

  The preferred candidate will have:
  - ✓ Basic knowledge of Mathematics, Statistics, Model Building, Machine Learning.
  - ✓ Interest in mathematical modelling and simulations.
  - ✓ Interest in bioinformatics and cancer biology.
  - ✓ Good programming skills (C/C++/R/Julia).

- **Scientific Profile**

  Based on the provided application documents of each candidate, the evaluation committee will evaluate qualitatively: the adaption of the previous training and career to the profile offered, the recommendation letters, the main results achieved (papers, proceedings, etc.), the statement of past and proposed future research and other merits; taking in account the alignment of these items to the topic offered.

- **Incorporation**

  May 2019 or as soon as possible thereafter.

EUSKO JAURLARITZA
GOBIERNO VASCO
HEZKUNTZA, HIZKUNTZA POLITIKA ETA KULTURA SAILA
DEPARTAMENTO DE EDUCACIÓN, POLÍTICA LINGÜÍSTICA Y CULTURA

EXCELENCIA SEVERO OCHOA