

TRAINING PROGRAMME IN COLLABORATIVE MATHEMATICAL RESEARCH



La Caixa Foundation, in the frame of the agreement between *La Caixa* and the Catalan Government, has approved funding of the training programme on *Collaborative Mathematics* presented by the Centre de Recerca Matemàtica (CRM).

Programme description

The aim of the programme is to encourage interdisciplinary and collaborative mathematical research in the better represented interfaces of the Catalan research system, both in universities and in other research centers. In the framework of this programme, collaborative research means *"mathematical research located at an interface which purpose is the development, analysis and simulation of contextualized models, with an interest beyond mathematics and including interaction with experimentalists"*.

The funding of this programme by *La Caixa* allows the CRM to offer a number of doctoral and postdoctoral contracts over a period of five years starting January 2014. Each contract will be assigned to a training project on a specific topic defined jointly by a researcher in mathematics as director and a co-director from another discipline.

The programme will make public announcements of these contracts during the first three years.

Proposed projects

The collaborative projects proposed in this programme will be prepared for each call by CRM research groups jointly with researchers from other institutions. The CRM groups and its projects can be consulted through the following links:

Complex Systems. [Website](#). [Projects](#).
Computational and Mathematical Biology. [Website](#). [Projects](#).
Computational Neuroscience. [Website](#). [Projects](#).
Industrial Mathematics. [Website](#). [Projects](#).
Mathematical Epidemiology. [Website](#). [Projects](#).

These projects have been updated on September 20, 2016.

Eligibility criteria

The programme is open to applicants of all nationalities.

Doctoral students:

- A basic requirement to be admitted to the programme is fulfilling the admission criteria of a doctoral programme in mathematics of some Catalan university when beginning the doctoral project. For more information see [here](#).
- The candidates must have outstanding academic records and a good level of English.

- Students that are still enrolled in bachelor or master studies can apply to the CRM call for research stays in preparation for this programme. For more information see [here](#).

Postdoctoral researchers:

- Candidates must hold a PhD at the time of joining the programme.

Contract conditions

Doctoral students:

- Doctoral students in this programme will become members of the CRM Doctoral Training Unit (see [here](#)).
- The doctoral students who pass the selection process will join the programme for 39 months divided in three periods. This includes an initial contract of 15 months, whose gross salary will be €18.000 euros, renewable for a second and a third year with a gross salary of €18.000 euros per year.
- Contract renewal is subject to the positive reports emitted by the supervisor.
- The first three months of the initial period are intended to facilitate a smooth entry into the CRM research environment. During this time students will be on probation working on the project of their choice. At the end of the first three months a definitive project and supervisor will be assigned.
- The CRM will pay the tuition fees for a doctoral programme in mathematics at a Catalan university. Students will be given a mobility allowance for activities related to their training.

Postdoctoral researchers:

- The postdoctoral researcher contract will be renewable annually up to three years, subject to a positive evaluation of the supervisor. The gross salary will be €25,000 per year.
- Postdocs will be given a mobility allowance for activities related to their training.

Selection process

Admission to the programme is on a competitive basis. Applications will be screened initially by the CRM executive committee to ensure that they are complete and eligible. All eligible applications will be reviewed by a selection committee, which will evaluate candidates based on the following criteria:

- The candidate's academic merit and potential for successful research while at the CRM, as evidenced by their qualifications and grades, and previous research experience.
- The information given by the candidate on the application form, and in particular the motivation letter.

The selection committee will consider all the applications and select a number of candidates to be interviewed by potential supervisors and discuss their research interests. Shortlisted candidates will be selected by the Selection Committee on the basis of this personal interview.

Candidates may be allocated to a research group different from that selected by the applicant at the discretion of the Selection Committee. The final selection of candidates

requires approval by the CRM scientific committee.

Applicants will be notified of the Selection Committee's final decision by e-mail. The selection committee will also propose a reserve list as well. Successful candidates are requested to inform the CRM whether they accept or decline the offer within 1 week after being notified.

Governance and administration

The implementation of this programme will be monitored by an ad hoc Governing Committee consisting of representatives of Fundació "La Caixa" and the CRM, who will meet at least once a year.

The CRM administration will provide the necessary general support for the deployment of the programme (diffusion, contracts, interviews, organization,...).

The CRM administration will also provide administrative support in visa formalities, lodging, travel, etc. to selected applicants, if required.