

Phd Position in Quantum Mathematics

Job Offer

Topics:

The Basque Center for Applied Mathematics is launching one PhD position of 4 years, to work in quantum many-body theory and related mathematical areas.

We offer a PhD position to work on different aspects of Quantum Mathematics, an intrinsically interdisciplinary field of Mathematics, including functional analysis, operator algebras, open quantum systems, quantum many-body theory, etc.

The candidate will be supervised by Prof. Jean-Bernard Bru and Prof. M. Merkli (Memorial U. of Newfoundland, Canada), with the possible help of Dr. Chiara Boccato (U. of Pisa, Italy). A few extended stays in a foreign country (Memorial U. of Newfoundland, Canada and U. of Pisa, Italy and/or U. of São Paulo, Brazil) are planned.

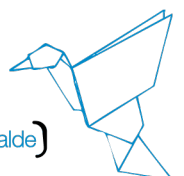
The position is for a PhD contract of four years at the Basque Center of Applied Mathematics, funded by AEI through the project PID2024-156184NB-I00.

The PhD thesis will be done within the doctoral program in Mathematics and Statistics at the University of the Basque Country (UPV/EHU). The main in-house training programme is structured around four axes:

- (1) periodic meetings;
- (2) BCAM courses;
- (3) international stays;
- (4) summer schools and training via seminars, workshops and conferences.

Particular attention will be paid to the student's participation in research conferences, both by attending and presenting their results.

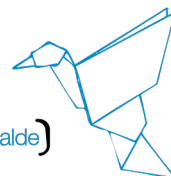
If you are a young graduate passionate about Quantum



	Mathematics or related fields, and eager to embark on a research career at BCAM, this opportunity is for you. Apply now and become part of our dedicated team at BCAM.
PIs in charge:	Jean-Bernard Bru and Chiara Boccato. Co-supervision with Marco Merkli.
Salary and conditions:	<p>The gross annual salary of the PhD student will be: 20.258 € - 25.395 € according to experience.</p> <p><i>It will then be the student own responsibility to make their yearly income declaration at the Bizkaia Treasury Agency.</i></p> <p>Additionally, we offer a moving allowance up to 500€.</p> <p>Should the student have a family at the time of recruitment:</p> <ol style="list-style-type: none"> 1.000€ gross in a single payment will be offered (you must be married-official register or with children and the certificate to prove it must be sent). 600€ gross per year/per child (up to 2 children) will be offered (the certificate to prove it must be sent). <p><i>Free access to the Public Health System in Spain is provided to all employees.</i></p>
Nº Positions offered:	1
Contract and offer:	4 years
Deadline:	October 3rd, 2025, 14:00 CET (UTC+1)
How to apply:	Applications must be submitted on-line at: https://joboffers.bcamath.org

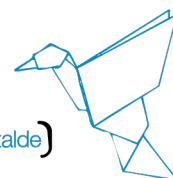
Scientific Profile Requested

Requirements:	<ul style="list-style-type: none"> Possession of a master's degree in mathematics or equivalent by the incorporation date.
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Skills and track-record:	<ul style="list-style-type: none"> • Good interpersonal skills. • Fluency in spoken and written English. • Ability to work independently and as part of a collaborative research team. • Ability to present and publish research outcomes in spoken (talks) and written (papers) form. • Ability to effectively communicate and present research ideas to researchers and stakeholders with different backgrounds • Ability to integrate within the local research network.
Scientific Profile:	<p>In the selection procedure we will appreciate:</p> <ul style="list-style-type: none"> • Solid background in functional analysis, operator algebras and mathematical physics (many-body theory). • Interest in quantum physics and its connections to Mathematics. • Note that a solid knowledge in Basque (C1) will also be taken into consideration.

Application and Selection Process	
Formal Requirements:	<p>The selected candidate must have applied before the application deadline online at the webpage: https://joboffers.bcamath.org</p> <p>The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their scientific profile.</p>
Application:	<p>Required documents:</p> <ul style="list-style-type: none"> ▪ CV ▪ Letter of interest ▪ 2 recommendation letters ▪ Statement of past and proposed future research (2-3 pages)
Evaluation:	<p>Based on the provided application documents of each candidate, the evaluation committee will evaluate qualitatively: the adaption of the previous training and</p>



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: 1st January 2026



CEX2021-001142-S/ AEI/10.13039/501100011033



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