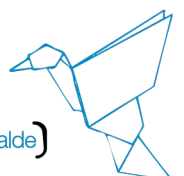


## Postdoctoral Fellow on Physics Informed Neural Network for Structural Health Monitoring.

Job Offer	
Topics:	<p><b>The Basque Center for Applied Mathematics is launching one Postdoctoral position of one year, renewable based on funding availability. We seek candidates with a strong background in applied mathematics, computational engineering, or related fields, and expertise in advanced AI/Machine Learning. This includes Deep Neural Networks, Physics-Informed Neural Networks (PINNs) (theory and application), and surrogate modeling for complex physical systems.</b></p> <p>We offer a Postdoctoral position for one year at the Basque Center of Applied Mathematics, funded by Ikur project to work on "Physics Informed Neural Network for Structural Health Monitoring". under the supervision of Prof. David Pardo.</p> <p>We are looking for a researcher with expertise in developing and applying advanced Artificial Intelligence and Machine Learning methods. This includes a strong background in Deep Neural Networks, particularly Physics-Informed Neural Networks (PINNs) from both theoretical development and application perspectives, and surrogate modeling.</p> <p>The ideal candidate will have a foundation in applied mathematics or computational engineering, applying these skills to complex engineering systems, such as those in offshore renewable energy, focusing on areas like Structural Health Monitoring (SHM) and health-aware control.</p> <p>The successful candidate will join a collaborative, international team, contributing to innovative projects with significant scientific and societal impact in areas like offshore renewable energy and structural health monitoring. The postdoctoral fellow will conduct cutting-edge research in Artificial Intelligence for engineering applications, with a focus on offshore renewable energy systems. Responsibilities include advancing the theory and application of Physics-Informed Neural Networks, developing novel surrogate models, and applying these to</p>

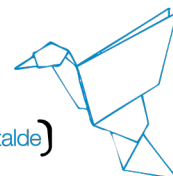


## IC2025\_02\_01 BCAM International Call

	challenges in structural health monitoring and intelligent control. The role offers opportunities for both fundamental research in AI methodologies and their impactful application.
PI in charge:	David Pardo and Ana Fernández Navamuel
Salary and conditions:	<p><b>The gross annual salary of the Fellowship will be 30.744 - 37.331€ according to experience.</b></p> <p>It will then be on your own responsibility to make your yearly income declaration at the Bizkaia Treasury Agency.</p> <p>Additionally, we offer a moving allowance up to 2.000€.</p> <p>Should the researcher have a family at the time of recruitment:</p> <ul style="list-style-type: none"> <li>• 2.000€ 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).</li> <li>• 1.200€ gross per year/per child (up to 2 children) will be offered (the certificate to prove it must be sent).</li> </ul> <p><i>Free access to the Public Health System in Spain is provided to all employees.</i></p>
Contract and offer:	1 year
Deadline:	<b>20/06/2025 14:00 CET</b>
How to apply:	Applications must be submitted on-line at: <a href="https://joboffers.bcamath.org/">https://joboffers.bcamath.org/</a>

### Scientific Profile Requested

Requirements:	<ul style="list-style-type: none"> <li>• Ph.D. Degree in Mathematics, Physics, Engineering, or related fields.</li> </ul>
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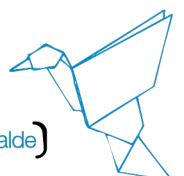


## IC2025\_02\_01 BCAM International Call

Skills and track-record:	<p>Although the requirements can be adapted to the different candidate profiles, a strong candidate needs to possess the following skills:</p> <ul style="list-style-type: none"> <li>• Proven experience in the theoretical development and practical application of Deep Learning models, especially Physics-Informed Neural Networks (PINNs) and surrogate models.</li> <li>• Strong programming skills (e.g., Python, TensorFlow/Keras, Pytorch, and/or Jax).</li> <li>• A background in applied mathematics, physics, or engineering, enabling the understanding and modeling of physical systems.</li> <li>• Preferably, (a) experience in Structural Health Monitoring, Remaining Useful Life prediction, AI-based control, or foundational AI/ML for physical systems, or (b) experience with integrating physics into ML models or working with data from numerical simulations (e.g., CFD, FEM).</li> <li>• Ability to work effectively in a collaborative research environment.</li> </ul>
Scientific Profile:	<p>A successful candidate should be willing to:</p> <ul style="list-style-type: none"> <li>• A researcher with expertise in developing and applying advanced Artificial Intelligence and Machine Learning methods. This includes a strong background in Deep Neural Networks, particularly Physics-Informed Neural Networks (PINNs) from both theoretical development and application perspectives, and surrogate modeling. The ideal candidate will have a foundation in applied mathematics or computational engineering, applying these skills to complex engineering systems, such as those in offshore renewable energy, focusing on areas like Structural Health Monitoring (SHM) and health-aware control.</li> </ul>

### Application and Selection Process

Formal Requirements:	<p>The selected candidate must have applied before the application deadline online at the webpage: <a href="https://joboffers.bcamath.org/">https://joboffers.bcamath.org/</a></p>
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## IC2025\_02\_01 BCAM International Call

	The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their scientific profile. Additional documents could be requested during the evaluation process so as to check this fulfilment.
Application:	<p>Required documents:</p> <ul style="list-style-type: none"> <li>▪ CV</li> <li>▪ Letter of interest</li> <li>▪ 2 recommendation letters</li> <li>▪ Statement of past and proposed future research (2-3 pages)</li> </ul>
Evaluation:	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:	<i>As soon as possible</i>
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