

**Company  
Description**

BCAM is the Research Center on Applied Mathematics created with the support of the Basque Government and the University of the Basque Country, which aims to strengthen the Basque science and technology system, by performing interdisciplinary research in the frontiers of mathematics, talented scientists' training and attraction, so the excellence of our results are recognized by the Society

**Information**

 Deadline: 2022-09-30     Country: Basque Country  
 Category: Business     City: Bilbao  
 Province: Bizkaia

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**Main functions, requisites & benefits****Main functions**

We have recently developed a novel metaheuristic methodology for optimizing the distribution of atoms and vacancies in solid-state materials. Our approach is currently programmed in the package Julia and has been tested in the solid-state electrolyte LLZO. The researcher will rewrite/reformat the code, as well as write a manual to share it with the wider community. He/she will also investigate the optimal set of parameters to maximize the algorithm's performance, and work on the implementation of additional features.

**Requisites**

M.Sc. or B.Sc. degree in Mathematics, Statistics, Computer Science and related disciplines. Good interpersonal skills. Demonstrated ability to work independently and as part of a collaborative research team. Ability to effectively communicate and present research ideas to researchers and stakeholders with different backgrounds. Fluency in spoken and written English. Solid programming skills in Julia. Candidates without specific knowledge of Julia but excellent skills in structurally similar languages such as Python, MATLAB, C++ or Ruby may be considered. Background in optimization methods. Specific knowledge in metaheuristic techniques such as simulated annealing or harmonic search is highly desirable. Experience with molecular dynamics codes (GROMACS, LAMMPS, etc.) is desirable.

**Benefits**

The gross annual salary of the Fellowship will be 18.450€-28.000€ Contract: 12 months (extensible) It will then be on your own responsibility to make your yearly income declaration at the Bizkaia Treasury Agency. Additionally, we offer a moving allowance up to 1.000€. Should the researcher have a family at the time of recruitment: 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). Free access to the Public Health System in Spain is provided to all employees.