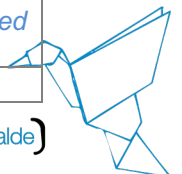


PhD position in Pedestrian Dynamics

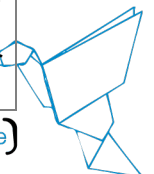
Job Offer	
Topics:	<p>In the framework of the BCAM “Mathematical Modelling Applied to Health” strategy, a series of projects in the field will be launched in different areas of Applied Mathematics. The “Computational Fluid Dynamics” research line. http://www.bcamath.org/en/research/lines/CFDMS) at the BCAM looks for a PhD candidate to work in the project:</p> <p><i>“Pedestrian dynamics modelling of crowd flow and disease transmission”</i></p> <p>The accurate prediction of the flow and dynamical properties of a group of pedestrians moving through complex environments is critical for strategic urban planning but also for the design of safety protocols in the presence of a pathogen, i.e. access to buildings, infrastructures etc. In the extraordinary health-care situation posed by COVID-19, a mathematical and numerical analysis of pedestrian flow combined with new pathogen diffusion models is a useful tool to predict the spreading of the disease in several urban scenarios for control/mitigation purposes.</p> <p>The target of this project is to formulate a novel particle-based simulation framework to model pedestrian dynamics fully coupled with stochastic infection-transmission models and apply it to urban situations characterized by the presence of large groups of people in motion with particular emphasis on hospital structures and/or patient care units. The research will be done collaboration with the Basque Country Health System.</p>
PI in charge	Ikerbasque Prof. Marco Ellero
Salary and conditions:	<p>The gross annual salary will be 18.000€.</p> <p>It will then be on your own responsibility to make your yearly income declaration at the Bizkaia Treasury Agency.</p> <p>There is a moving allowance for those researchers that come from a research institution outside the Basque Country from EUR 500 to EUR 1.000 gross.</p> <p><i>Free access to the Public Health System in Spain is provided to all employees.</i></p>
No Positions offered:	#1



Duration:	3 years contract
Deadline:	26 July 2021 at 14:00 CET (UTC+1)
How to apply:	Applications must be submitted on-line at: http://www.bcamath.org/en/research/job

Profile Requested	
Requirements:	<ul style="list-style-type: none"> Bachelor's or Master's degree in Physics, Engineering or Applied Mathematics.
Skills and track-record	<ul style="list-style-type: none"> Applicants must have an excellent academic record. Good communication and interpersonal skills. Good command of spoken and written English. Ability to clearly present and publish research outcomes in spoken (talks) and written (papers) form. Knowledge of advanced particle-based methods. Ability to analyse data, perform statistical analysis and interpret results. Strong analytical and problem-solving skills. Demonstrated ability to work independently and as part of a collaborative research team.
Scientific profile	<p>The preferred candidate will have:</p> <ul style="list-style-type: none"> Strong background in Physics, Mathematics and Computing. Previous experience with Discrete Elements Methods and Pedestrian Dynamics models would be beneficial. Interest in scientific programming, open source software development.

Application and Selection Process	
Formal Requirements:	<p>The selected candidate must have applied before the application deadline online at the webpage http://www.bcamath.org/en/research/job</p> <p>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.</p>
Application:	<p>Required documents:</p> <ul style="list-style-type: none"> CV Letter of interest In scientific results achieved and research statement section please upload in the same pdf: <ul style="list-style-type: none"> Statement of previous research experience transcripts of master and bachelor degrees.



	<ul style="list-style-type: none">▪ 2 recommendation letters
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 letter of interest, master and bachelor's degrees, and other merits; taking in account the alignment of these items to the job offered.

Incorporation:	Autumn 2021 or as soon as possible thereafter.
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