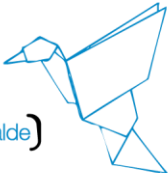


**Postdoctoral Fellowship in  
CFD Modelling and Simulation**

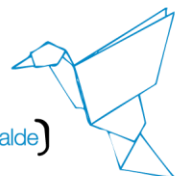
Job Offer	
Topics:	<p><b>Multiscale fluid dynamics modelling of cellular transport and adhesion using particle methods</b></p> <p>Applications are invited for a postdoctoral position in computational biomicrofluidics at the CFD group (BCAM). The focus of the project will be on multiscale modelling of the dynamics and adhesion of cells using Smoothed Particle Hydrodynamics and Dissipative Particle Dynamics methods.</p> <p>In many biological processes it is important to predict accurately the cellular transport, separation and deposition close to walls in presence of a complex unsteady flow. This is critical to control drug delivery and/or cellular sorting under microfluidics conditions, but also for the understanding of several cardiovascular pathologies such as, for example, atherosclerosis. This is a degenerative disease of the arterial wall that is thought to be initiated due to inflammation of the arterial endothelium, promoting the over-deposition of white blood cells. This anomalous WBC accumulation is site-specific and can lead to initial stage lesions or, on a long-term timescale, atherosclerotic plaques. To study these complex flow problems, we have recently developed a multiscale transport model for leukocytes and coupled it to an endothelial cell receptor binding model in order to link the flow transport and surface biology.</p> <p>The postdoctoral candidate will work under the supervision of Prof. Marco Ellero (CFD group, BCAM) on the developments and use of novel mesoscopic particle-simulation methods to better understand the dynamics and adhesion of cells under microfluidics conditions. This task will be performed in collaboration with Prof. Jesus Ruiz-Cabello (CIC Biomagune) and the eHealth and Biomedical Department of VICOMTECH, an applied research centre in the Basque Country working on innovative technological solutions in the biomedical sector.</p>
PI in charge:	Prof. Marco Ellero (Ikerbasque Research Professor)
Salary and conditions:	<b>The gross annual salary of the Postdoctoral Fellowship will be 28,000 – 32,000€.</b>



**IC2019\_Summer BCAM  
International Call**

	<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 1,000 to EUR 2,000 gross.</p> <p><i>Free access to the Public Health System in Spain is provided to all employees.</i></p>
No Positions offered:	<b>#1</b>
Contract and offer:	1+1 years
Deadline:	<b>20<sup>th</sup> August 2019, 14:00 CET (UTC+1)</b>
How to apply:	Applications must be submitted on-line at: <a href="http://www.bcamath.org/en/research/job">http://www.bcamath.org/en/research/job</a>

Scientific Profile Requested	
Requirements:	<ul style="list-style-type: none"> <li>• Promising young researchers.</li> <li>• Applicants must have their PhD completed before the starting date. PhD degree preferable in Physics, Applied Mathematics, Chemical, Medical or Mechanical Engineering.</li> </ul>
Skills and track-record:	<ul style="list-style-type: none"> <li>• Good communication and interpersonal skills.</li> <li>• Ability to effectively communicate and present research ideas to researchers with different background (e.g., mathematicians and engineers).</li> <li>• Ability to clearly present and publish research outcomes in spoken (talks) and written (papers) form.</li> <li>• Good command of spoken and written English.</li> </ul>
Scientific Profile:	<p>The preferred candidate will have:</p> <ul style="list-style-type: none"> <li>• Background in biofluid mechanics, rheology, soft matter, particulate systems or complex fluids.</li> <li>• Experience in modelling and simulation using particle methods such as smoothed particle hydrodynamics (SPH), dissipative particle dynamics (DPD) or molecular dynamics (MD) is required.</li> <li>• Knowledge of C/C++ or Fortran programming languages is required.</li> <li>• Experience in parallel programming for HPC is desirable.</li> </ul>



Application and Selection Process	
Formal Requirements:	The selected candidate must have applied before the application deadline online at the webpage <a href="http://www.bcamath.org/en/research/job">http://www.bcamath.org/en/research/job</a> The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their scientific profile.
Application:	Required documents: <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:	<b>Autumn 2019 or as soon as possible thereafter.</b>  <i>The BCAM postdoctoral contract will start when the selected candidate has finished the PhD, i.e. after dissertation defence.</i>

