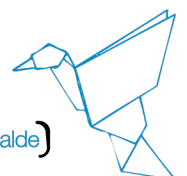


## Postdoctoral Fellowship in CFD Modelling and Simulation

Job Offer	
Topics:	<p><b>Mesoscopic Modelling and Simulations of Complex Particulate Systems</b></p> <p>Applications are invited for a postdoctoral position in mesoscopic modelling of complex particulate systems at the CFD group (BCAM). The focus of the project will be on accurate modelling and simulation of the dynamics and mechanical properties of micro/nano-particles interacting with complex liquids and under complex microflow conditions.</p> <p>In the area of material design, complex particulate systems represent one of the main building-blocks for smart composites. In particular, an emerging technology based on so-called “shear thickening fluids” (STFs) -a concentrated suspension of nanoparticles which adopts a solid-like state upon application of high stresses - is receiving increasing attention and has opened up a series of applications as selective dampers, such as a shock absorbers in the aerospace and textile industry.</p> <p>The postdoctoral candidate will work under the supervision of Prof. Marco Ellero (CFD group, BCAM) on the developments and use of mesoscopic particle-simulation methods to better understand the dynamics and rheology of complex suspensions. This task will be performed in collaboration with experimental rheologists, i.e. Prof. N.J. Wagner (Department of Chemical and Biomolecular Engineering) and Prof. Pep Español, (theoreticians at the Department of Theoretical Physics).</p>
PI in charge:	Prof. Marco Ellero (Ikerbasque Research Professor)
Salary and conditions:	<p><b>The gross annual salary of the Fellowship will be 28.000 - 32.000€.</b></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 1.000 to EUR 2.000 gross.</p>



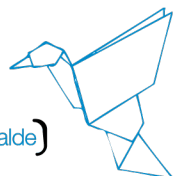
	<i>Free access to the Public Health System in Spain is provided to all employees.</i>
No Positions offered:	<b>#1</b>
Duration:	<b>2-year contract</b>
Deadline:	<b>August 31<sup>st</sup> 2018 14:00 CET</b>
How to apply:	Applications must be submitted on-line at: <a href="http://www.bcamath.org/en/research/job">http://www.bcamath.org/en/research/job</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 contract starts.</li> <li>• PhD degree preferable in Physics, Applied Mathematics, Chemical/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 fluid 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:	<p>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></p> <p>The candidates that do not fulfil the mandatory requirements will not be evaluated with respect to their</p>
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Application:	<p>scientific profile.</p> <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:	<p>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.</p>
Incorporation:	<p><b>October / November 2018 or as soon as possible thereafter.</b></p> <p><i>The BCAM postdoctoral contract will start when the selected candidate has finished the PhD, i.e. after dissertation defence.</i></p>
Timeframe:	<ul style="list-style-type: none"> <li>- Open Call: June 27<sup>th</sup>, 2018</li> <li>- Deadline for applications: August 31<sup>st</sup>, 2018</li> <li>- Evaluation: September 2018</li> <li>- Publication the results on website: October 2018.</li> <li>- Incorporation: October / November 2018 or as soon as possible thereafter</li> </ul>

