

**UNIVERSITY OF BIRMINGHAM  
SCHOOL OF CHEMICAL ENGINEERING**

**Research Fellow: Flow of Gas-Liquid Foams in Narrow Complex Geometries**

**Starting salary is normally in the range £28,695 to £37,394. With potential progression once in post to £39,685 a year.**

**Post is available from 01 February 2016 at the earliest, for a period of 36 months.**

Applications are invited for a post to carry out experimental and theoretical work in the field of gas-liquid foams. This project is part of an EPSRC-funded collaboration with the Universities of Cambridge and Aberystwyth.

Applications of gas-liquid foams are numerous including food, consumer goods, beauty care, pharmaceuticals, medical, ceramics, polymers, firefighting, oil recovery and mineral particle transport. The movement of three-dimensional gas-liquid foams through narrow channels of complex geometry where both bulk and surface properties are important, is commercially challenging and technically important. A wide gap, however, exists between the complexity of foam phenomena and the present state of knowledge. This project seeks to address this lack of understanding by studying experimentally using a range of diagnostic techniques, and via theory a number of fundamental aspects related to the flow, stability and behaviour of three-dimensional aqueous foams through narrow channels containing a variety of complex geometries. Polymer foams will be studied by our partners at Cambridge whilst bubble-scale computational modelling of foams will be conducted by our partners at Aberystwyth.

Applicants should have a strong first degree in Chemical Engineering or a relevant discipline and a PhD in Chemical Engineering or a relevant subject. They should have a good background in fluid mechanics, rheology and interfacial/colloid science. The successful candidate will be based at the University of Birmingham to work on (predominantly) experimental as well as theoretical aspects of the project, and to collaborate with researchers in Cambridge and Aberystwyth.

The ability to work both as part of a team, and independently, coupled with excellent communication, organisational and problem solving skills are required. The duties/responsibilities of this post are outlined in the 'Job Description' document and include developing and driving research objectives, writing up work for presentation and publication, collaborating with industrial partners, assisting in the supervision of student research projects, and delivering internal/external seminars and presentations.

Informal enquiries can be made to Prof. M. Barigou via e-mail: [m.barigou@bham.ac.uk](mailto:m.barigou@bham.ac.uk).

Applicants should complete an online application form, available from the website detailed below, provide an up-to-date CV and letter of motivation describing their suitability for the role, and the names and contact details of at least two academic referees.

**Closing date: 05 October 2015**

**Reference: 52916**

To download the full details of the post and submit an electronic application online visit: [www.hr.bham.ac.uk/jobs](http://www.hr.bham.ac.uk/jobs)