

Postdoctoral Position in Mathematical Modeling for Biophysics: from active droplets to cell motility

Applications are invited for a Leverhulme Trust-funded Postdoctoral Research Assistant in the School of Mathematics at the University of Bristol working with Tanniemola Liverpool and Jens Eggers.

Applicants should have (or be about to receive) a PhD in applied mathematics, theoretical condensed matter physics, theoretical biophysics, complex fluids, statistical mechanics or related areas; and a strong interest in applying these to biological or biologically inspired systems.

They must have a proven record of experience in the theory and/or simulation of fluid mechanics, complex fluids, biological fluids, or condensed matter systems. Experience in the any of the following areas is also desirable: theory of active matter systems, soft condensed matter and complex fluids, fluid mechanics and expertise in using numerical methods for PDEs.

With the goal of developing soft matter modelling techniques to explore the physical principles behind cell motion, the research project involves the development of coarse-grained mathematical models for the motion of a drop of active matter on a solid substrate and its response to external cues. Issues to be addressed include lubrication theory of active liquid crystals, free surface motion, nonlinear dynamics, singular flows, boundary layers and surface adhesion.

The position is available from 15 October 2016 for 2 years initially with the possibility of extension for up to a further 1 year, with flexible start date. The appointment will be on Research Grade I, with starting salary up to £31,656 per annum depending on age and experience.

The School of Mathematics is one of the leading centres for research and teaching in the mathematical sciences in the UK, and offers a stimulating and friendly environment with first-rate facilities. The successful applicant will be able to take advantage of major national research facilities based in Bristol such as the £15M BrisSynBio synthetic biology centre. For this project, we also have excellent computing facilities at our disposal.

Informal enquiries may be addressed to:

Prof. Tannie Liverpool, t.liverpool@bristol.ac.uk
Prof. Jens Eggers, jens.eggers@bristol.ac.uk

The deadline for receipt of applications is midnight on 15 September 2016.