UNIVERSITY OF OXFORD

Mathematical, Physical and Life Sciences Division

MATHEMATICAL INSTITUTE

3 year Postdoctoral Research Assistant Position in Mathematical and Computational Modelling of Solid Tumour Growth

Grade 7: Starting salary £29,837-£36,661 p.a

We invite applications for a three-year, postdoctoral research position, funded by the European Commission FP7 and based at the Mathematical Institute, University of Oxford. This work will be jointly supervised by Professor Helen Byrne (Mathematical Institute and Computational Biology Group, CBG), Professor Philip Maini (Wolfson Centre for Mathematical Biology) and Dr Joe Pitt-Francis (CBG), and is part of a large, multidisciplinary project (Computational Horizons in Cancer, CHIC) led by Professor Georgios Stamatakos, Athens, Greece. As such, there is considerable potential for collaboration with clinicians, mathematicians and computer scientists from across Europe. This is a fixed term position for up to 36 months and is available for an immediate start. The successful candidate must be in post on, or before, 1st April 2014.

Cancer is a group of diseases in which the normal controls on cell behavior are disrupted, leading to rapid cell growth, invasion into nearby healthy tissues and spread to distant parts of the body. Increased understanding of the mechanisms that cause cancer has led to significant improvements in its treatment. However, its complex nature means that many questions remain unanswered and the cure rate for certain types of cancer remains poor. The main aims of this project are: i) to develop new mathematical and computational models that can be used to investigate how the different physical processes involved in tumour growth interact, and ii) to use these models to compare the efficacy of existing treatment strategies with new ones in order to predict those that have the strongest therapeutic effect.

This project will be focused on the development and investigation of new mathematical models of vascular tumour growth and/or early colorectal cancer. The models will provide insights into the mechanisms that regulate solid tumour growth and assist with the identification of improved strategies for their treatment.

The successful candidate will perform mathematical and computational research on the project "*Mathematical and Computational Modelling of Solid Tumour Growth.*" They will write up their results for publication and will participate fully in the activities of the research group. They may also be required to teach up to four sets of undergraduate or graduate classes per year.

With a PhD awarded, or a Masters degree and PhD submitted (at the time of taking up the position), the successful candidate will possess expertise in mathematical modelling, experience of developing and applying numerical methods to solve systems of partial differential equations and of programming in C++ or a similar language together with a good publication record, judged by the stage of his/her career.

Please direct informal enquiries to the Administrative Assistant (email: vacancies@maths.ox.ac.uk), quoting vacancy reference 111586.

Applicants should read the job description before writing their application. You will be required to upload a letter setting out how you meet the selection criteria, a curriculum vitae including full list of publications and a statement of research interests and the contact details of two referees as part of your online application. **(NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date).**

Applications for this vacancy are to be made online. To apply for this post and for further details, including the job description and selection criteria, please click on the link below

https://www.recruit.ox.ac.uk/pls/hrisliverecruit/erq_jobspec_version_4.jobspec?p_id=111586

Only applications received before 12:00 noon UK time on Wednesday 5th March 2014 can be considered.

Committed to equality and valuing diversity.