

Vacancies at the Magnetic Resonance Research Centre (MRRC)
(<http://www.cheng.cam.ac.uk/research/groups/mri/>)

PDRA 1: Spatially Resolved MRI Velocimetry of Multi-phase Flow in Porous Media

A 1 year PDRA, with possible extension to a 2nd year, sponsored by ExxonMobil Research and Engineering Company, USA, is available (to start as soon as possible) to develop MRI velocimetry techniques for characterising two-phase flow (gas, oil and/or water). These will be applied to studies of both upstream (rock cores) and downstream (fixed bed reactors) processes. Applicants would be expected to have a PhD or equivalent research background in NMR/MRI; previous experience of working with pulsed field gradient techniques or porous media would be advantageous.

This post is available to take up as soon as possible.

PDRA 3: MRI of Catalytic Processes

A 3 year PDRA (1 year in the first instance) is available to develop magnetic resonance imaging (MRI) techniques to image flow and reaction in heterogeneous reactors, which are operating at realistic operating conditions. Applicants would be expected to have a PhD or equivalent research background and previous experience of magnetic resonance techniques is welcomed. This is part of a European Commission FP7 project.

The start date will be the 1/10/09.

An application form, PD18, can be downloaded at (<http://www.admin.cam.ac.uk/offices/hr/forms/pd18/>). Parts I and III should be completed with the vacancy specified and should be sent with a CV, publications list, and contact details for two professional referees. Applications can be sent either electronically or single-sided hard copy to the Research Secretary, Department of Chemical Engineering and Biotechnology, New Museums Site, Pembroke Street, Cambridge, CB2 3RA (email: recruitment@ceb.cam.ac.uk).

For further details, please contact Professor L F Gladden, e-mail: gladden@cheng.cam.ac.uk

Closing date: 31 May 2009.

The University values diversity and is committed to equality of opportunity.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

PhD 1: MRI Studies of Rock Permeability Modification by Bio-precipitation

A PhD studentship is available to study the modification of rock pore space by calcite precipitation due to microbial activities. A particular focus will be fractured rock structures and extensive use will be made of MRI to non-invasively image this process and hence validate appropriate models. The project is part of a larger consortium where the application of the research is the development of such biomineralisation barriers in the subsurface for controlling pollutant migration (particularly in the nuclear waste disposal industry). This studentship is open to UK or EU nationals. Applicants should have a First Class (or a high 2:1) degree in a relevant discipline such as chemical engineering, engineering, chemistry or physics. The studentship is fully-funded (i.e. pays tuition fees at

the UK/EU rate as well as a tax-free annual maintenance stipend of £13,000 p.a.). The start date will be the 1/10/09. Candidates should in the first instance send a detailed *CV* and academic transcripts to the Research Secretary, Department of Chemical Engineering and Biotechnology, New Museums Site, Pembroke Street, Cambridge, CB2 3RA (email: recruitment@ceb.cam.ac.uk).

For further details, please contact Dr M L Johns, e-mail: mlj21@cam.ac.uk