Research Fellow or Senior Research Fellow in MRI Electromagnetic Tissue Properties Mapping

UCL Department Department of Medical Physics & Biomedical Engineering
Specific Laboratory Magnetic Resonance Imaging (MRI) Group
Location of position UCL, Bloomsbury, London, UK
Grade 7 or 8
Hours Full Time
Salary (inclusive of London allowance) £35,328 to £43,884 per annum

Duties and Responsibilities
Applications are invited for a postdoctoral expert in MRI physics to join the Magnetic Resonance Imaging Group in the UCL Department of Medical Physics & Biomedical Engineering, London, UK.

UCL is one of the foremost universities in Britain and the world. The Department of Medical Physics & Biomedical Engineering is proud to host internationally-leading research groups covering a broad range of activities and spread over several sites. Our staff and students have a diverse range of interests and expertise, covering many areas of physics, engineering, medicine, physiology, computer science, and mathematics. This provides a highly stimulating multidisciplinary environment for learning and for scientific research. In addition to our research activities, we run a variety of undergraduate and graduate degree programmes.

Dr Karin Shmueli leads the MRI Group in the Department of Medical Physics and Biomedical Engineering. The group conducts cutting-edge research into MRI techniques to increase image contrast and resolution by exploiting new contrast mechanisms. Dr Shmueli has obtained funding for two research programmes: one to develop magnetic susceptibility (QSM) and electrical conductivity (MR-EPT) MRI techniques for neuroimaging and another to develop a new susceptibility mapping-based technique to measure oxygenation in head-and-neck and prostate cancers. Current projects within the group include, but are not limited to, developing and optimising quantitative susceptibility mapping (QSM) techniques for a variety of clinical applications, aiming to improve disease diagnosis and monitoring of therapies.

We are seeking four talented MRI physicists and postdoctoral researchers to join this exciting research programme. We are looking for highly motivated individuals to join and work within the MRI group, reporting to Dr Karin Shmueli. You will have a central role in developing, optimising and applying new MRI electromagnetic tissue properties mapping (QSM and MR-EPT) acquisition sequences and processing techniques in phantoms, healthy volunteers and patient studies. You will carry out most of your MRI experiments on up-to-date clinical 3-Tesla MRI systems within local UCLH Hospitals.

Key Requirements
You will ideally have a first degree in Physics, Maths or Engineering. You must have a PhD, or be about to submit a PhD, in MRI Physics or a related subject. A strong background in MRI Physics and expertise in computer programming in high-level languages (e.g. Matlab, C/C++, IDL or Python) are essential. Previous experience in acquisition, reconstruction, processing and analysis of MRI data are required. Experience in electromagnetic tissue properties mapping: quantitative magnetic susceptibility mapping (QSM) or MR-Electrical Properties Tomography (MR-EPT), MRI pulse sequence development, conducting and analysing functional MRI studies, and/or MRI body or cancer imaging would be desirable.
The positions are available immediately (with an expected start date as soon as possible) and are funded for 24 months in the first instance with renewal subject to satisfactory completion of a 9-month probation period and performance. Starting salary on UCL Grade 7 is in the range £35,328 - £42,701 per annum or on Grade 8 is at £43,884 per annum, including London Allowance and subject to your level of experience. Appointment at Grade 7 or 8 is dependent upon having been awarded a PhD; if you are about to submit a PhD, the appointment will be at Research Assistant Grade 6B (at a salary of £30,922 - £32,607 per annum, inclusive of London Allowance) with payment at Grade 7 being backdated to the date of final submission of the PhD thesis.

Further Details
You should apply for these positions through UCL’s online recruitment – [http://www.ucl.ac.uk/hr/jobs](http://www.ucl.ac.uk/hr/jobs) where you can download detailed job descriptions and person specifications using reference numbers: 1806458, 1806471, 1806664 and 1806665.

If you have any informal enquiries regarding the position please contact Dr Karin Shmueli at k.shmueli@ucl.ac.uk
I will be happy to meet with interested candidates at the Annual Meeting of the ISMRM.

If you have any queries regarding the application process please contact Ms Tracy Pearmain (tracy.pearmain@ucl.ac.uk), HR Staffing Officer, UCL Department of Medical Physics & Biomedical Engineering, tel. no. 0207 679 0252

More information on the department’s research and teaching activities can be found at: [http://www.ucl.ac.uk/medphys/](http://www.ucl.ac.uk/medphys/)

UCL Taking Action for Equality:
We particularly welcome female applicants and those from an ethnic minority, as they are under-represented within UCL at this level.
Our department holds an Athena SWAN Bronze award, in recognition of our commitment to advancing gender equality.

We will consider applications to work on a part-time, flexible and job share basis wherever possible. Applications will be considered on a rolling basis so please apply as early as you can.

This appointment is subject to UCL Terms and Conditions of Service for Research and Support Staff.

Please use these links to find out more about UCL working life including the benefits we offer and UCL Terms and Conditions related to these jobs.