British Chapter ISMRM

Post-Graduate
Magnetic Resonance Symposium

23rd March, 2010

Institute of Psychiatry,
King’s College London
## Programme

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>9.45 – 10.15</td>
<td>Registration, Tea and Coffee</td>
<td>Ground Floor, IoP Main Building</td>
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<tr>
<td>10.15 – 10.17</td>
<td>Welcome, Prof Gareth Barker (IoP, KCL)</td>
<td>Wolfson Lecture Theatre, IoP Main Building</td>
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<td>10.17 – 10.20</td>
<td>‘Housekeeping’ issues, Dr Po-Wah So (IoP, KCL)</td>
<td>Wolfson Lecture Theatre, IoP Main Building</td>
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### Session 1 – Neuroimaging I, Wolfson Lecture Theatre

Wolfson Lecture Theatre. Chairs: Prof Gareth Barker, Ms. Catherine Mallik (IoP, KCL)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<tr>
<td>10.20 – 10.32</td>
<td>O1 - An uniquely human direct pathway connects frontal and occipital lobes</td>
<td>Stephanie Forkel (IoP, KCL)</td>
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<tr>
<td>10.32 – 10.44</td>
<td>O2 - A true isotropic resolution acquisition for DTI</td>
<td>Joan Chick (IoP, KCL)</td>
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<td>10.44 – 10.56</td>
<td>Correspondence between in vivo axonal diameter and cortical connectivity of the corpus callosum</td>
<td>Flavio Dell’Acqua (IoP, KCL)</td>
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<tr>
<td>10.56 – 11.08</td>
<td>O3 - Associations between thyroid hormone transporter gene variants and grey matter volume changes in healthy controls and patients with major depressive disorder</td>
<td>Luanna Dixson (GSK, ICL)</td>
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<td>11.08 – 11.20</td>
<td>O4 - Optimizing MRI data acquisition for FreeSurfer and VBM analyses in multi-centre studies</td>
<td>Sima Chalavi (IoP, KCL)</td>
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<td>11.20 – 11.32</td>
<td>O5 - Comparison of multicomponent DESPOT to DTI, is there extra information in the myelin water fraction?</td>
<td>Sonya Bells (CUBRIC, Cardiff University)</td>
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### Session 2 – MRS, Traveling Wave and DCE-MRI

Chairs: Dr. Thomas Eykyn and Dr. Geoff Charles-Edwards (Imaging Sciences Division, KCL)

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<tr>
<td>Noon – 12.12</td>
<td>O6 - Localisation and visualization of MRS results on MR images</td>
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Yu Sun (Birmingham Children’s Hospital NHS Foundation Trust and Cancer Sciences, Birmingham University)

12.12 – 12.24  **O7 -** Investigation of metabolic changes in human visual cortex during neuronal activity using functional $^1$H MRS at 7T  
*Yan Lin (Sir Peter Mansfield Resonance Centre, University of Nottingham)*

12.24 – 12.36  **O8 -** A comparison of two motion compensation methods in abdominal $^1$H spectroscopy  
*Michael Germuska, (ICR)*

12.36 – 12.48  **O9 -** A simple approach for the fast classification of brain tumours using MRS and LCModel  
*Felix Raschke (Division of Cardiac and Vascular Sciences, St George’s, University of London)*

12.48 – 13.00  **O10 -** Travelling wave antennas and waveguide  
*Amany Alsuraihi (Sir Peter Mansfield Resonance Centre, University of Nottingham)*

13.00 – 13.12  **O11 -** Influence of k-space acquisition schemes on the accuracy of pharmacokinetic Modeling of DCE-MRI  
*Ina Kompan (Imaging Sciences Division, KCL)*

13.12 – 14.20  **Lunch**  
*Seminar Rooms 1 and 2, Ground Floor, IoP Main Building*

**Session 3 – Non-Neuroimaging**  
*Wolfson Lecture Theatre, Chairs: Prof Rene Botnar (Imaging Sciences Division, KCL), Dr Andrea Protti (Cardiovascular Division, KCL)*

14.20 – 14.32  **O12 -** Novel hybrid real-time phase-contrast sequence  
*Jennifer Steeden, (CMIC, UCL)*

14.32 – 14.44  **O13 -** Quantitative magnetization transfer in *in vivo* healthy human skeletal muscle at 3T  
*Chris Sinclair (Dept of Brain Repair and Rehabilitation, UCL)*

14.44 – 14.56  **O14 -** CardioVis: A cardiac software for fast left ventricle segmentation  
*Andrea Protti (Cardiovascular Division, KCL)*

14.56 – 15.08  **O15 -** MRI characterization of cardiac tissue scaffold materials *in vitro* and *in vivo*  
*Daniel Stuckey (National Heart and Lung Hospital, ICL)*

15.08 – 15.20  **O16 -** Tract specific CSD calibration for facial muscle tractography  
*Greg Parker (CUBRIC, Cardiff University)*

15.20 – 15.32  **O17 -** Implementation and analysis of ASL myocardial perfusion quantification  
*Adrienne Campbell (CABI, UCL)*

15.32 – 16.00  **Tea Break and Posters (even numbers)**  
*Wolfson Lecture Theatre*
Session 4 – Neuroimaging II
Wolfson Lecture Theatre, Chairs: Dr Mitul Mehta, Dr Diana Cash (IoP, KCL)

16.00 – 16.12  **O18** - Dopamine D3 receptor availability explains orbitofrontal connectivity with cognitive networks
        *David Cole (GSK, ICL)*

16.12 – 16.24  **O19** - Structural abnormalities in the left perisylvian pathways correlate with language deficits in autism
        *Sanja Budisavljevic (IoP, KCL)*

16.24 – 16.36  **O20** - Discriminating atomoxetine from methylphenidate in working memory networks
        *Andre Marquand (IoP, KCL)*

16.36 – 16.48  **O21** - Magnetization transfer (MT) and endogenous chemical exchange saturation transfer (CEST) effects in patients with clinically isolated syndrome
        *Ali Al-Radaideh (Sir Peter Mansfield Resonance Centre, University of Nottingham)*

16.48 – 17.00  **O22** - Anatomy of the fronto parietal pathways correlates with the symmetrical processing of visual scenes
        *Michael Thiebaut de Schotten, (IoP, KCL)*

17.00 – 17.12  **O23** - Anaesthetic interactions in the phMRI response to acute ketamine challenge
        *Duncan Hodkinson (Imaging Science and Biomedical Engineering, University of Manchester)*

17.12 – 17.24  **O24** - Establishing patterns of parenchymal perfusion following administration of a potent vasodilator
        *Nyssa Craig (Academic Unit of Radiology, Sheffield University)*

17.24 – 17.30  **Closing Remarks, Prof Steve C. R Williams (IoP, KCL)**

17.30 - 21.00  **Drinks Reception, kindly sponsored by GE Healthcare and Varian Inc**
        *Seminar Room 1, Ground Floor, IoP Main Building*
Poster Presentations

P1 **White matter asymmetries in the human brain: an in vivo diffusion tractography**


P2 **Constant and variable features of white matter anatomy in the human brain: an in vivo diffusion tractography study**


P3 **Human brain activity during defensive behavior**
A. Perkins and S. C. R. Williams
Centre for Neuroimaging Sciences, Institute of Psychiatry, London.

P4 **Amygdala response during expectation of taste reward is attenuated by age**
Z. Gerald, C. Long, J. Howard, R. Newbould, A. Makwana, J. Beaver
GlaxoSmithKline Clinical Imaging Centre, Imperial College, Hammersmith Hospital, London, UK

P5 **Effects of an intraperitoneal glucose dose during fasting in a rat model – a fMRI study**
K. O’Toole, D. Cash, S. C. R. Williams, P-W. So
Neuroimaging Group/Preclinical Imaging Unit, Department of Neuroimaging, Institute of Psychiatry, King’s College London

P6 **Effects of acute dehydration on brain morphology in healthy humans**

1Centre for Neuroimaging Sciences, Institute of Psychiatry, King's College London, London, 2Section of Neurobiology of Psychosis, Institute of Psychiatry, King's College London, London, 3The Centre for Sport and Exercise Science, Sheffield Hallam University, Sheffield, 4School of Sport, Exercise and Health Sciences, University of Chichester, Chichester, 5Academic Unit of Radiology, University of Sheffield, Sheffield.

P7 **Late gadolinium enhancement of acute myocardial infarction in mice at 7T: cine-FLASH vs inversion recovery**
A. Protti, A. Sirker, A. Shah, R. Botnar

1Cardiovascular and 2Imaging Sciences Divisions, King’s College London British Heart Foundation Centre, King’s College London, London.

P8 **Multiphase respiratory gating using golden-radial phase encoding**
C. Kolbitsch, C. Preito, T. Schaeffter
Imaging Sciences Division, King’s College London, London.

P9 **Assessing the inter-scan reproducibility of MTR, T2 and fat quantification in muscle MRI**

1MRC Centre for Neuromuscular Disease, UCL Institute of Neurology, Queen Square, London, 2National Hospital for Neurology and Neurosurgery, Queen Square, London.

P10 **Body fat compartment analysis methods using Dixon two-point MRI**
A. Makwana, A. Rao, B. Delafont, R. Newbould, J. Beaver
GlaxoSmithKline, Clinical Imaging Centre, Imperial College, Hammersmith Hospital, London.
P11 *In vivo* assessment of glucose homeostasis by manganese-enhanced MRI
L-W. Lee1,2, P-W. So3, J. D. Bell1
1Metabolic and Molecular Imaging Group, MRC Clinical Sciences Centre, Hammersmith Hospital Campus, Imperial College London, London, 2Department of Diagnostic Radiology, Chang Gung Memorial Hospital-Chiayi, Chang Gung University College of Medicine, Chiayi, Taiwan, 3Preclinical Imaging Unit, Department of Neuroimaging, King’s College London, Institute of Psychiatry, James Black Centre, Denmark Hill Campus, London.

P12 Different metabolic profiles of human colorectal carcinoma cells altered by Bax gene deficiency
G. Lin1, D-M. Koh1, S. P. Robinson1, P. Clarke2, M. O. Leach1, Y-L. Chung1
1Cancer Research UK and EPSRC Cancer Imaging Centre, Institute of cancer research and Royal Marsden Hospital, Sutton, Surrey, 2Cancer Research UK Centre for Cancer Therapeutics, Institute of cancer research and Royal Marsden Hospital, Sutton, Surrey.

P13 Noise reduction on *in vivo* proton MR spectra using wavelet shrinkage de-noising (WSD) and the Lorentzian lineshape property
J. Hao1, N. P. Davies2,3,4, M. Wilson2,4, A. C. Peer2,4, T. N. Arvanitis1,4
1Biomedical Informatics, Signals and Systems Research Laboratory, School of Electronic, Electrical & Computer Engineering, University of Birmingham, Birmingham, 2Cancer Sciences, University of Birmingham, Birmingham, 3Department of Imaging and Medical Physics, University Hospitals Birmingham NHS Foundation Trust, Birmingham, 4Birmingham Children’s Hospital NHS Foundation Trust, Birmingham.

P14 Automated propagation-based morphometry using a mouse embryo atlas – assessment and validation
F. C. Norris1,2, M. Modat3, J. O. Cleary1,4, A. N. Price1, B. Sinclair1,3, K. McCue5, P. J. Scambler5, S. Ourselin3, M. F. Lythgoe1
1Centre for Advanced Biomedical Imaging, Department of Medicine and UCL Institute of Child Health, University College London, 2Centre for Mathematics and Physics in the Life Sciences and Experimental Biology (CoMPLEX), University College London, 3Centre for Medical Image Computing, Departments of Medical Physics and Bioengineering and Computer Science, University College London, 4Department of Medical Physics and Bioengineering University College London, 5Molecular Medicine Unit, UCL Institute of Child Health, University College London.

P15 MRI detection of axonal transport via tetanus neurotoxin bound iron oxide nanoparticles
S. Richardson1, B. Siow1, J. Wells1, E. Fisher2, G Schiavo3, M. F. Lythgoe1
1Centre for Advanced Biomedical Imaging, Department of Medicine and UCL Institute of Child Health, University College London, 2UCL Institute of Neurology, 3CRUK, London Research Institute, London.
Public Transport

It is well worth trying the Journey Planner from Transport for London.

**By Rail / Train**
- **Denmark Hill Station** is adjacent to the Institute of Psychiatry and the Maudsley Hospital. It can be reached by trains from Victoria, London Bridge, Blackfriars, and Elephant and Castle.
- **Loughborough Junction Station** is about 15 minutes walk away and is served by Thameslink trains from London Blackfriars via Elephant and Castle.

**By Tube**
The nearest tube stations are Brixton (Victoria Line), Oval (Northern Line) and Elephant and Castle (Northern Line - City Branch) from where the journey has to be completed by bus.

**By Bus**
- **Very close to the Institute**: The following buses stop at the Maudsley Hospital next to the Institute of Psychiatry: 40, 68, 176, 185, 406 and 484.
- **About 10 minutes walk from the Institute**: The following buses stop at Camberwell Green: 12, 35, 36, 42, 45, 345 and 171.

**Driving or Cycling**

**By Car**
Parking is not possible within the Institute grounds. It is possible, though difficult, in some of the nearby streets. The spaces are few and care should be taken.

**By bike**
There are covered Sheffield racks and shower facilities for cyclists.

http://www.iop.kcl.ac.uk/virtual/?path=About/how-to-find-the-institute-of- psychiatry/