Programme Overview

Wednesday 7th September

11:00 – 13:00  **IPEM MG-SIG/ BC-ISMRM Joint Workshop** – Gradients and their behaviour
Prof. Iain Wilkinson, Prof. Richard Bowtell, Dr Jennifer Macfarlane, Prof. Martin Leach and Dr Paul Harvey

13:30 – 17:00  **CANCER MRI Workshop** – Standardisation across sites
Prof. Martin Leach, Prof. John Waterton, Dr Andrew Peet and Dr Dominick McIntyre

18:30 – 20:00  Drinks reception at the Manchester Museum

Thursday 8th September

09:00 – 09:15  Opening – Prof. Geoff Parker

09:15 – 09:55  **Bill Moore Lecture** – Dr Roy Gordon

09:55 – 10:45  Oral Session 1: Lung Imaging

10:45 – 11:10  Coffee break

11:10 – 11:40  Invited speaker – Dr Richard Edden

11:40 – 12:30  Oral Session 2: Molecular Imaging

12:30 – 14:30  Lunch, Posters and Technical Exhibition

14:30 – 15:00  Invited speaker – Prof. David Norris

15:00 – 15:50  Oral Session 3: Novel Hardware and Methods

15:50 – 16:10  Coffee break

16:10 – 16:40  Invited speaker – Prof. Mara Cercignani

16:40 – 17:30  Oral Session 4: Neuroimaging 1

17:30 – 18:00  British Chapter ISMRM Annual General Meeting

19:30  Drinks Reception and Dinner at Manchester Town Hall

Friday 9th September

09:00 – 09:30  Invited speaker – Prof. Rene Botnar

09:30 – 10:20  Oral Session 5: Cardiac Imaging

10:20 – 10:45  Coffee break

10:45 – 11:15  Invited speaker – Dr Richard Hodgson

11:15 – 12:10  Oral Session 6: Body Imaging

12:10 – 14:00  Lunch, Posters and Technical Exhibition

14:00 – 14:30  Invited speaker – Prof. Martin Leach

14:30 – 15:20  Oral Session 7: Cancer

15:20 – 15:45  Coffee break

15:45 – 16:15  Invited speaker – Dr Tim Behrens

16:15 – 17:05  Oral Session 8: Neuroimaging 2

17:05 – 17:30  Awards of AstraZeneca and Mansfield Prizes

17:30  Close
Welcome to the 17th Annual Scientific Meeting of the British Chapter of the ISMRM. It is a pleasure to host the meeting once more in Manchester. Doing so in 2011 gives us an excuse to capitalise on one of our great past scientists. Ernest Rutherford worked at the University of Manchester between 1907–1919 and in 1911, 100 years ago, he published a paper postulating that atoms contain a very small positively charged nucleus. This insight was built upon experimental work involving firing alpha particles at gold foil, performed under his direction two years earlier by Hans Geiger and Ernest Marsden, also in Manchester. Without Rutherford and his team we would not have our current understanding of the atomic nucleus and therefore we would not have NMR, let alone a British Chapter of the ISMRM. Hence our meeting strapline – *Watching nuclei for 100 years*.

Along with Rutherford, you may spot other past eminent Manchester scientists in background slides for the meeting. Our scientific past is impressive and we continue into the modern day with the 2010 Nobel Prize for Physics being shared between two Manchester scientists, Andre Geim and Konstantin Novoselov, "for groundbreaking experiments regarding the two-dimensional material graphene." The University of Manchester now has more Nobel Laureates on its staff than any other British Institution. Manchester itself is a city that has a unique past as the leading centre of the industrial revolution and a flourishing present, with a reputation for industry, education, arts and sport. We hope that you will find the time to explore and enjoy our city.

We have an impressive line-up of speakers for this year’s meeting. The opening Bill Moore Lecture will be delivered by Dr Roy Gordon of Bruker Biospin. We are also happy that Dr Richard Edden, Prof. David Norris, Prof. Mara Cercignani, Prof. Rene Botnar, Dr Richard Hodgson, Prof. Martin Leach and Dr Tim Behrens have accepted our invitation to deliver talks. In addition, the membership of the British Chapter of the ISMRM have submitted papers that will be presented in eight oral sessions and two poster sessions.

We are very grateful to our sponsors, who allow us to offer a number of student stipends. Please do visit their stands!
Meeting Information

All oral sessions will be held in the Martin Harris Centre for Music and Drama – it is a performing space situated at the heart of the oldest part of the University. We will be treated to the comfort of the Cosmo Rodewald Concert Hall, an acoustically-designed auditorium which seats an audience of up to 350 people.

Coffee/tea and lunch will also be held in the Martin Harris Centre, as will the poster sessions and sponsors’ technical exhibition. Accommodation will be in the Westin Halls, a 15 minute walk from the main venue. There will be plenty of people around during the conference to point you in the right direction and free bus tickets in case you don’t feel like walking.

The conference drinks reception will be held at the Manchester Museum in the newly refurbished Mammals Gallery. The conference dinner will take place in Manchester Town Hall. Both venues are striking examples of Victorian architecture and well worth exploring in between eating and drinking.

We hope you enjoy your time in the city of Manchester and wish you a pleasant stay.

Local Organising Committee

Geoff Parker
Steve Williams
John Waterton
Jo Naish
Laura Parkes
Ross Little
Alan Jackson

Administrative Team

Shelagh Stedman
Jane Kear
Cath Wright
Hannah Mansell

Special Thanks to:

Penny Hubbard
Caleb Roberts
Chris Rose
Chris Miller
David Morris
Gio Buonaccorsi
Rishma Vidyasagar
Scientific Programme

Wednesday 7th September

09:30 – 18:00 Registration open

IPEM MG-SIG/BC-ISMRF Joint Workshop

GRADIENTS AND THEIR BEHAVIOUR

11:00 – 11:05 Introduction – Prof. Iain Wilkinson University of Sheffield

11:05 – 11:35 Overview of gradient technology – Prof. Richard Bowtell University of Nottingham

11:35 – 11:55 Gradient performance assessment: test-objects – Dr Jennifer Macfarlane Ninewells Hospital, Dundee

11:55 – 12:15 Radiotherapy treatment planning and gradients – Prof. Martin Leach Institute of Cancer Research

12:15 – 12:45 Gradient manufacture: tolerance and calibration – Dr Paul Harvey Philips Healthcare, Best

12:45 – 13:00 Discussion

13:00 – 13:30 Lunch

Cancer MRI Workshop

STANDARDISATION ACROSS SITES

13:30 – 14:15 Prof. Martin Leach
Institute of Cancer Research
Advanced MRI in clinical cancer studies: Current status and problems with generalisation across centres

14:15 – 15:00 Prof. John Waterton
AstraZeneca
Role of MRI in cancer drug development

15:00 – 15:30 Coffee Break
Roy Gordon has worked in MRI since its earliest days. He did a PhD in Aberdeen University working on 1H spin relaxation times in normal and diseased excised biological tissues. After a post-doctoral fellowship at Kent University he joined the development group at Oxford Instruments in 1979 and thereafter became one of the founding employees of Oxford Research Systems working on the first dedicated systems for localized spectroscopy in animals. His work there included the first human tumour spectrum, novel methods for spectroscopic localization (eg topical magnetic resonance, Depth Pulses, PRESS, ISIS etc) and the development of MRI instruments for small animal imaging. In 1983 ORS was taken over by Bruker where he has remained ever since as part of the division developing in vivo systems. He has had important scientific collaborations with many of the world's luminary in vivo NMR groups, notably Oxford, Yale and Johns Hopkins and is a valued friend and colleague of many of the leading lights in applications of MRI and MRS in animal models. He has an almost unique perspective of the breadth and reach of NMR in vivo. Currently he is a Vice President of Bruker Biospin Corporation.

**Oral Session 1: Lung Imaging**

| 09:55 | O1 | Direct visualisation of collateral ventilation in COPD with hyperpolarised gas MRI  
Helen Marshall\(^1,2\), M.H. Deppe\(^1\), J. Parra-Robles\(^1\), S. Hillis\(^2\), S. Miller\(^2\), J. Watson\(^1\), D. A. Lipson\(^3\), R. Lawson\(^2\) and J. M. Wild\(^1\)  
\(^1\)Academic Radiology, University of Sheffield, \(^2\)Respiratory Medicine, Sheffield Teaching Hospitals NHS Trust, \(^3\)GlaxoSmithKline, King of Prussia, PA |
| 10:07 | O2 | Physiological modelling of a dynamic contrast-enhanced MRI extended time series in COPD  
Penny L. Hubbard\(^1,2\), G. J. Parker\(^1,2\), D. Singh\(^3\), E. Bondesson\(^4\), L. E. Olsson\(^4\), L. Wigström\(^4\), S. S. Young\(^5\) and J. H. Naish\(^1,2\)  
Imaging Science, School of Cancer and Enabling Sciences, The University of Manchester, \(^2\)The Biomedical Imaging Institute, The University of Manchester, \(^3\)University Hospital of South Manchester Foundation Trust, \(^4\)AstraZeneca R & D, Sweden, \(^5\)AstraZeneca R & D, UK |
Oral Session 2: Molecular Imaging

10:19  O3 Correlation between dynamic oxygen-enhanced MRI and quantitative CT in evaluation of chronic obstructive pulmonary disease: preliminary findings
Weijuan Zhang1,2, P. L. Hubbard1,2, E. Bondesson3, L. Wigström3, S. S. Young4, D. Singh5, G. J. Parker1,2 and J. H. Naish1,2
1Imaging Science, School of Cancer and Enabling Sciences, The University of Manchester, 2The Biomedical Imaging Institute, The University of Manchester, 3AstraZeneca R&D, Sweden, 4AstraZeneca R&D, UK, 5University Hospital of South Manchester Foundation Trust

10:31  O4 Imaging of dual 19F tracer gases for measurement of lung ventilation properties
Peter Thelwall1,2, C. Fox3, H. Walden3 and A. Fisher2
1Newcastle Magnetic Resonance Centre, Newcastle University, 2Institute of Cellular Medicine, Newcastle University, 3Cellular and Molecular Sciences, Northumbria University

10:45 – 11.10 Coffee break

Invited Speaker
11:10 – 11:40 Dr Richard Edden
John Hopkins University
Edited MRS of GABA: Inhibition in sensory processing

Richard Edden is Assistant Professor in the Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, where he also did a postdoctoral fellowship from 2005 to 2007. From 2007 to 2009, he was RCUK Academic Fellow in the Schools of Chemistry and Biosciences at Cardiff University. Both as a graduate and undergraduate, Dr Edden studied at Cambridge University in the Department of Chemistry (PhD research on small-molecule high-resolution NMR under Dr James Keeler).

Oral Session 2: Molecular Imaging

11:40  O5 pH mapping using exogenous CEST contrast agents: in vitro feasibility assessment
Fotios Savvopoulos1,2, R. Bendell1, R. Grundy2, D. Auer1 and H. Faas1
1Department of Radiological and Imaging Sciences, School of Clinical Sciences, 2Children’s Brain Tumour Research Centre, Queen’s Medical Centre, University of Nottingham

11:52  O6 A comparison of UTE k-space sampling techniques for the in vivo detection of total sodium at 3T
Frank Riemer1, B. S. Solanky1, M. Clemence2, D. Miller1, X. Golay3 and C. A. M. Wheeler-Kingshott1
1NMR Unit, Department of Neuroinflammation, UCL Institute of Neurology, London, 2Philips Clinical Science Group, Philips Healthcare, Guildford, UK, 3Department of Brain Repair and Rehabilitation, UCL Institute of Neurology, London

12:04  O7 Evolution of Na signal changes in the acute phase of stroke
Friedrich Wetterling1,2, I. M. Macrae3, L. Gallagher3 and A. J. Fagan1,4
1School of Physics, Trinity College, University of Dublin, Ireland, 2Computer Assisted Clinical Medicine, Medical Faculty Mannheim, University of Heidelberg, Germany, 3Glasgow Experimental MRI Centre, Division of Clinical Neuroscience, Faculty of Medicine, University of Glasgow, UK, 4Centre for Advanced Medical Imaging, St. James’s Hospital / Trinity College Dublin, Ireland
Prof. David Norris  
*University of Nijmegen*

fMRI at 7 T, what are the limits?

David Norris is a director of the Donders Centre for Cognitive Neuroimaging at the Radboud University in Nijmegen and of the Erwin L Hahn Institute for MRI at the University of Duisburg-Essen. He obtained his PhD from the University of Aberdeen and subsequently worked at the University of Bremen, and the Max-Planck-Institute for Human Cognitive and Brain Sciences in Leipzig, before taking up his current position in 2001. His research group concentrates on methods development for cognitive brain imaging, including high resolution fMRI, BOLD contrast mechanisms, pulse sequence development, and connectivity measures. He is a past president of ISMRM, and has chaired the annual program committee for both ISMRM and ESMRMB. He is one of the representatives of the European MR community to the European Union with respect to safety issues. He is a fellow of the Institute of Physics, ISMRM and ESMRMB.

**Oral Session 3: Novel Hardware and Methods**

15:00 O9 A travelling wave antenna with matched waveguide for head imaging at 7 T: Simulation results

_Daniel J. Lee¹ and P.M. Glover¹_

¹SPMMRC, University of Nottingham

15:12 O10 Generation of highly polarised materials for magnetic resonance using brute-force and low-field thermal mixing

_D. G. Gadian¹, K. S. Panesar², A. J. Perez Linde³, A. J. Horsewill², W. Köckenberger³ and John R. Owens-Bradley⁴_

¹Institute of Child Health, University College London, London, ²School of Physics & Astronomy, University of Nottingham, Nottingham, ³Sir Peter Mansfield MR Centre, School of Physics & Astronomy, University of Nottingham, Nottingham

15:24 O11 Steady-state motion-induced contrast using DANTE pulse trains: A novel approach to fast multi-slice 2D and multi-slab 3D black blood imaging

_Linquing Li¹ and P. Jezzard¹_

¹FMRIB Centre, Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford

15:36 O12 Decomposition of dynamic MR images with low-rank and sparse matrix separation

_Benjamin Trémoulihac¹, P. G. Batchelor², A. Menys³ and D. Atkinson³_

¹Centre for Medical Image Computing, University College London, ²Imaging Sciences and Biomedical Engineering, King’s College London, ³Centre for Medical Imaging, UCL Division of Medicine

15:50 – 16:10 Coffee break
Mara Cercignani is the Chair in Medical Physics at Brighton and Sussex Medical School. She obtained an MPhil at Leicester University in 1999, and a PhD at University College London in 2006. Before moving to Brighton and Sussex Medical School, she worked at San Raffaele Hospital in Milan, at the Institute of Neurology, in London, and at Santa Lucia Foundation, in Rome. Her research is focused on quantitative MRI techniques, such as relaxometry, diffusion MRI, magnetization transfer, and other emerging methods. She is currently Secretary of the Italian Chapter of the International Society for Magnetic Resonance in Medicine.

Oral Session 4: Neuroimaging 1

16:40 O13 Understanding neuro-vascular coupling: Are you BOLD enough?
Aneurin J. Kennerley¹, S. Harris², M. Bruyns-Haylett³, L. Boorman¹, Y. Zheng¹, M. Jones¹ and J. Berwick¹
¹SPiNSN, University of Sheffield, Sheffield, UK

16:52 O14 phMRI reveals an unusual effect of the antibiotic minocycline on cerebral haemodynamics
Duncan J. Hodkinson¹, D. Cash², S. R. Williams², J. F. W. Deakin³ and S. R. Williams¹
¹Imaging Science, Proteomics and Genomics Research Group, University of Manchester, ²Neuroimaging Research Group, Institute of Psychiatry, King’s College London, ³Neuroscience & Psychiatry Unit, University of Manchester

17:04 O15 Measuring bi-exponential transverse relaxation of the ASL signal at 9.4T to estimate arterial oxygen saturation and the time of exchange of labelled blood water into cortical brain tissue
Jack A. Wells¹, B. M. Siow¹, M. F. Lythgoe¹* and D. L. Thomas²*
¹UCL Centre for Advanced Biomedical Imaging, Division of Medicine and Institute of Child Health, University College London, UK, ²Department of Brain Repair and Rehabilitation, UCL Institute of Neurology, Queen Square, London

17:16 O16 Increased muscle pH at rest is related to decreased cerebral blood flow (CBF) in patients with chronic fatigue syndrome
Jiabao He¹, K. G. Hollingsworth¹, J. L. Newton²* and A. M. Blamire¹*
¹Newcastle Magnetic Resonance Centre, ²Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne

17:30 – 18:00 British Chapter ISMRM Annual General Meeting
Chair – Prof. David Gadian
Institute of Child Health and British Chapter Management Committee

19:30 Drinks Reception and Dinner at Manchester Town Hall
**Friday 9th September**

08:30 – 17:30  Registration open

**Invited Speaker**
09:00 – 09:30  Prof. Rene Botnar  
*Kings College London*  
MRI of coronary atherosclerosis: from mouse to man

Rene Botnar received his PhD from the ETH Zurich. From 1996-97 he was a Research Associate in the Department of Radiology at the University Zurich. In 1997, he joined the Cardiac MR Center at the Beth Israel Deaconess Medical Center and Harvard Medical School. In 2003, Prof. Botnar became the Scientific Director of the Cardiac MR Center at the Beth Israel Deaconess Medical Center and was appointed to Assistant Professor of Medicine at Harvard Medical School, Boston, USA. In 2005, Prof. Botnar accepted a Professorship of Biomedical Imaging at the Technische Universität München where he set up a cardiac MR program with a special focus on pre-clinical and translational multi modality imaging. His work was funded by the German Ministry of Research and Education, by the German Excellence Program, and by industry. At the end of 2007, he joined the Imaging Sciences Division at King’s College London where he is currently Chair of Cardiovascular Imaging. Prof. Botnar is a member of the International Society of Magnetic Resonance Imaging in Medicine and the Society for Cardiovascular Magnetic Resonance; he was a board member of Society for Cardiovascular Magnetic Resonance from 2008–2011 and is on the scientific advisory board of the High Risk Plaque initiative. He has authored more than 130 peer-reviewed original papers, 15 review articles and 20 book chapters in the field of CMR. He also holds 4 patents and is an editor of a CMR textbook on Cardiovascular Magnetic Resonance Imaging.

**Oral Session 5: Cardiac Imaging**

09:30  O17  Left ventricular torsion, energetics and diastolic function in normal human ageing  
**Kieren G. Hollingsworth**1, A. M. Blamire1, B. D. Keavney2 and G. A. MacGowan2  
1Newcastle Magnetic Resonance Centre, Newcastle University, 2Institute of Genetic Medicine, Newcastle University

09:42  O18  Equilibrium contrast MR as a sensitive marker of amyloidosis  
**Adrienne Campbell**1,2, A. N. Price1, S. Ellmerich1, J. P. Simons4, R. Al-Shawi6, P. N. Hawkins6, R. J. Ordidge7, M. B. Pepys4, J. C. Moon5 and M. F. Lythgoe1  
1Centre for Advanced Biomedical Imaging (CABI), University College London, 2Department of Medical Physics and Bioengineering, University College London, 3Robert Steiner MRI Unit, Imaging Sciences Department, Hammersmith Hospital, Imperial College London, 4Center for Amyloidosis and Acute Phase Proteins, Division of Medicine, University College London, 5Heart Hospital and Division of Medicine, University College London

09:54  O19  Optimisation of murine cardiac hyperpolarized magnetic resonance spectroscopy with application in a novel cardiac specific fumarate hydratase knockout mouse  
**Michael S. Dodd**1,2, V. Ball5, B. Schuler5, D. Ball3, H. Ashrafian5, H. Watkins5, K. Clarke1 and D. J. Tyler1  
1Cardiac Metabolism Research Group, 2Cardiovascular Medicine, University of Oxford, Oxford, UK

10:06  O20  Assessment of PDK inhibition in the isolated perfused heart using hyperpolarized pyruvate  
**Lydia Le Page**1, D. Ball3, M. Dodd5, V. Ball5, H. H. B. Jones5, E. Johansson3 and D. Tyler1  
1Department of Physiology, Anatomy and Genetics, Oxford University, Oxford, 2AstraZeneca, Alderley Park, UK, 3AstraZeneca, Mölndal, Sweden

10:20 – 10:45  **Coffee break**
Invited Speaker
10:45 – 11:15  Dr Richard Hodgson
University of Leeds
Ultrashort echo time MRI of musculoskeletal tissues

Oral Session 6: Body Imaging

11:15  O21  Can MR provide biomarkers of disease progression in a weight-bearing joint in rheumatoid arthritis?
Mike A. Bowes, G. R. Vincent, C. Wolstenholme, J. C. Waterton, R. A. Maciewicz, C. J. Taylor and C. E. Hutchinson
*current address: University of Warwick

11:27  O22  Quantification of ductus arteriosus shunt volume in preterm infants using phase contrast CMR
Kathryn M. Broadhouse, A. N. Price, G. Durighel, D. J. Cox, A. D. Edwards, J. V. Hajnal and A. M. Groves
Imaging Sciences Department, MRC Clinical Sciences Centre, Imperial College, Hammersmith Hospital, London

11:39  O23  Oxygen-enhanced MRI in the human placenta
Isaac Huen, D. M. Morris, C. Wright, C. P. Sibley, E. Johnstone and J. H. Naish
Imaging Sciences and Biomedical Engineering, School of Cancer and Enabling Sciences, University of Manchester, The Biomedical Imaging Institute, University of Manchester, Maternal & Fetal Health Research Centre, University of Manchester

11:51  O24  An investigation into the effect of a 100% oxygen gas challenge on renal blood flow
Katherine F. Holliday, G. J. M. Parker, M. S. Dobbs and J. H. Naish
Imaging Sciences and Biomedical Engineering, School of Cancer and Enabling Sciences, University of Manchester, Manchester, The Biomedical Imaging Institute, The University of Manchester

12:05 – 14:00  Lunch, Posters and Technical Exhibition
Invited Speaker
14:00 – 14:30 Prof. Martin Leach
CRUK and EPSRC Cancer Imaging Centre Institute of Cancer Research and Royal Marsden NHS Foundation Trust
Modulating the cancer metabolome to postpone cell death

Martin Leach is Co Director of the CR-UK and EPSRC Cancer Imaging Centre at the Institute of Cancer Research and the Royal Marsden Hospital (University of London), Joint Chairman of the Section of Magnetic Resonance and Professor of Physics as Applied to Medicine. He joined the Institute of Cancer Research and the Royal Marsden in 1978 after PhD research in Physics at Birmingham. Since 1986 he has developed a programme of translational research and supported the MR Service to the Royal Marsden. Current areas of interest include development and application of dynamic nuclear polarisation, identification of MR biomarkers of drug action in preclinical and clinical studies, methods of assessing vascular function in trials using MR, using MRI to screen for breast cancer. He is a Fellow of the Academy of Polarisation, identification of MR biomarkers of drug action in preclinical and clinical studies, methods of assessing the MR Service to the Royal Marsden. Current areas of interest include development and application of translational research and supported the MR Service to the Royal Marsden. Current areas of interest include development and application of dynamic nuclear polarisation, identification of MR biomarkers of drug action in preclinical and clinical studies, methods of assessing vascular function in trials using MR, using MRI to screen for breast cancer. He is a Fellow of the Academy of Medical Sciences, Fellow of the ISMRM and is a National Institute of Health Research (NIHR) Senior Investigator. He is currently Chair of the ECMC Imaging Steering Committee.

Oral Session 7: Cancer
14:30  O25 ADC change following radiotherapy in LoVo tumour xenografts reflects significant changes in necrosis, not apoptosis
Daniel Burke1, K. J. Williams2, J. C. Waterton1, M. Babur2 and J. P. B. O’Connor1
1Imaging Sciences, Manchester Academic Health Sciences Centre, The University of Manchester, 2School of Pharmacy, The University of Manchester

14:42  O26 Investigating tumour interstitial convection currents using extra-vascular convection (EVAC) MRI
Simon Walker-Samuel1, R. Ramasawmy1, J. Wells1, B. Siow1, P. Johnson2, B. Pedley3 and M. F. Lythgoe1
1UCL Centre for Advanced Biomedical Imaging, Department of Medicine and Institute of Child Health, University College London, London, 2Institute of Cancer, University College London, London

14:54  O27 1H magnetic resonance spectroscopy for characterising medulloblastomas in children
Simrandip K. Gill1,2, M. Wilson1,2, N. P. Davies1,2,3, Y. Sun1,2, K. Natarajan1,2,3, L. MacPherson1,2, T. N. Arvanitis2,4 and A. C. Peet1,2
1Cancer Sciences, University of Birmingham, Birmingham, 2Birmingham Children’s Hospital, Birmingham, 3Medical Imaging and Physics, University Hospital Birmingham, 4Electrical, Electronic and Computer Engineering, University of Birmingham

15:06  O28 Native T1 is a generic imaging biomarker of response to chemotherapy in neuroblastoma
Yann Jamin1, E. R. Cullis2, L. Vaughan2, H. Webber2, J. K. R. Boult1, L. C. Baker1, D.-M. Koh1, L. Chiesier2 and S. P. Robinson1
1CRUK and EPSRC Cancer Imaging Centre, 2Paediatric Oncology, The Institute of Cancer Research and Royal Marsden NHS Trust

15:20 – 15:45 Coffee break
Invited Speaker
15:45 – 16:15  Dr Tim Behrens
University of Oxford
Connections and connectomes in the human brain

Tim Behrens is a Wellcome Fellow at the FMRIB centre in Oxford. He works on brain connectivity and the relation between brain connectivity and regional brain function, with a specific interest in regions that support value-guided decision-making. He is a member of two recent high profile projects - The European Connect project, and the NIH Human Connectome Project, that aim to advance diffusion imaging techniques to enable comprehensive mapping of human brain connections at the macro-scale.

Oral Session 8: Neuroimaging 2

16:15  O29  Assessing high frequency functional connectivity networks
Thomas W. Allan¹, M. J. Brookes², S. T. Francis¹ and P. A. Gowland¹
¹Sir Peter Mansfield Magnetic Resonance Centre, School of Physics and Astronomy, University of Nottingham

16:27  O30  Association between brain atrophy and white matter lesions in older people – a case study of The Lothian Birth Cohort 1936
Benjamin S. Aribisala¹, M. C. Valdés Hernández¹, N. A. Royle¹, S. M. Maniega¹, M. E. Bastin¹, I. J. Deary² and J. M. Wardlaw¹
¹Brain Research Imaging Centre, University of Edinburgh, ²Department of Psychology, University of Edinburgh

16:39  O31  Investigating ncMRI in the human arm using transcutaneous electrical nerve stimulation
Heather Hilliard¹, S. Anwar², S. Reynolds¹, G. Cook² and M. Paley¹
¹Academic Radiology, ²Communications Research Group, University of Sheffield

16:51  O32  Propagation of probabilistic tractography of the optic radiation for neuronavigation in epilepsy surgery
Gavin P. Winston¹, P. Daga², J. Stretton¹, M. Modat², M. R. Symms¹, A. W. McEvoy³, S. Ourselin² and J. S. Duncan¹
¹Epilepsy Society MRI Unit & Department of Clinical and Experimental Epilepsy, UCL Institute of Neurology, ²UCL Centre for Medical Image Computing, ³Department of Neurosurgery, National Hospital for Neurology and Neurosurgery

17:05 – 17:30  Awards of AstraZeneca and Mansfield Prizes

17:30  Close