P-01 - Fast Field Cycling Nuclear Magnetic Resonance: A Novel Tool for the Detection and Characterisation of Breast Cancer

Katie Hanna[a], Ehab Husain[b], Yazan Masannat[b], Rasha Abu-Eid[a], Valerie Speirs[a] and Lionel Broche[a]
[a]University of Aberdeen, Aberdeen, United Kingdom
[b]Aberdeen Royal Infirmary, Aberdeen, United Kingdom

P-02 - Fast Field-Cycling imaging identifies prostate cancer at magnetic field strength below 200 mT: a study on ex vivo prostate cancer

Vasiliki Mallikourti[a], Amnah Alamri[a] , Jenna Gregory[b], Sinclair Dundas[c], Lionel M. Broche[a]
[a]University of Aberdeen, Aberdeen, United Kingdom.
[b]Institute of Medical Sciences, University of Aberdeen, Aberdeen, United Kingdom.
[c]Pathology Unit, Aberdeen Royal Infirmary, Aberdeen, United Kingdom.

P-03 - Comparison of pre-processing strategies to inform data-driven classification of small vessel disease patients using field-cycling MRI

Graeme Stewart[1], Vasiliki Mallikourti[2], James Ross[2], Lionel M. Broche[2], Gordon D. Waiter[2], Mary-Joan MacLeod[2], Nir Oren[1, ‡], Nicholas Senn[2, ‡]
[‡] Indicates joint last author, [1] School of Natural and Computing Sciences, University of Aberdeen, UK
[2] School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, UK

P-04 - Susceptibility weighted imaging of the placenta

Amy Turnbull[a], George Hutchinson[a], Penny Gowland[a],
[a] SPMIC, University of Nottingham

P-05 - Quantitative Susceptibility Mapping in the Head and Neck: An Optimized and Repeatable Reconstruction Pipeline

Matthew T. Cherukara[1], Karin Shmueli[1]
[1]Medical Physics and Biomedical Engineering, University College London, London, UK

P-06 - CSF and Whole Brain Referencing has Mixed Efficacy in Head and Neck versus Whole Brain Quantitative Susceptibility Mapping

Matthew T. Cherukara[1], Karin Shmueli[1]
[1]Medical Physics and Biomedical Engineering, University College London, London, UK

P-07 - Impact of reference region choice on statistical analysis in QSM

Patrick Fuchs[a], Carlos Milovic[b], Oliver C Kiersnowski[a], Karin Shmueli[a]
[a]Department of Medical Physics and Biomedical Engineering, University College London, London, UK.
[b]School of Electrical Egineering, Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile.

P-08 - Investigating 'Inverse' Positive Activations in functional quantitative susceptibility mapping (fQSM)

Jannette Nassar[1], Oliver C. Kiersnowski[1], Patrick Fuchs[1], Karin Shmueli[1]
[1]Department of Medical Physics and Biomedical Engineering, University College London, UK

P-09 - Comparison of Bipolar Gradient Phase Offset Correction Methods for Quantitative Susceptibility Mapping

Mitchel Lee[a], Fenella Kirkham[b], Karin Shmueli[a]

[a]Department of Medical Physics and Biomedical Engineering, University College London, London, United Kingdom
[b]Imaging and Biophysics, Developmental Neurosciences, UCL Great Ormond Street Institute of Child Health, London, United Kingdom

P-10 - Investigating magnetic susceptibility differences in prostate cancer lesions

Laxmi Muralidharan[a], Manju Mathew[b], Adam Retter[b], Shonit Punwani[b], Karin Shmueli[a]
[a]Department of Medical Physics and Biomedical Engineering, University College London, United Kingdom
[b]Centre for Medical Imaging, University College London, United Kingdom

P-11 - Improving phase-based quantitative conductivity mapping using least squares minimum norm solution

Jierong Luo[a], Oriana Arsenov[a], Karin Shmueli[a]
[a]Department of Medical Physics and Biomedical Engineering, University College London, London, UK.

P-12 - Modelling Magnetization Transfer in Segmented ZTE Pulse Sequences

Oliver Pinna[a], Gareth Barker[a], Tobias C Wood[a]
[a] Department of Neuroimaging, King's College London, IoPPN, DeCrespigny Park, Camberwell, SE5 8AF

P-13 - Streamlining Sequence Parameter Comparison and Protocol Optimisation: Leveraging Version Control and Power BI

Yukai Zou[a,b], Mobeen Ali[a], Chris Everitt[c], Angela Darekar[a,b]
[a]Department of Medical Physics, University Hospital Southampton NHS Foundation Trust
[b]School of Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton
[c]Cross Sectional Imaging Department, Radiology, University Hospital Southampton NHS Foundation Trust

P-14 - Machine learning based characterisation of glioma shows best performance with post-contrast T1 and diffusion imaging

Gabriel Oliveira-Stahl[a], Marianna Inglese[b,c], Steffi Thust[d,e,f,g], Matthew Grech-Sollars[h, i]
[a] Institute of Neurology, University College London, UK
[b] Department of Biomedicine and Prevention, University of Rome Tor Vergata, Rome, Italy
[c] Department of Surgery and Cancer, Imperial College London, London, UK
[d] Precision Imaging Beacon, Medical School, University of Nottingham, UK
[e] Sir Peter Mansfield Imaging Centre, School of Physics and Astronomy, University of Nottingham, UK
[f] Radiology Department, Queen's Medical Centre, Nottingham University Hospitals NHS Trust
[g] Department of Brain Rehabilitation and Repair, Institute of Neurology, University College London, UK
[h] Lysholm Department of Neuroradiology, National Hospital for Neurology and Neurosurgery, University College London Hospitals NHS Foundation Trust, London, UK
[i] Department of Computer Science, University College London, UK

P-15 - Impact of diffusion-orientation and phase encoding on EPI image distortion and ADC bias

Prashant Nair[a], Rosie Goodburn[a] , Bastien Lecoeur[a], Uwe Oelfke[a], Andreas Wetscherek[a]
[a]Institute of Cancer Research, 15 Cotswold Rd, Sutton, London

P-16 - Hippocampal subfield segmentation of super-resolved (resolution-enhanced) diffusion MRI validated with high-resolution T1-weighted imaging

Bastien BRUN[a,b], Prince Nwaubani[c], Matteo Figini[d], Bradley Karat[e], Daniel C Alexander[d], Alessandro Colasanti[c], Mara Cercignani[b]

[a]Polytech Marseille Department of Biomedical Engineering, Aix-Marseille University, Marseille, France
[b]Cardiff University Brain Research Imaging Center, Cardiff University, Cardiff, United Kingdom
[c]Brighton and Sussex Medical School, University of Sussex, Brighton, United Kingdom
[d]Centre for Medical image Computing and Department of Computer Science, University College London, London, United Kingdom
[e]Schulich School of Medicine and Dentistry, University of Western Ontario, London, Canada

P-17 - **Optimisation of T1ρ imaging for detecting cardiac fibrosis**

Liene Balode[a], Dana Dawson[a], James Ross [a]
[a]University of Aberdeen, Aberdeen, UK

P-18 - **Magnetic Resonance Imaging as a Therapeutic Device: Utilization of Iron Oxide Nanoparticles (SPIONs) for Tumor and Cancer Treatment**

Sidharth Vinod[a], Silpamol Jaimon[b], Shazna Ashraf K K[c] Amisha Sabu[d]
[a,c]University of Aberdeen, Kings College, Aberdeen, AB24 3FX
[b,d]Swansea University, Singleton Park, Sketty, Swansea SA2 8PP

P-19 - **Numerical Modelling of MRI-related RF Power Deposition of Orthopaedic Implants -How Detailed do the Implant Models have to be?**

Michael Taylor[a], R Stephen Nicholas[b, c]
[a]University of Aberdeen, King's College, Aberdeen AB24 3FX Scotland, UK
[b]University of Dundee, Nethergate, Dundee DD1 4HN Scotland, UK
[c]Ninewells Hospital and Medical School, NHS Tayside, Dundee DD1 9SY Scotland, UK

P-20 - **Universal Excitation Pulses for a Parallel-Transmit Head Coil at 7T**

Yiling Hu[a], Belinda Ding[a,b], Shajan Gunamony[a,c], David A. Porter[a], Sydney N. Williams[a]
[a]Imaging Centre of Excellence, University of Glasgow, Glasgow, UK
[b]Siemens Healthcare Ltd., Frimley, UK
[c]MR CoilTech Limited, Glasgow, UK

P-21 - **Investigating the impact of complementary microstructural phenomena on diffusion MRI measurements**

Zhiyu Zheng[a], Karla Miller[a], Benjamin Tendler[a], Michiel Cottaar[a]
[a]Wellcome Centre for Integrative Neuroimaging, University of Oxford, Oxford, United Kingdom

P-22 - **3D Distortion Compensation of Low Field MR Images Using Soft Registration of a Scan of a 3D Printed Phantom to a Simulated Scan of the Same Phantom**

Harry Lanz[a], Karyn E Chappell[a], Mihailo Ristic[a], John V M McGinley[a]
[a]Imperial College London, Exhibition Rd, South Kensington, London SW7 2BX

P-23 - Do anthropomorphic phantoms enhance compliance with the professional bodies' quality assurance guidelines for MRI in radiotherapy

Meshal Alzahrani[a], David Broadbent[b], Irvin Teh[a], Bashar Al-Qaisieh[b], Adrian Walker[c], Rachel Lamb[c], and Richard Speight[b]

[a]Biomedical Imaging Science Department, University of Leeds, Leeds, United Kingdom
[b]Department of Medical Physics and Engineering, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom
[c]Leeds Test Objects, Boroughbridge, United Kingdom

P-24 - Ensuring Accurate Stereotactic Planning During Intraoperative MRI through RF Coil QA

James Thorpe [a], Rafal Panek [a,b], Paul Morgan [a,b]

[a] Nottingham University Hospitals NHS Trust, Medical Physics, Nottingham, United Kingdom
[b] University of Nottingham, School of Medicine, Nottingham, United Kingdom

P-25 - 3D-printable phantoms for quantitative dynamic contrast-enhanced MRI

M. Sulaiman Sarwar[a,b], Antoine Vallatos[a,c], Rachaita Podder[c], Cher Hon Lau[d], Adam Waldman[a,e], Simone Dimartino[b], Michael J. Thrippleton[a,e]

[a]Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, UK
[b]Institute for Bioengineering, University of Edinburgh, Edinburgh, UK
[c]Glasgow Experimental MRI Centre, School of Psychology and Neuroscience, University of Glasgow, Glasgow, UK
[d]Institute for Materials and Processes, University of Edinburgh, Edinburgh, UK
[e]Edinburgh Imaging, Edinburgh, UK

P-26 - A dual-frequency ^{1}H/^{19}F body coil array at 3 Tesla

Paul McElhinney[1], Sarah Allwood-Spiers[2], Graeme Keith[1], Belinda Ding[3], David Brennan[4], Natasha Fullerton[2], Celestine Santosh[2,4], David Porter[1], Shajan Gunamony[1,5]

[1]Imaging Centre of Excellence, University of Glasgow, Glasgow, Scotland; [2]NHS Greater Glasgow & Clyde, Glasgow, United Kingdom; [3]Siemens Healthcare Limited, Frimley, United Kingdom; [4]Aurum Biosciences Limited, Glasgow, United Kingdom; [5]MR CoilTech Limited, Glasgow, United Kingdom