

## BIC-ISMRM Meeting, Brighton 2025: Preliminary Programme: Day 1

9:00-9:30	Registration + refreshments
9:30-9:45	Welcome
9:45-11:00	<p><b>Oral Session 1: MRI and MRS: Brain Physiology</b> Moderator + introduction to the session: TBD</p> <p>Elizabeth J. Fear, University of Chieti-Pescara, Italy: <i>Evaluation of Single Breath-Hold Calibrated fMRI for Baseline CMRO<sub>2</sub> and OEF Measurement in Grey Matter</i></p> <p>Jierong Luo, University College London <i>Resting-State Functional Electrical Properties Tomography (rsfEPT)</i></p> <p>Kevin McNally, University College London <i>Complex-Valued Magnetic Resonance Fingerprinting for Simultaneous Estimation of Magnetic Field Perturbations and Transverse Relaxation</i></p> <p>Ferrida Ponce, Bangor University <i>Regional Neurometabolic Responses to Intermittent Hypoxia</i></p> <p>Jiri Benacek, Cardiff University <i>Enhancing temporal resolution of fMRI data through multi-modal data fusion with paired MEG measurements using machine learning</i></p>
11:00-11:30	Break + refreshments + <b>posters</b>
11:30-12:45	<p><b>Oral Session 2: MRI: Image Analysis and Machine Learning</b> Moderator + introduction to the session: TBD</p> <p>Param Ahir, Trinity College, Dublin <i>Deep Spatiotemporal Neural Networks and tSNR-Guided Frame Retention for Frame Quality Classification in Infant Awake fMRI</i></p> <p>Aisling E Fothergill, University of Manchester <i>Impact of Bayesian-inference vs least squares fitting on the repeatability of ASL perfusion estimates</i></p> <p>Houriehsadat Jamalidinan, University of Calgary, Alberta, Canada <i>Dual Output Modes of 4DFlowNet Highlight Super-Resolution Advantages for Hemodynamic Profiling in Bicuspid Aortic Valve</i></p> <p>Jacob Turnbull, University of Oxford <i>Addressing bias in FreeSurfer imaging-derived phenotypes arising from T2-FLAIR scan omission in UK Biobank using harmonization approaches</i></p> <p>Zi Ye, Trinity College, Dublin <i>RWKV-MoEst: An RWKV-based 4D fMRI Motion Estimation Model</i></p>
12:45-14:00	Lunch, <b>posters and exhibits</b>
14:00-15:00	Gold sponsor presentation (1)
15:00-15:15	Short Break

15:15-16:30	<p><b>Oral Session 3: MRI and MRS: Preclinical Studies and Cancer</b></p> <p>Moderator + introduction to the session: TBD</p> <p>Michael Law, Cardiff University <i>Microstructural imaging of Glioblastoma using ultra-strong gradient diffusion MRI</i></p> <p>Tareq Alrashidi, University of Liverpool <i><sup>1</sup>H MR spectroscopy and IVIM-DWI to evaluate the effects of lonidamine and temozolomide treatment in a mouse model of glioblastoma</i></p> <p>Maëliss Jallais, Cardiff University <i>Combining single and double diffusion encoding for improved dendritic spine density estimation with magnetic resonance spectroscopy</i></p> <p>Suchit Kumar, University College London <i>Investigation of Gradient-Induced Artefacts in Simultaneous Graphene-Array Electrophysiology-fMRI in 7T Preclinical MRI</i></p> <p>Friedrich Wetterling, Trinity College, Dublin <i>High-resolution T1-weighted magnetic resonance imaging of myelinated fibre tracts in the caudate putamen of an ex vivo murine model at 9.4T</i></p>
16:30-17:00	Break + refreshments + <b>posters</b>
17:00-17:45	<b>Bill Moore Lecture: Prof Mark Lythgoe, University College London</b>
19:30	Conference Dinner

## BIC-ISMRM Meeting, Brighton 2025: Preliminary Programme: Day 2

9:00-9:30	Refreshments
9:30-10:45	<p><b>Oral Session 4: MRI, MRS and other modalities: Neuro</b> Moderator + introduction to the session: TBD</p> <p>Laith Alexander, King's College, London <i>Neural correlates of negative autobiographical memory and rumination: a personalised fMRI and pCASL study in healthy volunteers</i></p> <p>Gemma Brownbill, Brighton and Sussex Medical School <i>Altered Brain Energy Metabolism in Multiple Sclerosis: Elevated Lactate and Impaired Creatine Response in the Anterior Cingulate Cortex Following Exercise-Induced Fatigue</i></p> <p>Daniel Cocking, University of Nottingham <i>Time-Resolved Glutamate Responses During Working Memory via a Mixed Block/Event-Related 1H MRS Design</i></p> <p>Elizabeth Davies, University of Manchester <i>Regional ATT, but not CBF, Correlates with Amyloid Burden in Early Dementia: Insights from a Multimodal Imaging Exploration</i></p> <p>Svetla Manolova, Cardiff University <i>Investigating Microstructural Determinants of Propagation Delays: a Multimodal MEG-MRI study</i></p>
10:45-11:15	Break + refreshments + <b>posters</b>
11:15-12:30	<p><b>Oral Session 5: Hardware, pulse and protocol design</b> Moderator + introduction to the session: TBD</p> <p>Finn Aubrey Conboy, University of Sussex <i>Enhanced SNR in Ultra-Low Field MRI using novel Composite Refocusing Pulses</i></p> <p>Alice Conner, Balliol College, University of Oxford <i>Accelerated Bloch-Siegert B1+ Mapping using Concentric Ring 31P-MRSI at 7T</i></p> <p>Philippa Sha, University College London <i>Generating a Novel Digital Phantom for Simultaneous QSM and EPT</i></p> <p>Kadir Şimşek, Cardiff University <i>TASK-DRIVEN Experimental Design for Protocol Optimization of Ultra-high Gradient Strength Diffusion-weighted MRI Measurements</i></p> <p>Chia-Yin Wu, University of Glasgow <i>Improving transmit magnetic field homogeneity using a neurovascular head and neck coil with tailored parallel transmission pulses</i></p>
12:30-13:30	Lunch, posters and exhibits

13:30-14:00	BIC-ISMRM Annual General Meeting
14:00-15:00	Gold sponsor presentation (2)
15:00-15:15	Short Break
15:15-16:30	<p><b>Oral Session 6: Body MRI and MRS</b></p> <p>Moderator + introduction to the session: TBD</p> <p>Mueed Azhar, University of Cambridge  <i>Non-invasive 2H-MRS reveals increased liver fat from de novo lipogenesis in South Asians compared with Europeans</i></p> <p>Dominic Harrison, University of Newcastle  <i>Development of high-resolution 19F-MRI of inhaled perfluoropropane using a 6-channel receive array coil with compressed sensing-parallel imaging</i></p> <p>Klara Mišák, University College London  <i>Sequence-Specific Geometric Distortions in Breast MRI at 3T: A Phantom-Based Analysis</i></p> <p>Eve S. Shalom, Perspectum, Oxford  <i>Repeatability metrics for automatically derived quantitative pancreatic MRI measures</i></p> <p>Anna Griffith, University of Sheffield  <i>What is the effect of a breath-hold on renal BOLD MRI scans?</i></p>
16:30-17:00	Awards and close

## BIC-ISMRM Meeting, Brighton 2025: Preliminary Programme: Posters

Mitchel Lee, University College London

*Altered Resting State Ventrolateral Periaqueductal Grey Functional Connectivity in Sickle Cell Anaemia*

Kylie Yeung, University of Oxford

*Off-Resonance Correction for Hyperpolarized Xenon-129 Imaging with Integrated B0 Mapping and Pinv-Recon*

Belinda Ding, University Hospital Birmingham NHS Foundation Trust

*Feasibility of using convolutional neural network for automated low-contrast detectability in MRI QA*

Zaeema Fatima, Cardiff University

*Comparison and validation of Two automated lesion segmentation tools*

Thierry M. Guihéneuf, University of Oxford

*Comparative Performance of T1, T2 and Fat Fraction Mapping in Bone Marrow at 3 Tesla*

Elise Gwyther, Cardiff University

*Temporal Diffusion Ratio to Map Regions of Restricted Diffusion in Human Brain Metastases*

Claire Holland, University of Manchester

*Evolution of White Matter Hyperintensities and the impact of acute ischaemic Stroke*

Yiling Hu, University of Glasgow

*Image registration for real-time deep learning-based rigid motion correction at 7T*

Zoona Javed, University of Sheffield

*Repeatability of  $^{31}\text{P}$  CSI metabolite quantification: A voxel-wise analysis of the thalamus and the postcentral gyrus*

Olivia A Jones, University of Manchester

*DCE-MRI measurements of blood-brain barrier permeability in chronic ischaemic stroke*

Zhuang Liu, University of Oxford

*Optimization of  $[2-^{13}\text{C}]\text{Pyruvate}$  Hyperpolarization Via the Addition of Gadolinium*

Yuchen Ma, Perspectum, Oxford

*Comparison of segmentation-based and ROI-based quantification of pancreatic PDFF*

Klara Mišák, University College London

*Evaluating the Stability and MRI Relaxation Properties of Alginate for Breast Phantom Development*

Alex Nagle, Brighton and Sussex Medical School

*Using functional MRI neurofeedback to modulate self-blame in major depressive disorder.*

Stephen Naulls, Brighton and Sussex Medical School

*Chemsex and the Brain: Interim Findings from a Multimodal Pilot Neuroimaging Study*

Qin Li, Cardiff University

*Coupled grey matter BOLD-CSF oscillations measured at 7T during wake and sleep.*

Jan Sedlacik, Imperial College, London

*Temporal phase unwrapping of free-running 5D phase-contrast flow MRI by using cardiac phases reconstructed with high temporal resolution*

Philippa Sha, University College London

*Investigating the Repeatability of Phase-Based Magnetic Resonance Electrical Properties Tomography (EPT) in the Human Brain*

Abi Spicer, University of Nottingham

*Variability in  $^{13}\text{C}$  MRS measurement of Liver Glycogen in Children*

Neslihan Isleyen, The Royal London Hospital

*MRI Fun Day: Pilot Study of a Paediatric-Focused Educational Event*

Yirun Wang, University College London

*Optimising phase-based magnetic resonance electrical properties tomography (EPT) for multi-parametric mapping (MPM) MRI acquisitions in the brain*

Benjamin LB Wilson, University of Sheffield

*Feasibility of Dissolved-Phase Hyperpolarised  $^{129}\text{Xe}$  MRI at 0.5 T*

Mehmet N. Yildirim, Cardiff University

*Qualitative Comparison of Harmonic and Transient Excitations in a Finite Element Brain Model for Magnetic Resonance Elastography*

Yuxin Weng, University College London

*Comparative Evaluation of Traditional and Deep Learning-Based Total Intracranial Volume Estimation Methods in Alzheimer's Disease and Cognitively Normal Brain MRI*

James Robertson, King's College London

*Comparing Standard and Tensor-based MP-PCA Complex Denoising Performance for a Highly Sampled Diffusion-Relaxometry Dataset*