BIC-ISMRM 2022 – Programme

"Translating Imaging Physics to the Bedside"

Thursday 8th Sept 2022

09:45 – 10:15:   Registration

10:15 – 10:30:   Welcome

10:30 – 11:00:   Invited Speaker
   "Parallel transmit MRI at high and low(er) fields"
   Dr. Shaihan Malik, King's College London

11:00 – 12:30:   Proffered Talks – Session 1

11:00 – 11:15:   T01 – *Nejat Karadeniz, King's College London*
   Comparison of the transmit performance and Local SAR for multi-row parallel transmit coil arrays at 3 Tesla

11:15 – 11:30:   T02 – *Rosie Goodburn, Institute of Cancer Research*
   Towards 4D Synthetic CT for Adaptive MR-guided Radiotherapy of Lung Cancer on the MR-Linac

11:30 – 11:45:   T03 – *Kangwa Alex Nkonde, University of Aberdeen*
   Repeatability and reliability of quantitative T1 and T2 texture features of fresh breast tumour specimens in formalin at 3T

11:45 – 12:00:   T04 – *Yazan Ayoub, University of Aberdeen*
   Microcalcification Detection and Classification in Breast Cancer using Ultrashort Echo Time

12:00 – 12:15:   T05 – *Catriona H. E. Rooney, University of Oxford*
   Effect of Radical Concentration and Structure on the Hyperpolarization of Silicon Nanoparticles using Dynamic Nuclear Polarization

12:15 – 12:30:   T06 – *M. Neal, Newcastle University*
   F-MRI of pulmonary ventilation: Assessment of response to treatment in asthma and COPD

12:30 – 13:30:   Lunch

13:30 – 14:00:   Invited Speaker
   "Preclinical Imaging – understanding ischemic stroke and ageing"
   Prof. Claire Gibson, University of Nottingham

14:00 – 15:30:   Proffered Talks – Session 2

14:00 – 14:15:   T07 – *Elizabeth Powell, University College London*
Blood-brain barrier water exchange estimation using contrast-enhanced ASL

14:15 – 14:30:   T09 – Melissa E. Wright, *CUBRIC, Cardiff University*
Cerebrovascular function across the menstrual cycle

14:30 – 14:45:   T10 –*Qijia Shen, University of Oxford*
Efficient 3D cone trajectory design for improved combined angiographic, structural and perfusion imaging using arterial spin labelling

14:45 – 15:00:   T11 – *Alaa Alghanimy, University of Glasgow*
The effect of a novel AQP4 facilitator, TGN-073, on glymphatic transport captured by diffusion MRI and DCE-MRI

15:00 – 15:15:   T12 – *Brooke Tornifoglio, Trinity College Dublin*
Mechanical and microstructural insight into atherosclerotic plaques – an ex vivo DTI study

15:15 – 15:30:   T16 – *Bleddyn Woodward, CUBRIC, Cardiff University*
Implementation of a convolutional neural network for brainstem landmark detection and co-registration

15:30 – 16:00:   Refreshments

16:00 – 16:45:   **Bill Moore Lecture**
"Challenge-led versus discovery research
for clinical impact"
Prof. Dorothee Auer, University of Nottingham

16:45 – 17:30:   Power Pitch Presentations – Session 1

Poster 1:   *Elisabeth S. Pickles, University of Oxford*
Evaluation of optimised 3D multi-echo gradient echo sequences at 3 T and 1.5 T for hepatocellular carcinoma detection

Poster 2:   *Tamadur Alsulami, University College London*
The Value of Arterial Spin Labelling Perfusion MRI in Glioma Post-therapy Assessment: A Systematic Review and Meta-analysis

Poster 3:   *M. Sulaiman Sarwar, University of Edinburgh*
3D-printable phantoms for quantitative dynamic contrast-enhanced MRI

Poster 4:   *Meshal Alzahrani, University of Leeds*
Stability of an anthropomorphic multimodality (CT/MRI) head and neck phantom for radiotherapy QA

Poster 5:	*Manal Aljuhani, King's College London*
	The effects of Inflammation and/or Iron on Brain R1- and R2-Relaxometry in Wildtype and Alzheimer's Mice
Poster 6:	*Alba Sáenz de Villaverde Cortabarría, University of Edinburgh*
	Investigating the association of Sinus Inflammation and Neuroimaging brain health markers in Sporadic Small Vessel Disease
Poster 8:	*Khaliesah Bolhassan, King's College Hospital*
	FMRI-based language mapping at 1.5 and 3T: the influence of methodological choices
Poster 9:	*Maryam Afzali, University of Leeds*
	Cumulant expansion with localization: A new representation of the diffusion MRI signal
Poster 10:	*S. Sabharwal, Queen Elizabeth Hospital Birmingham*
	Determination of Optic Nerve Motion Amplitude using MRI for Calculating Optic Nerve Planning Risk Volume Margins for Stereotactic Radiosurgery
Poster 12:	*E. L. Thomson, University College London*
	Quantification of Cerebral blood volume and Intravascular water residence time using non-contrast MR fingerprinting
Poster 13:	*Devon Ward, CUBRIC, Cardiff University*
	Simulating the Stimulated Brain: Exploring the Utility of Individualised Diffusion Tensors Estimation in tES Models
Poster 14:	*Ei T. Lin, Perspectum Diagnostics*
	Comparison of four Region-of-Interest (ROI) placement methodologies for increased repeatability of renal T1

17:30 – 19:00:   Poster Session & Drinks Reception

19:00 – 21:00:   Gala Dinner

Friday 9th Sept 2022

09:30 – 10:00:   Registration

10:00 – 10:30:   Invited Speaker
"New Horizons in Cardiac Diffusion Magnetic Resonance Imaging"
Prof. Jürgen Schneider, University of Leeds

10:30 – 11:30:   Proffered Talks – Session 3

10:30 – 10:45:   T13 – *Jannette Nassar, University College London*
Multi-Echo EPI for Preliminary Functional Quantitative Susceptibility Mapping (fQSM)

10:45 – 11:00:   T14 – *Oliver C. Kiersnowski, University College London*
Optimising Multi-Echo and Single-Echo 2D EPI for Rapid Quantitative Susceptibility Mapping: What is the Maximum TE?

11:00 – 11:15:   *T15 – Patrick Fuchs, University College London*
Incomplete Spectrum Inversion QSM

11:15 – 11:30:   T08 – *B. Örzsik, University of Sussex*
Integrating ASL with qBOLD MRI to assess brain oxygen metabolism – does it hold up to PET?

11:30 – 12:30:   Annual General Meeting

12:30 – 13:30:   Lunch

13:30 – 14:00   Proffered Talks – Session 4

13:30 – 13:45:   T17 – *Alix Plumley, CUBRIC, Cardiff University*
Tensors and Tracts at 64 mT

13:45 – 14:00:   T18 – *Olivier Mougin, University of Nottingham*
Evaluate body motion at various patient position in 0.5 T Upright scanner

14:00 – 14:30:   Power Pitch Presentations – Session 2

Poster 15:   *Mitchel Lee, University College London*
Investigating Regional Changes in Magnetic Susceptibility in Tanzanian Children with Sickle Cell Anaemia at 1.5 Tesla

Poster 16:	*Roshni Senthilkumar, University of Aberdeen*
	Evaluation of precision of multi-compartment model on relaxation properties in breast cancer on 3T using numerical simulation

Poster 17:	*Sam Keaveney, The Royal Marsden NHS Foundation Trust*
	An automated tool for monitoring imaging protocol compliance through XNAT

Poster 18:	*Kajal Saroay, CUBRIC, Cardiff University*
	Development of a dynamic model of blood flow in the cerebral vessels

Poster 19:	*Maira Tariq, The Institute of Cancer Research*
	Optimisation of T1mapping for Oxygen-Enhanced MRI assessment of hypoxia in patients with head and neck cancers

Poster 20:	*Oriana Arsenov, University College London*
	Preliminary MRI Conductivity Mapping Using a Multi-Echo EPI Sequence

Poster 21:	*Matthijs H.S. de Buck, University of Oxford*
	Consistent multi-channel B1+ mapping in both the head and the neck using pTx head coils at 7T by combining different RF shims and transmit voltages

Poster 22:	*Jack Highton, King's College London*
	Principal Component Analysis and Deep Learning for Retrospective

Poster 23:	*Eva Periche-Tomas, CUBRIC, Cardiff University*
	Diffusion-weighted MR spectroscopy: A novel in-vivo method for imaging inflammation-associated changes in glial morphology

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14:30 – 15:30:   Poster Session

15:30 – 16:00:   Refreshments

16:00 – 16:30:   Invited Speaker
       "What are we doing here?"
       Prof. Penny Gowland, University of Nottingham

16:30 – 17:00:   Awards & Closing