ISMRM
ONE
COMMUNITY
FOR CLINICIANS
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ISMRM ANZ in SYDNEY

4th Annual Chapter Meeting Program

09–10 NOVEMBER 2022
John Niland Scientia Building
University of New South Wales (UNSW), Sydney, Australia

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DAY 1

WEDNESDAY 9TH NOVEMBER

09:30 – 17:00	Registration desk open	Tyree Room
11:00 – 11:15	**Coffee & tea served**	**Tyree Room**
11:15 – 12:30	**Keynote Lecture**	**Tyree Room**
11:15 – 11:30	Welcome and introduction of Keynote	Brad Moffat
11:30 – 12:30	The ischaemic penumbra: how MRI translated an experimental concept into everyday clinical practice	Mark Parsons
12:30 – 13:30	**Lunch and poster viewing**	**Tyree Room**
13:30 – 15:00	**Oral Session 1: Revolutionising MRI technology** Chair: Claudia Hillenbrand	**Tyree Room**
13:30 – 13:45	Study design for mobile Point of Care MR (PoCeMR) network in Australia	Zhaolin Chen
13:45 – 14:00	Advancing Ultralow Field MRI with Deep Learning Reconstruction	David Waddington
14:00 – 14:15	Improving the robustness of deep learning segmentation models by analysing intensity distribution shifts between data sets	Fernanda Ribiero
14:15 – 14:30	Automatically Resampling Oblique-Acquired MRI to Enable Robust and Accurate QSM Algorithms	Ashley Stewart
14:30 – 14:45	Sub-Population Universal Pulses: A Feasibility Study	Igor Tyshchenko
15:00 – 15:30	**Afternoon tea and poster viewing**	**Tyree Room**
15:30 – 17:00	**Oral Session 2: Advances in Neuroimaging** Chair: Adam Clemente	**Tyree Room**
15:30 – 15:45	Increased Connectivity from Ventral Temporal Cortex to Perisylvian Language Areas During Non-Word Reading	Vicky He
15:45 – 16:00	Optimising functional brainstem imaging of sympathetic drive with ultra-high field MRI	Rebecca Glarin
16:00 – 16:15	Structure-function relationships in the human hippocampus: new insights using track-weighted dynamic functional connectivity	Marshall Dalton
16:15 – 16:30	In vivo microstructural border delineation between areas of the human cerebral cortex using magnetic resonance fingerprinting (MRF) residuals	Shahrzad Moinian
16:30 – 16:45	Data-driven in-vivo parcellation of human subcortex	Tonima Ali
17:00 – 17:30	**ANZ Chapter discussion and update** Chair: Fernando Calamante	**Tyree Room**
18:00 – 19:30	**Networking drinks**	**Coogee Pavilion**

THURSDAY 10TH NOVEMBER

08:30 – 13:00	Registration desk open	Tyree Room
09:00 – 10:15	**Keynote Lecture**	**Tyree Room**
09:00 – 09:15	Welcome and introduction of Keynote	Sirisha Tadimalla
09:15 – 10:15	The use of MRI in radiation therapy for applications – an expensive tool for anatomical imaging?	Annette Haworth
10:15 – 11:00	**Morning tea and poster viewing**	**Tyree Room**
11:00 – 12:30	**Oral Session 3: Clinical applications of advanced MRI** Chair: Karen Caeyenberghs	**Tyree Room**
11:00 – 11:15	Quantitative MRI: defining measurement uncertainty for detecting treatment response in longitudinal imaging of prostate cancer	Yu-Feng Wang
11:15 – 11:30	Leukoencephalopathic changes after treatment for breast cancer and their association with serum neurofilament	Gwen Schroyen
11:30 – 11:45	Early identification of cerebral small vessel disease in obstructive sleep apnoea patients using magnetic resonance spectroscopy: a pilot study	Arunan Srirengan
11:45 – 12:00	Hippocampal Glx in RRMS: A potential therapeutic indicator in fingolimod and injectables	Oun Al-iedani
12:00 – 12:15	Personalised quantitative susceptibility mapping in the identification of traumatic brain injury neurodegeneration	Karen Caeyenberghs
12:30 – 13:30	**Lunch (on own)**	
13:30 – 14:00	**UNSW site tour (Research Imaging NSW)**	**Ralf Loeffler**
14:00 – 15:00	**ECR Data Blitz Session** Chair: Govinda Poudel	**Galleries I & II**
14:00 – 14:05	Deep learning-based mutual and modality-specific information disentanglement of MR and PET for low-dose PET image processing robust to varying levels of dose reduction	Cameron Pain
14:05 – 14:10	3D Basis Encoded Excitation (3DBEE)	Negin Yaghmaie
14:10 – 14:15	Interactive AI-assisted labelling for abdominal MRI organ segmentation	Xincheng Ye
14:15 – 14:20	Efficient Network for Diffusion-Weighted Image Interpolation and Accelerated Shell Sampling	Eric Pierre
14:20 – 14:25	An Experimental Study of MRI Reconstruction using Transformer Networks	Mevan Ekanayake
14:25 – 14:30	Multi-parametric MRI to measure the oxygen partial pressure and the fluid viscosity of the vitreous humour of the eye	Xingzheng Pan
14:30 – 14:35	Computationally efficient multi-echo QSM	Korbinian Eckstein
14:35 – 14:40	Establishing baseline diffusion and susceptibility measurements for deep grey matter structures	Manon Levayer
14:40 – 14:45	Altered network topology in patients with visual snow syndrome: a resting-state 7 Tesla MRI study	Myrte Strik
14:45 – 14:50	Functional and structural brain network development in children with attention deficit hyperactivity disorder	Shania Soman
15:00 – 15:30	**Afternoon tea and poster viewing**	**Galleries I & II**
15:30 – 16:00	**Award Presentations and Close** Chair: Brad Moffat & Remika Mito	**Galleries I & II**

POSTER PRESENTATIONS

Poster 1	Mapping the brain functional correlates of cue-reactivity in moderate-to-severe cannabis use disorder: A functional neuroimaging study	Arush Arun
Poster 2	Investigating the computational reproducibility of Neurodesk	Thanh Thuy Dao
Poster 3	Adiabatic pulse approximation using a Fourier approach	Edward Green
Poster 4	Using quantitative susceptibility mapping (QSM) for clinical correlations of iron-rich deep grey matter of relapsing-remitting multiple sclerosis patients	Ibrahim Khormi
Poster 5	Probabilistic Fixel-based White Matter Atlas	Lea Vinokur
Poster 6	A Feasibility Study of Semi-supervised Brain Tumour Segmentation using a Privacy Preserving Federated Deep Learning Framework	Xinqian Wang
Poster 7	2D UTE imaging for rapid 23Na MRI	Chengchuan Wu
Poster 8*	Efficient Network for Diffusion-Weighted Image Interpolation and Accelerated Shell Sampling	Eric Pierre
Poster 9*	Altered network topology in patients with visual snow syndrome: a resting-state 7 Tesla MRI study	Myrte Strik

*indicates Data Blitz presenter

DAY 1: KEYNOTE SPEAKER

PROFESSOR MARK PARSONS

Professor Parsons is an internationally recognised Neurologist and leader in Stroke Medicine, and an experienced clinical triallist, having led several international phase II and III clinical trials. He also has a strong track record of research translation into clinical practice change. He moved to Sydney in 2020 as SHARP Professor of Medicine and Neurology at UNSW South Western Sydney Clinical School, Liverpool Hospital and The Ingham Institute for Applied Medical Research. There, he has established and leads a new Stroke and Neuroscience research team – the Sydney Brain Centre @ The Ingham Institute. He remains as a Professor of Neurology, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne. He is also a Conjoint Professor of Neurology at University of Newcastle. He also is a Visiting Professor at Fudan University, Shanghai.

DAY 2: KEYNOTE SPEAKER

PROFESSOR ANNETTE HAWORTH

Professor Annette Haworth is the Director of the Institute of Medical Physics at the University of Sydney and the course coordinator for the medical physics postgraduate program. She has more than 25 years experience as a clinical medical physicist having previously worked at the Peter MacCallum Cancer Centre in Melbourne Australia before moving to Sydney in 2016. Annette's research interests have focused on novel approaches to brachytherapy and radiotherapy treatments, in particular using quantitative imaging for biological optimization of treatment planning and treatment response.
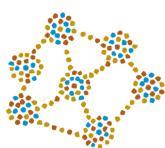
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