ISMRM ONE COMMUNITY FOR CLINICIANS AND SCIENTISTS

ISMRM-ANZ Annual Meeting 2024

KEYNOTE SPEAKERS

INTERNATIONAL KEYNOTE SPEAKER

Assistant Professor Chun-Hung Yeh

Chang Gung University, Taiwan

Chun-Hung Yeh is an Assistant Professor in the Department of Medical Imaging and Radiological Sciences at Chang Gung University (CGU) in Taiwan. He joined CGU in 2020 as an Assistant Research Fellow at the Institute for Radiological Research. Before that, from 2014 to 2019, he was a Senior Research Officer in the Imaging Division led by Professor Alan Connelly at the Florey Institute of Neuroscience and Mental Health in Melbourne, Australia. Dr. Yeh has a long-standing interest in the application of novel diffusion imaging method developments to significant clinical neuroscience challenges. He is currently leading multiple local and international projects, including the EBRAINS initiative funded by the Horizon Europe Framework Programme. His research group focuses primarily on mental health conditions such as autism spectrum disorder and bipolar disorder, using a multi-modality approach that incorporates diffusion, functional, and structural MRI, positron emission tomography (PET), and plasma biomarkers. Additionally, his group is contributing to the advancement of transcranial brain stimulation protocols to treat psychiatric symptoms.

NATIONAL KEYNOTE SPEAKER

Professor Martin Ugander

University of Sydney, Australia

Professor Martin Ugander, MD, PhD, is since 2019 Professor of Cardiac Imaging and since 2020 Director of Clinical Imaging, both at the University of Sydney. He leads the University of Sydney Cardiovascular Magnetic Resonance Research Group as well as the Sydney Clinical Imaging Network. He was born 1975 in Sweden, and grew up in the USA. He was awarded an MD in 2001 and PhD in 2006 from Lund University, Sweden. 2009-2011 he was a Post-doctoral Research Fellow in Cardiovascular MRI and CT at the National Institutes of Health (NIH), USA. 2011-2019 he undertook clinical training in the medical specialty Clinical Physiology at Karolinska University Hospital, Stockholm, Sweden, where he also founded and led the Karolinska Cardiovascular Magnetic Resonance Group at the Karolinska Institute. His research interest is in non-invasive cardiac imaging in general and cardiac magnetic resonance imaging (MRI) in particular, with a focus on the diagnoses ischemic heart disease, myocarditis, and heart failure, as well as basic cardiac pumping physiology. His research traverses cardiology, radiology, nuclear medicine, and physiology, while spanning technical, pre-clinical translational, and clinical cardiovascular imaging.

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MEETING SCHEDULE (All times are in AEDT)

International Keynote Presentation **Chair: Marshall Dalton**		
12.00 – 12.05	Marshall Dalton	Welcome and International Keynote Introduction
12.05 - 12.45	Assistant Professor Chun-Hung Yeh	Cross-Sectional and Longitudinal Analyses of Psychiatric Conditions Using Diffusion MRI
12.45-12.55	Q&A	
12.55-1.00	Break	

National Keynote Presentation **Chair: Zhaolin Chen**		
1.00 – 1.05	Zhaolin Chen	National Keynote Introduction
1.05-1.45	Professor Martin Ugander	Cardiovascular MRI for heart disease phenotyping
1.45–1.55	Q&A	
1.55-2.00	Break	

Data Blitz Session 1 - MR sequences and image processing: ***5 minute talk + 3 minute Q&A for each Speaker*** **Chair: Brad Moffat**		
	Presenter	Abstract Title
2.00 - 2.08	Marshall Xu	Enabling Neurodesk Workflows on the Scanner Console
2.08 - 2.16	Tudor Sava	Optimising Ex-Vivo Hand Imaging at Ultra-High FIeld (7T)
2.16 - 2.24	Ashley Stewart	Automated and Privacy-Preserving DICOM Validation for Multi-Site Studies and Domain-Specific Guidelines
2.24 - 2.32	Haribalan Kumar	Dynamical analysis of intracranial motion using amplified MRI (aMRI) in idiopathic intracranial hypertension – a pilot investigation
2.32 - 2.40	Himashi Peiris	Bilateral Hippocampi Segmentation in Low-Field MRIs Using Mutual Feature Learning via Dual-Views

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2.40 - 2.48	Ashley Stewart	QSM-CI: An automated continuous QSM challenge
Break		

Data Blitz Session 2 - Clinical Applications ***5 minute talk + 3 minute Q&A for each Speaker*** **Chair: Maryam Tayebi & Warda Syeda**		
	Presenter	Abstract Title
3.00 - 3.08	Steven Greenstein	Do current automated tractography methods hold up in tumour and epilepsy pathology? A comparison of four methods with expert manual tractography
3.08 - 3.16	Hannes Almgren	Monitoring Neurodegeneration Within Core Motor Pathways in Amyotrophic Lateral Sclerosis using Diffusion MRI
3.16 - 3.24	Christian John Saludar	Impact of subconcussive head acceleration on brain microstructure: Longitudinal diffusion MRI findings and symptom correlation
3.24 - 3.32	Yining Chen	Quantitative diffusion MRI metrics as potential biomarkers for chronic traumatic brain injury: a systematic review and meta-analysis
3.32 -3.40	Ruby Gilroy	Assessment of White Matter Tract Alterations in Mild Traumatic Brain Injury: Fractional Anisotropy and Free Fatty Acids
3.40 - 3.48	Oscar Alateras	Functional Connectivity of the Triple Network Predicts Depressive Symptoms in Patients with Mild Traumatic Brain injury and Healthy Adults
Break		

Breakout Room Sessions

Breakout Room 1: Imaging in Diseases and Disorder ***5 minute freeform talk (poster or presentation) + 3 minute Q&A for each Speaker*** **Chair: Erin Wang**		
	Presenter	Abstract Title
4.00 - 4.08	Emma Uren	Investigating diffusion MRI biomarkers in the brain of adults with attention-deficit hyperactivity disorder

4.08 - 4.16	Benjamin Bristow	White matter vulnerability in methamphetamine addiction: Evidence of myelin and radial diffusivity alterations in key cognitive tracts
4.16 - 4.24	Taylor Solomon	Volumetric brain differences across genetic subtypes of Frontotemporal Dementia: Insights from baseline MRI in the ARTFL LEFFTDS Longitudinal Frontotemporal Dementia study
4.24 - 4.32	Maryam Tayebi	White matter changes and cognitive function in methamphetamine addiction
4.32 -4.40	Leila Nategh	Brain Structural Alterations in Hip Osteoarthritis

Breakout Room 2: Improving Imaging Methods ***5 minute freeform talk (poster or presentation) + 3 minute Q&A for each Speaker*** **Chair: Sarah Hellewell**		
	Presenter	Abstract Title
4.00 - 4.08	Simone Zanoni	Streamline-Based Analysis: A novel framework for tractogram-driven streamline-wise statistical inference
4.08 - 4.16	Cassandra Marotta	Free-water imaging in progressive supranuclear palsy
4.16 - 4.24	Steven Greenstein	Improving manual tractography by automating spurious streamline removal: an application in paediatric tumour patients
4.24 - 4.32	Haribalan Kumar	An application of dynamic imaging for lower spine pathology
4.32 -4.40	Mara Quach	An interactive Bloch-McConnell simulator with Julia (to help you stop sacrificing accuracy for speed)

Breakout Room 3: Deep Learning in Imaging *5 minute freeform talk (poster or presentation) + 3 minute Q&A for each Speaker* **Chair: Mercy Kataike**		
	Presenter	Abstract Title
4.00 - 4.08	Ghulam Nabi Ahmad Hassan Yar	Deep Learning for low dose PET-MRI Imaging: Evaluating Models for Low-Dose to Full-Dose image synthesis
4.08 - 4.16	Marshall Xu	Evaluation of Deep Learning Reconstructions for 3D EPI SWI at 3T
4.16 - 4.24	Kh Tohidul ISLAM	Deep Learning for Enhanced Volumetric Accuracy in Ultra-Low-Field MRI
4.24 - 4.32	Mevan Ekanayake	SeCo-INR: Semantically Conditioned Implicit Neural Representations for Improved Medical Image Super-Resolution
4.32 -4.40	Break	

Award Announcements and Meeting Close	
4.40 – 5.00	• Award Announcements • Introduction of Incoming President • Meeting Close