MELBOURNE MICROSTRUCTURE SYMPOSIUM

20 April 2026
Ian Potter Auditorium
Kenneth Myer Building, Parkville

Register
https://tinyurl.com/MMS20Apr26

PROGRAM

09:00	Registration	Remika Mito & Sila Genc
09:15	Intro & Welcome	
SESSION 1: NEW FRONTIERS IN MICROSTRUCTURAL IMAGING		**Chair: Leigh Johnston**
09:20	**KEYNOTE: Pushing the limits of diffusion MRI: Beyond conventional hardware and scale**	Chantal Tax
09:50	Imaging cranial nerves at 7T with NexGen UHF technology	Rebecca Glarin
10:00	New mathematical models to map brain tissue microstructure	Qianqian Yang
10:10	(Un)certainty in the frontiers of neuroimaging software	Robert Smith
10:20	Discussion panel	All speakers
10:30	**Morning tea** 	
SESSION 2: BRAINS ACROSS SCALES		**Chair: Andrew Zalesky**
11:00	**KEYNOTE: Molecules to magnets: Multiscale analysis of prenatal brain development**	Gareth Ball
11:30	AI for layer-specific transcriptomics in focal cortical dysplasia	Ehsan Ramezani
11:40	Network neuroscience: Can simple models explain brain function across species and scales?	Caio Seguin
11:55	Discussion panel	All speakers
12:05	**Lunch**	
SESSION 3: FROM CONNECTIONS TO TRANSLATION		**Chair: Shawna Farquharson**
13:05	**KEYNOTE: Next-Generation Medical Visualization**	Maxime Chamberland
13:35	Seeing is believing: The value of tractography visualisation in paediatric epilepsy surgery	Joseph Yang
13:50	Psychiatry needs microstructural imaging	Josselin Houenou
14:00	From fibers to fluctuations: white matter microstructure and cognitive variability	Karen Caeyenberghs
14:15	Discussion panel	All speakers
14:30	**Afternoon Tea** 	
15:00	**SESSION 4: FLASH TALKS**	See page 3
15:50	Closing remarks	Remika Mito & Sila Genc
16:00	**Networking drinks**	

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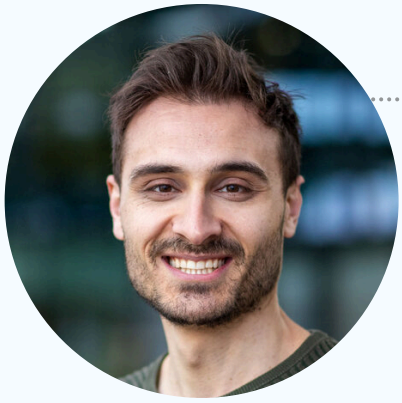
FEATURED SPEAKERS

INTERNATIONAL KEYNOTES

Chantal Tax is an Associate Professor at the University Medical Centre (UMC) Utrecht, the Netherlands, and a Senior Research Fellow at Cardiff University, UK. Her work spans from extracting new information from multi-contrast MRI experiments with the ultra-strong gradient Connectom MRI scanner, to optimising and validating quantitative MRI for clinical applications.

She will discuss the use of strong-gradient insert systems in humans to probe microstructural features that are inaccessible with standard clinical scanners, as well as ultra-high-field, high-resolution diffusion MRI of organoids. Her work will illustrate how innovations in hardware and scale open new possibilities for studying microstructure in healthy and pathological tissue.



Maxime Chamberland is a tenured Assistant Professor in Scientific Data Visualization at Eindhoven University of Technology (TU/e), the Netherlands. His research bridges data science, computer graphics, and neuroimaging, with a focus on diffusion MRI, tractography, and real-time multimodal visualisation.

He will present recent advances in tractography and scientific visualisation that enable interactive, anatomically grounded exploration of diffusion MRI data, including concepts from cinematic rendering and continuous tractography that improve spatial coherence and anatomical fidelity.

LOCAL KEYNOTE

Gareth Ball is an Associate Professor and Principal Research Fellow at the Murdoch Children's Research Institute. He is a developmental neuroscientist with 15 years of research experience developing and applying novel analysis methods to clinical imaging data to further our understanding of early brain development.

He will present his work which integrates neuroimaging data with a micrometre-resolution 3D digital atlas of the prenatal brain and post mortem gene expression data to understand the biological mechanisms that drive cortical expansion and the formation of brain connectivity networks during gestation.

FLASH TALKS

15:00	Phillip Pruckner	The Florey
15:05	Bram Kraaijeveld	Eindhoven University of Technology
15:10	Steven Greenstein	Murdoch Children's Research Institute
15:15	Maria Nucera	Murdoch Children's Research Institute
15:20	Samuel Combes	The Florey
15:25	Ella Rowsthorn	Monash University
15:30	Julien Zanin	University of Melbourne
15:35	Cassandra Marotta	Monash University
15:40	Eric Pierre	The Florey
15:45	Stuart Oldham	Murdoch Children's Research Institute

MELBOURNE MICROSTRUCTURE SYMPOSIUM

ORGANISERS

Sila Genc	Murdoch Children's Research Institute Royal Children's Hospital
Remika Mito	The University of Melbourne

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