

Monday, June 23 2025 | 9 a.m. AEST

Queensland University of Technology  
Gardens Point Campus



# GRADIENTS OF BRAIN ORGANIZATION

8:30 - 9:00

Registration & Coffee

9:00 - 9:15

Welcome

9:15 - 10:30

Methods and multimodal applications

Chairs:

Geometric principles shaping the brain's structure and function

*James Pang, Monash University, Australia*

Optical flow for capturing hierarchical cortical activity propagations

*Adam Pines, Stanford University, USA*

Comparison of Different Group-Level Templates in Gradient-Based Multimodal Connectivity Analysis

*Sunghun Kim, Korea University, South Korea*

Stimulation mapping and whole-brain modeling reveal gradients of excitability and recurrence in cortex

*Davide Momi, Krembil Centre for Neuroinformatics (CAMH), Canada*

Panel discussion

10:30 - 10:45

Coffee break

10:45 - 12:15

Hippocampus and subcortex

Chairs:

Multiscale cartography of human hippocampal organization

*Alexander Ngo, McGill University, Canada*

The role of hippocampal travelling waves in shaping cortical activity

*Anna Behler, University of Newcastle, Australia*

Towards a unification of the multiscale nature of human brain activity and cognitive function

*Giulia Baracchini, University of Sydney, Australia*

Panel discussion

12:15 - 13:15	Lunch break
13:15 - 13:30	Flash Talks
	TBD
	TBD
	TBD
13:30 - 14:45	Clinical and translational perspectives Chairs:
	Gradients and brain surgery <i>Sara Larivière, Université de Sherbrooke, Canada</i>
	Aging, genetic, and inflammatory underpinnings of altered network architecture of cortical thickness in schizophrenia <i>Bin Wan, University of Geneva, Switzerland</i>
	Development of the sensorimotor- association functional gradient and its dysfunction in depression <i>Mingrui Xia, Beijing Normal University, China</i>
	Panel discussion
14:45 - 15:00	Coffee break
15:00 - 16:15	Cognitive studies Chairs:
	Developmental Variations in Recurrent Cortical Spatiotemporal Brain Propagations in Youth <i>Kyoungseob Byeon, Child Mind Institute, USA</i>
	Local orchestration of distributed functional patterns supporting loss and restoration of consciousness <i>Andrea Luppi, University of Cambridge, United Kingdom</i>
	Axes of Hierarchical Brain Development <i>Audrey Luo, University of Pennsylvania</i>
	Panel discussion
16:15 - 16:45	Closing comments

16:45 - 17:00	Transition
17:00 - 18:30	Poster session and cocktail