

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 - 10:45

Methods and multimodal applications
Chairs: Sofie Valk and Jessica Royer

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, Stanford University, USA

Panel discussion

10:45 - 11:00

Coffee break

11:00 - 12:15

Hippocampus and subcortex
Chairs: Boris Bernhardt and Seok-Jun Hong

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

Intrinsic cortical geometry captures individual differences in local functional organization

Francesco Alberti, Université Paris Cité, France

Only a matter of time: developmental heterochronicity captures properties of the human connectome

Stuart Oldham, Murdoch Children's Research Institute, Australia

Cerebellar growth trajectories are associated with cerebral maturation and behavioral outcomes in a domain-specific way

Katerina Manoli, Max Planck Institute for Human Cognitive and Brain Sciences, Germany

13:30 - 14:45	Clinical and translational perspectives Chairs: Bo-yong Park and Tamara Vanderwal
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Gradients and brain surgery

Sara Larivière, Université de Sherbrooke, Canada

Aging, genetic, and inflammatory underpinnings of altered network architecture of cortical thickness in schizophrenia

Bin Wan, University of Geneva, Switzerland

Development of the sensorimotor- association functional gradient and its dysfunction in depression

Mingrui Xia, Beijing Normal University, China

Panel discussion

14:45 - 15:00	Coffee break
15:00 - 16:15	Cognitive studies Chairs: Daniel Margulies and Beth Jefferies

Developmental Variations in Recurrent Cortical Spatiotemporal Brain Propagations in Youth

Kyoungseob Byeon, Child Mind Institute, USA

Local orchestration of distributed functional patterns supporting loss and restoration of consciousness

Andrea Luppi, University of Cambridge, United Kingdom

Axes of Hierarchical Brain Development

Audrey Luo, University of Pennsylvania, USA

Panel discussion

16:15 - 16:45	Closing comments
16:45 - 17:00	Transition
17:00 - 18:30	Poster session and cocktail