Whistler Scientific Workshop on Brain Functional Organization, Connectivity, and Behavior

Sunday, March 1
Noon – 6pm Check-in
6:00 – 8:00pm Opening Reception and Poster Session

Monday, March 2
7:30 – 8:30a Breakfast

Session 1 Brain Anatomy and Function
8:30 – 9:00a Charlotte Murphy
Topographical neural gradients support unique modes of operation

9:00 – 9:30a Casey Paquola
Towards a Multi-Scale Model of the Cortex

9:30 – 10:00a Ann Sizemore-Blevins
Topological voids within the human cortex

10:00 – 10:30a Coffee

10:30 – 11:00a Janine Bijsterbosch
Beyond connectivity: the role of spatial network topology in predicting behavior

11:00 - 11:30a James Haxby
Hyperalignment reveals individual differences in information encoded in fine-scale cortical topographies

11:30 - 12:00 Discussion: anatomy and function
Daniel Margulies, Alex Fornito, Todd Constable

12:00 – 4:30p Break

4:30 – 5:00p Coffee

Session 2 Brain and Behavior
5:00 – 5:30p Chandra Sripada
When Interactions Attack: Controlling for Group x Phenotype Interactions in Predictive Modeling
5:30 – 6:00p  Siyuan Gao  
Combining data from multiple sources improves predictive modeling

6:00 - 6:30pm  Joshua Vogelstein  
The role of the connectome in achieving artificial general intelligence

6:30 – 8:00pm  Poster reception

Tuesday, March 3

7:30 – 8:30a  Breakfast

Session 3  Dynamics Across Timescales

8:30 – 9:00a  Valerio Zerbi  
Combining fMRI with chemo- and optogenetics in the mouse to deconstruct brain network activity

9:00 – 9:30a  Elizabeth Hillman  
Exploring the neural basis of resting-state functional connectivity in awake mice

9:30 – 10:00a  Evelyn Tang  
The control of brain network dynamics across diverse scales of space and time

10:00 – 10:30a  Coffee

10:30 – 11:00a  Javier Gonzalez-Castillo  
Cognitive correlates of resting dynamic functional connectivity

11:00 – 11:30a  Aaron Kucyi  
Electrophysiological dynamics of antagonistic brain networks

11:30 – 12:00  Adeel Razi  
Dynamic causal models of brain function

12:00 – 4:30p  Break

4:30 – 5:00p  Coffee

Session 4  Cross-modal integration and modeling

5:00 – 5:30p  Aurina Arnatkeviciute  
Genetics of brain network hubs

5:30 – 6:00p  Roselyne Chauvin  
Integrating functional connectivity analyses across separate task domains using task potency
6:00 - 6:30p  Alain Dagher  
Using Connectomics to Model Neurodegenerative Diseases

7:00 – 9:00p  Closing dinner

Wednesday, March 4

7:30 – 8:30a  Breakfast

Session 5  Clinical applications and imaging across the lifespan

8:30 – 9:00a  Stefan Fräessle  
Predicting individual clinical trajectories of depression with generative embedding

9:00 – 9:30a  Signe Bray  
What can children’s connectomes tell us about brain development and behavior

9:30 – 10:00a  Richard Bethlehem  
The New Normal: Modelling Atypical Brain Development

10:00 – 10:30a  Coffee

10:30 – 11:00a  Graham Baum  
Development of structure–function coupling in human brain networks during youth

11:00 – 11:20a  Jessica Cohen  
Disrupted static and time-varying functional connectivity in children with ADHD

11:20 – 11:40a  Xiaoping Hu  
Application of convolutional neural networks to rsfMRI data for individual identification and disease classification

11:40 – 12:00  Hal Blumenfeld  
Long-range network switch and impaired consciousness in focal temporal lobe seizures

12:00  Wrap-up/Meeting adjourns