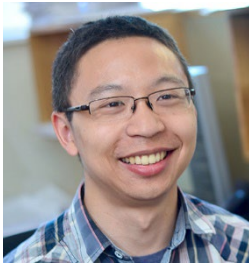


Invited Speaker Seminar Series (HYBRID)

Sparse coding for odour-specific memories through homeostatic plasticity

Abstract:

Stimulus-specificity of associative memories is enabled by sparse coding (only a small fraction of neurons responds to each stimulus). We found that optimal sparse coding in the fruit fly's memory centre, the mushroom body, is maintained by homeostatic plasticity, where neurons compensate for disturbances away from their 'preferred' activity level. We observe both physiological and anatomical compensation and show using computational models that this compensation enhances memory capacity.



Biography:

Andrew Lin received his bachelor's degree in biology from Harvard University. He did his PhD on local translation in axon guidance with Christine Holt at the University of Cambridge. He did his postdoctoral work on sensory coding and memory with Gero Miesenböck at the University of Oxford. Since 2015, he has been a group leader at the University of Sheffield, where he is currently a Senior Lecturer.

Speaker:	Dr Andrew Lin Senior Lecturer, School of Biosciences, University of Sheffield, UK
Host:	Assoc Prof Adam Claridge-Chang Principal Investigator Neuroscience & Behavioural Disorders Programme, Duke-NUS
Date:	30 January 2023, Monday
Time:	12:00pm to 1:00pm
Venue:	Room 7C, Level 7, Duke-NUS
Zoom Detail:	Join Zoom Meeting https://nus-sg.zoom.us/j/84314248216?pwd=aFE4eU1kbTh1VnFJZUpFOWQ4aGIXQT09 Meeting ID: 843 1424 8216 Passcode: 219896
Contact Person:	Jacqueline Ho (jacqueline.ho@duke-nus.edu.sg) Neuroscience & Behavioural Disorders Programme, Duke-NUS

All are welcome. No registration is required.