



Oxford Autumn School in Neuroscience 2019

Thursday 26th September

09.25 Welcome: Professor Masud Husain, Chair Autumn School in Neuroscience

Language: Talking Brains: from bats to bilinguals

Chair: Professor Kate Watkins, Department of Experimental Psychology, University of Oxford

09.30 - 10.10 Dr Sonja Vernes, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands

Studying bats to shed light on speech and language

10.10 - 10.50 Professor Anne-Lise Giraud, University of Geneva, Switzerland

Speech processing with (and without) cortical oscillations

10.50 - 11.20 Break

11.20 - 12.00 Dr Gesa Hartwigsen, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

Adaptive plasticity in the language network

12.00 - 12.40 Dr Denise Klein, Centre for Mind, Brain, Language & Music, McGill University, Canada

How language experience shapes the brain

12.40 - 13.30 Lunch and poster session, Sherrington Library

Neurophysiology: To go or not to go: diversity in dopamine neuron biology

Chairs: Professor Stephanie Cragg, Dept. of Physiology Anatomy and Genetics, University of Oxford

Dr Mark Walton, Department of Experimental Psychology, University of Oxford

13.30 - 14.10 Dr Paul Dodson, School of Physiology, Pharmacology and Neuroscience, University of Bristol

Heterogeneity in the encoding of behaviour by dopamine neurons

14.10 - 14.50 Professor Stephanie Cragg, Dept. of Physiology Anatomy and Genetics, University of Oxford

Diverse axonal gating of dopamine transmission in the striatum

14.50 - 15.20 Break

15.20 - 16.00 Dr Lauren Burgeno, University of Washington/Dept. of Physiology Anatomy and Genetics, University of Oxford

Diametric changes in ventral striatal dopamine mediate drug taking and drug seeking behaviour

16.00 - 16.40 Dr Mark Howe, Dept. of Psychological and Brain Sciences, Boston University

Functional diversity of striatum neuromodulator signalling on multiple spatial scales during behaviour





Friday 27th September

Computational Neuroscience:

Chairs: Professor Andrew King and Tim Vogels, Dept. of Physiology Anatomy and Genetics, University of Oxford

09.00 - 09.40 Prof. Dr. Klaus Obermayer, Technical University, Berlin

Computational models of electric field effects on neurons and neural populations

09.40 - 10.20 Prof. Dr. Benjamin Lindner, Institute for Physics, Humbolt University, Berlin

Sources and effects of fluctuations in models of spiking neurons

10.20 - 10.50 Break

10.50 - 11.30 Dr Andrew Saxe, Department of Experimental Psychology, University of Oxford

A deep learning theory of perceptual learning

11.30 - 12.10 Prof. Dr. Henning Sprekeler, Institute for Theoretical Biology, Humbolt University, Berlin

Sparse bursts optimize information transmission in a multiplexed neural code

12.10 -13.10 Lunch and poster session, Sherrington Library

Neurodegenerative disease: molecules, movement and memory

Chair: Professor Richard Wade-Martins, Dept. of Physiol. Anatomy and Genetics, University of Oxford

13.10 - 13.50 Assoc. Professor Michele Hu, Nuffield Department of Clinical Neurosciences, University of Oxford

Unravelling the heterogeneity of Parkinson's: the Discovery Cohort

13.50 – 14.30 Professor Richard Wade-Martins, Dept. of Physiol. Anatomy and Genetics, University of Oxford

Parkinson's: from disease mechanisms to target discovery

14.30 - 15.00 Break

15.00 - 15.40 Dr Selina Wray, Institute of Neurology, University College London, London

Human stem cell models of Alzheimer's disease and frontotemporal dementia

15.40 - 16.20 Dr Simon Cox, Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh

Brain and cognitive ageing

16.20 - 16.35 Closing remarks

