

## The Brain Conferences

### Computational Neuroscience of Prediction

15 – 18 April 2018  
Rungstedgaard, Denmark

#### PROGRAMME

Sunday, 15 April 2018	
From 14:15	Arrival and registration
14:50-15:00	Welcome address from the Conference Chairs
<i>Session Moderator: Peter Dayan</i>	
15:00-15:40	<a href="#">Ifat Levy</a> , Yale School of Medicine, USA Individual differences in decision making under uncertainty: implications for aging and psychopathology
15:40-16:20	<a href="#">Quentin Huys</a> , ETH Zürich, Switzerland Predicting relapses after antidepressant discontinuation - preliminary results from the AIDA study
16:20-16:50	Afternoon snack
16:50-17:30	<a href="#">Marisela Morales</a> , National Institute on Drug Abuse, NIH, USA Neuronal Diversity and Co-transmission
17:30-17:50	<a href="#">Carina Soares-Cunha</a> , ICVS, University of Minho, Portugal Nucleus accumbens microcircuit underlying D2-MSN-dependent increase in motivation
17:50-18:30	<a href="#">Claire Gillan</a> , Trinity College Dublin, Ireland Crowdsourcing and treatment prediction in mental health
19:00-21:30	Welcome Drink & Dinner

## Monday, 16 April 2018

*Morning Session Moderator: Jill O'Reilly*

09:00-09:40	<a href="#">Hanneke den Ouden</a> , Donders Institute for Brain, Cognition and Behaviour, the Netherlands Dissociating Pavlovian and Instrumental controllers of biased decision-making
09:40-10:20	<a href="#">Melissa Warden</a> , Cornell University, USA To seek or to flee: the neural circuits of approach and avoidance
10:20-10:50	Group Picture and Coffee Break
10:50-11:30	<a href="#">Kerstin Preuschoff</a> , University of Geneva, Switzerland Uncertainty and surprise in decision making and learning
11:30-12:10	<a href="#">Drazen Prelec</a> , MIT Sloan School of Management, USA Honest neurons
12:10-12:30	<a href="#">Akash Guru</a> , Cornell University, USA Sustained activity in midbrain dopamine neurons encodes information predicting distant reward
12:30-14:00	Lunch
<i>Afternoon Session Moderator: Claire Gillan</i>	
14:00-14:40	<a href="#">Marios Philiastides</a> , University of Glasgow, United Kingdom Dynamic network reconstruction of prediction error processing in humans via EEG-fMRI fusion
14:40-15:20	<a href="#">Alison Adcock</a> , Duke University, USA Motivation as a Predictive Neural Context Regulating Learning
15:20-15:35	<b>Poster Spotlights I * (9 presentations, 90 seconds each)</b>
15:35-17:45	<b>Poster Session I with Afternoon Snack</b>
17:45-18:45	<a href="#">Ilana Witten</a> , Princeton Neuroscience Institute, USA Specialized and spatially organized coding of sensory, motor, and cognitive variables in midbrain dopamine neurons
18:45-19:15	End of the day: Group discussion
19:15 -21:30	Dinner

## Tuesday, 17 April 2018

*Morning Session Moderator: Jan Krajbich*

09:00-09:40	<a href="#">Mauricio Delgado</a> , Rutgers University, USA Adaptation to stress via positive memories
09:40-10:20	<a href="#">Catharine Winstanley</a> , The University of British Columbia, Canada Cued up for addiction: how do environmental stimuli bias decision making under uncertainty?
10:20-10:40	<a href="#">Drew Robson</a> , Harvard University, USA Whole brain imaging in freely swimming zebrafish reveals a midbrain network that phasically motivates hunting behavior
10:40-11:00	Coffee break
11:15-15:00	Box Lunch, outing to <a href="#">Kronborg Castle</a>
<i>Afternoon Session Moderator: Ifat Levy</i>	
15:15-15:55	<a href="#">Jill O'Reilly</a> , University of Oxford, United Kingdom Control of Uncertainty in Internal Models
15:55-16:15	<a href="#">Alexis Deighton MacIntyre</a> , University College London, United Kingdom Metric Structure Shapes Early Implicit Learning
16:15-16:55	<a href="#">Michael J. Frank</a> , Brown University, USA Working memory contributions to reinforcement learning
16:55-17:10	<b>Poster Spotlights II ** (9 presentations, 90 seconds each)</b>
17:10-19:25	<b>Poster Session II with Snack</b>
19:30-21:30	Dinner

## Wednesday, 18 April 2018

*Morning Session Moderator: Hanneke den Ouden*

09:00-09:40	<a href="#">Peter Dayan</a> , University College London, United Kingdom Predicting and manipulating others
09:40-10:20	<a href="#">Nathaniel Daw</a> , Princeton University, USA Rational planning via prioritized experience replay
10:20-10:50	Coffee Break
10:50-11:30	<a href="#">Ian Krajbich</a> , The Ohio State University, USA The neural dynamics of gaze-driven evidence accumulation in value-based predictions
11:30-12:10	<a href="#">Peter Bossaerts</a> , The University of Melbourne, Australia Modeling Ignorance: Uncertainty or Complexity?
12:10-12:30	<a href="#">Sam Ereira</a> , University College London, United Kingdom Agent-specific learning signals for self-other distinction during mentalising
12:30-14:00	Lunch
<i>Afternoon Session Moderator: Quentin Huys</i>	
14:00-14:40	<a href="#">Laurence Hunt</a> , University of Oxford, United Kingdom Predicting where to look next: information search and choice in humans and other primates
14:40-15:00	<a href="#">Vickie Li</a> , University of Oxford, UK A unified theory of distraction in human perceptual, cognitive and economic decision-making
15:00-15:40	<a href="#">Jacqueline Gottlieb</a> , Columbia University, USA The neural basis of information sampling in attention and eye movement control
15:40-16:10	Coffee Break
16:10-16:30	<a href="#">Ruidong Chen</a> , Cornell University, USA Ventral basal ganglia sends performance error signals to VTA in singing birds
16:30-17:30	<a href="#">Michael Woodford</a> , Columbia University, USA Cognitive Imprecision and Intertemporal Decision Making
17:30-18:00	Tying it all together: Group Discussion & Closing Remarks <a href="#">Kerstin Preuschoff</a> & <a href="#">Peter Dayan</a>
19:00-22:00	Gala Dinner & Poster Awards

## \* Poster Spotlights I

Monday, 16 April 2018, 3:20 pm -3:35 pm

1	Neurocomputational mechanisms of social influence in goal-directed learning Lei Zhang, University Medical Center Hamburg-Eppendorf (DE)
2	Hierarchical Prediction Errors during Auditory Mismatch under Pharmacological Manipulations: A Computational Single-Trial EEG Analysis Lilian Aline Weber, University of Zürich and ETH Zürich (CH)
3	Surprise in Bistable Perception: Probing Internal Models of the External World Jonathan Robinson, Queensland University of Technology (AU)
4	Rise and fall of a reinforcement learning model: inter-individual variability reveals the elusive nature of punishment-avoidance learning Stefano Palminteri, Institut National de la Santé et Recherche Médicale (FR)
5	Dopamine activity reflects efficient encoding of latent task variables for reward based decisions Asma Motiwala, Champalimaud Research (PT)
6	Differences in action selection mechanisms in contexts of response inhibition and response execution David Meder, Danish Research Centre for Magnetic Resonance (DK)
7	Linking neuronal response properties to a decision variable in the auditory cortex Tania Barkat, Basel University (CH)
8	Do astrocytes play an active role in cortical state changes during behavioral transitions? Andrea Dietz, University of Copenhagen (DK)
9	The effects of Emotion on Probabilistic Reward learning in Major Depressive Disorder Seda Eroglu, Dokuz Eylul Iniversity (TK)

## **\*\* Poster Spotlights II**

Tuesday, 17 April 2018, 4:55 pm - 5:10 pm

1	Outcome valence bias confidence and impact decision strategies in reinforcement learning tasks <a href="#">Maël Lebreton, Universiteit van Amsterdam (NL)</a>
2	Dynamic expectations: the interplay of timing and reward prediction during learning <a href="#">Angela Langdon, Princeton University (USA)</a>
3	Neural Computations in the Temporoparietal Junction during Strategic Interactions <a href="#">Arkady Konovalov, University of Zürich (CH)</a>
4	Neuronal coding of food-seeking and food intake in hypothalamic networks <a href="#">Tatiana Korotkova, Max Planck Institute for Metabolism Research (DE)</a>
5	Reward signalling in non-ergodic environments <a href="#">Oliver Hulme, Danish Research Centre for Magnetic Resonance (DK)</a>
6	Dopamine Transients in the Ventral Tegmental Area Reduce Prediction Error about Aversive Outcomes <a href="#">Mihaela Iordanova, Concordia University (CA)</a>
7	Use of Low-Level Visual Priors in Perceptual Inference Perceptual is Reduced in First Episode Psychosis, But Normal in At-Risk Mental State <a href="#">Juliet Griffin, University of Cambridge (UK)</a>
8	Temporal Characterization of Risk Prediction and Error in the Human Brain <a href="#">Emanuele de Luca, University of Glasgow (UK)</a>
9	The effects of experimentally-induced learned helplessness on the interaction between Pavlovian and instrumental valuation systems <a href="#">Gábor Csifcsák, University of Tromsø (NO)</a>