



UNIVERSITY of
TASMANIA



CONFERENCE
LAUNCESTON 2019

Sponsors





The Tramsheds Function Centre

4 Invermay Road, Invermay
Tasmania, 7248

Workshops

Wednesday 20th November

10.30-17.00	Advanced EEG Signal Processing: A hands-on introduction to Fourier and Wavelet-based analysis - Supported by Symbiotic Devices	Tram Room 28
Presenters:	Daniel Feuerriegel Evelien Lageweg Agnieszka Iwasiw Eduardo Bellomo	University of Melbourne Symbiotic Devices Symbiotic Devices Brain Products

Thursday 21st November

10.30-15.00	Early Career Researcher Day: "Networking"	Tram Room 28
10.30-11.00	Keynote Presentation Nicole Wenderoth International networking and collaboration	
11.00-12.00	Networking Activity	
12.00-13.00	Lunch - Supported by Symbiotic Devices	Tram Room 28
13.00-14.00	Award winners' talks and presentation by Cedric Tremblay (Monash University)	Tram Room 28
14.00-15.00	Panel Q&A Session	

Conference Schedule

Day 1 | Thursday 21st November

15.30-16.00	Welcome and Acknowledgement of Country Conference Opening and Award Announcements	Auditorium
16.00-17.00	Keynote Lecture I - Supported by UTAS School of Medicine Nicole Wenderoth Volitional regulation of cortical excitability: Modifying cortical networks and brain oscillations with neurofeedback	
17.00-19.00	Welcome Reception - Supported by UTAS School of Medicine	University of Tasmania School of Creative Arts Gallery Inveresk Campus

Day 2 | Friday 22nd November

08.30-09.00	Young Investigator Award Talk Stefan Bode The neurocognitive mechanisms of changing one’s mind		Auditorium
Auditorium		Tram Room 28	
09.00-10.15	Symposia I: Cortical plasticity and motor function in ageing and neurodegenerative disease (Chair: James Coxon)		Symposia II: Using network neuroscience to understand typical and atypical development (Chair: Nandita Vijayakumar)
	Ann-Maree Vallence	Is the excitation – inhibition balance important for fine motor control in older adults?	Nandita Vijayakumar Maturational covariance of cortical development during puberty
	George Opie	Primed to learn: investigating the use of transcranial magnetic stimulation for promoting motor function in older adults	Gareth Ball The development of structural connectivity subnetworks and specific alterations in autism spectrum disorder
	Hayley Teasdale	Combining physical exercise and transcranial direct current stimulation to address sensorimotor impairment in Parkinson’s disease	Sarah Whittle Coupling of resting state networks in adolescent problematic substance use and depression
	Sophie Andrews	Effects of acute exercise and transcranial magnetic stimulation on motor cortex plasticity and motor skill learning in Huntington’s disease	Karen Caeyenberghs Mapping brain networks in young patients with traumatic brain injury: What can graph metrics tell us?
10.15-10.45	Morning Tea - Supported by UTAS School of Medicine		Tram Room 29
10.45-11.45	Keynote Lecture II Helen Zhou Network-sensitive brain imaging in preclinical and prodromal dementia: a longitudinal perspective		Auditorium
Auditorium		Tram Room 28	
	Regular Talks		
11.45-12.45	Cognition I		Social
	Montana McKewen	Theta Frontoparietal Networks Underlying Switch and Mixing Costs During Task-Switching	Ian Evans The effect of familiarity on neural correlates of emotion perception in 15 week old infants
	Avinash Kumar Singh	Cognitive Conflict in Virtual Reality Based Object Selection Task : An EEG study	Sarah Krivan I’ll cry instead: Mu suppression responses to tearful expressions
	Shane Ehrhardt	Transcranial direct current stimulation of prefrontal cortex augments multi-session single/dual-task training and induces near transfer: A dosage study	Patrick Cooper Frontocentral signatures of curiosity: Evidence for subjective valuation of non-instrumental information
	Frini Karayanidis	Modelling practice and adult lifespan effects on task-switching performance in a large scale data set	Aisling Mulvihill Use your Words: The relationship between private speech content and task performance in preschool children
12.45-13.45	Lunch - Supported by Symbiotic Devices		Tram Room 29
Lunchtime:	Equity and Diversity Open Discussion Forum - Supported by Symbiotic Devices Please bring your lunch and join us for an open discussion regarding equity and diversity within our Society and Neuroscience more broadly.		Auditorium
13.45-15.30	Visual System I		Clinical I
	Rebecca Keogh	Using pupillometry to measure individual differences in visual imagery strength (Award Talk)	Claire O’Callaghan Noradrenergic contributions to neuropsychiatric and cognitive symptoms in Parkinson’s disease – ultra-high field imaging of locus coeruleus and effects of atomoxetine

15.30-16.00	Afternoon Tea	Tram Room 29
15.30-17.30	Poster Session I	
18.00-21.00	Early Career Researcher Mixer Open to ACNS Early Career Researchers ONLY	James Boags Brewery Function Centre (Ground Floor and Beer Garden)

09.00-10.00	Keynote Lecture III Xiaosi Gu The social brain: norms, beliefs, and model-based influence	Auditorium
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Fast Talks continued			
Eileen Luders	From Baby Brain to Mommy Brain: Widespread Gray Matter Gain After Giving Birth	Evelyn Deutscher	Towards Personalised Profiles of Pathology in Traumatic Brain Injury Patients using Anatomical MRI Scans: A proof-of-concept study
Elektra Schubert	Distributed patterns of event-related potentials during anticipation of emotion regulation predict success for reappraisal but not distraction	Eric Tan	Speech analysis for assessing schizophrenia spectrum disorders: what machine learning techniques say
11.00-11.30	Morning Tea - Supported by UTAS School of Medicine		
11.30-12.45	Tram Room 29		
	Symposia III: Inhibitory control in healthy and clinical populations (Chair: Mark Hinder)	Symposia IV: Advancing our understanding of cognition (Chairs: Emma Burrows and Katherine Johnson)	
Rohan Puri	Role of expectancy in selective stopping: a behavioural and neural perspective	Shuting (Tina) Li	A novel Posner-style cueing task to assess attention orienting in mouse models of autism
Jane Tan	In-phase tACS does not improve response inhibition for older adults, but potentially reduces response conflict in their younger counterparts	Jess Nithianantharajah	Of mice and mental disorders: deconstructing motivation and decision-making to advance translational research in psychiatry
Dinisha Parmar	Inhibitory control in neurodevelopmental disorders	Farshad Mansouri	The neural architecture of cognitive flexibility and control
Nahian Chowdhury	Reduced motor cortex inhibition in problem gamblers	Bernard Balleine	Human and rodent homologies in the circuits mediating action control: Implications for obsessive compulsive disorder
12.45-13.45	Lunch - Supported by Symbiotic Devices		
13.45-14.45	Tram Room 29		
14.45-15.15	Auditorium		
14.45-16.30	Keynote Lecture IV James Vickers Individual and public health interventions to boost cognitive reserve and resilience to dementia		
16.30-17.30	Tram Room 29		
	Poster Session II		
	AGM		
19.00- Late	Auditorium		
	Conference Dinner with entertainment from The Geale Brothers - Supported by Compumedics		Penny Royal Restaurant 1 Bridge Road

Day 4 | Sunday 24th November

	Auditorium		Tram Room 28	
	Fast Talks			
09.00-09.45	Visual System II		Cognition II	
	Philippa Johnson	The visual system compensates for neural delays to represent moving objects in their physical position in real time	Sally Richmond	Individual differences in gamified attention training: Training curves in typically developing children
	Regan Gallagher	The Massive Report Paradigm: Assessing the richness of conscious experience	Alice Stephenson	The effect of prior perceptual load on visuomotor neural oscillatory mechanisms and task performance
	Fernanda L. Ribeiro	Predicting brain function from anatomy using deep learning	Hamid Karimi-Rouzbahani	Neural correlates of vigilance decrements: can we use brain decoding to pre-empt behavioural errors?
	Abbey Nydam	Speed of Processing Configural Regularities in Contextual Cuing	Elizabeth Bowman	The effects of dopaminergic psychostimulants on complex problem solving

Fast Talks continued			
	Imogen Stead	Modelling of spatial representations across eye movements reveals rapid post-saccadic updating	Julian Matthews Non-instrumental information is devalued in decision-making under risk and uncertainty
09.45-10.30	Visual System III		Sleep, Wakefulness and Arousal; Social
	Sidney Davies	Dissociable effects of perceived position and perceived motion in the high-phi illusion	Charmaine Diep Acoustic slow wave sleep stimulation improves daytime sleepiness and sustained attention in chronically sleep-deprived adults
	Annabelle Pontvianne	Do water views restore sustained attention?	Chase Sherwell Measuring physiological synchrony and arousal with wearable devices: comparing approaches using the SoChro toolbox
	Lena Zou-Williams	Cultural influences on attention: evidence from eye-movements and EEG during emotional scene viewing	Matthew Hendrickx Quite powerful: The EEG of memory consolidation during quiet wakefulness
	Melanie J Murphy	Eye Movement Patterns as a Measure of Problem-Solving Strategy in Primary School Aged Children	Nikki-Anne Wilson Reduced Social Perception is Associated with Social Scene Construction Deficits in Frontotemporal Dementia
	Alexander M. Puckett	Manipulating the structure of natural images using wavelets to probe the human visual hierarchy	Megan E. J. Campbell Automatic imitation of actions for unpredictable, but not predictable stimulus-response pairings
10.30-11.00	Morning Tea - Supported by UTAS School of Medicine		
	Auditorium		Tram Room 29
	Tram Room 28		
	Regular Talks		
11.00-12.30	Understanding Cognitive Control of Action using EEG and fNIRS		Decision Making
	James Coxon	Effect of pharmacological manipulation of dopamine D2 receptors on response inhibition	Denise Moerel Disentangling the effects of attention and decision-making in space and time
	Rebecca J. St George	Functional near-infrared Spectroscopy shows age-related cortical compensation during standing	Raina Angdias The Effect of Motor Costs on Decision Confidence
	Daniel Hochstrasser	The Role of Contextual Uncertainty on the Neural Interaction of Predicted and Attended Tones	Yiu Hong Ko The effects of absolute and relative evidence strength on decision confidence
	Elise Rowe	Detecting (un)seen change: the neural underpinnings of (un)conscious prediction errors	Tess Nikitenko Investigating the neural correlates of decision-making using transcranial magnetic stimulation
	Dragan Rangelov	Neurocognitive consequences of prediction violation across auditory and visual modalities	Christina A. Van Heer Local versus global optimisation of error in probabilistic learning
		Kelly Garner	Cognitive capacity limits are remediated by practice-induced plasticity between the Putamen and Pre-Supplementary Motor Area
12.30-13.00	Award Presentation and Final Remarks		
			Auditorium

Posters

Session I | Friday 22nd November 15.30-17.30

1	Predictive coding in the visual cortex of awake and anaesthetized non-human primates	Ekaterina Levichkina
2	Multimodal Neuroimaging in Paediatric Moderate/Severe Traumatic Brain Injury: Towards Understanding the Functional-Structural Relationship	Nicholas Parsons
3	How variability affects mismatch negativity elicitation	Mattsen Yeark
4	Searching for the sweet spot: Balancing tDCS intensity for cortical excitability modulation with double blinding integrity	Hannah Bereznicki
5	Effects of screen use on behavioural and cognitive attention and sleep in school-aged children	Karen Chiu
6	The role of individual alpha frequency in predicting susceptibility to false memories	Julia Romeo
7	The conditions under which inhibition of return is represented in object-based coordinates	Cameron T. Mace
8	The effects of Mindfulness Meditation with Neurofeedback on ERP Measures of Attention	James Brady
9	Alpha Neurofeedback Training For Mental Resilience	Graham Jamieson
10	Motion extrapolation in the flash-lag effect depends on perceived, rather than physical speed	Lysha Lee
11	Social anxiety and visual working memory differentiate typically developing children from those with additional learning needs, irrespective of diagnosis	Hayley E. Pickering
12	Differential patterns for true and false memories across sleep: An event-related potential (ERP) investigation	Sophie Jano
13	The role of the pre-frontal cortex in step initiation and the effects of age	Danielle Pretty
14	Gravity and Predictive Coding	Blake W. Saurels
15	Investigating the roles of the orexin system in goal-directed decision making	Jeremy Metha
16	A Freudian Blip – Examining the Neural Bases of Female Difference in Sexual Arousal	Ian D. Evans
17	Individual differences in threat detection measured using ensemble encoding	Daniel A. Madden
18	A common neural substrate for retrospective and prospective memory disturbances across dementia syndromes	Lulu Liu
19	The relationship between the human mirroring system and subtle mimicry of arm movements.	Emma J. Kornfeld
20	Dissociable effects of tDCS polarity on latent decision processes are associated with individual differences in neurochemical concentrations and cortical morphology	Hannah Filmer
21	A biomarker for anorexia nervosa	Andrea Phillipou
22	Transcranial direct current stimulation (tDCS) for the treatment of anorexia nervosa: Protocol	Andrea Phillipou
23	Exploring the NUCOG: the Cattell-Horn-Carroll model improves cognitive construct validity	Dave Mussoff
24	Multifocal visual evoked potentials to emotional faces	Eveline Mu
25	fMRI adaptation to stimulus form, orientation, and size in different subdivisions of the lateral occipital complex	Hayden Peel
26	Peak alpha frequency and statistical learning ability independently affect artificial language learning	Benjamin Troup
27	Standard and Inter-Regional Continuous Theta Burst Priming of the Primary Motor Cortex Modulates Transcranial Magnetic Stimulation- and Sensory-Evoked Potentials	Michael Do
28	Switching Between Selective and Divided Attention - Insights from behavioral as well as physiological data	Magnus Liebherr
29	Examining cerebellum-primary motor cortex connectivity using a novel transcranial magnetic stimulation protocol: Application in tremor-dominant Parkinson's disease	Brittany Rurak
30	Combined cognitive training and transcranial Direct Current Stimulation in older adults	Kristina Horne
31	A model of V1 complex cells challenges the role of corticothalamic feedback in figure-ground segmentation	William J Harrison
32	Memory complaints in healthy middle-aged adults are not associated with memory or sustained attention	Yi-En Quek
33	Attentional bias in trauma survivors	Selma Music
34	Seeing with your eyes closed: Spatially localised adaptation-induced changes to the 'intrinsic' occipital alpha rhythm	Wiremu Hohaia
35	Changes in the rate of force applied when lifting an object do not produce related changes in its perceived weight	Elizabeth J Saccone
36	The Ever-Changing Ideal: The Body You Want Depends On Who Else You're Looking At	Ellie Aniulis
37	Spatial ICA reveals distinct facial thermal components showing dynamic and synchronized temperature changes during naturalistic emotional experience	Saurabh Sonkusare
38	Tracking the time course of sensory dampening following response errors	Alexandra Konski
39	Lightness constancy in gaze perception	Colin J. Palmer
40	Computational cognitive requirements of random decision problems	Pablo Franco
41	Examining the neural correlates of error awareness in a large (n = 451) fMRI study	Gezelle Dali
42	Where do you look when you don't want to reach? Factors associated with visuomotor direction and inhibition	Gemma Lamp
43	Association between Schizotypy and Antisaccade Performance: New Data from a Large Sample and Meta-analysis	Elizabeth Thomas
44	Tracing the time course of memory consolidation with RSA	Alex Chatburn
45	Organised toe maps in extreme foot users	Harriet Dempsey-Jones
46	The effects of light level on the task-evoked pupil response during effortful listening	Jennifer Baldock
47	A Validation of Emotiv Flex for ERP Research	Nik Williams
48	The laughing mind and its dissociation of the self	Sam Hatfield
49	Neural activity during response inhibition predicts treatment outcomes in PTSD.	Thomas Williamson
50	Perturbs and Observes the Frontotemporal Network in Automatic/Pre-attentive Abstract Change Detection with Transcranial Magnetic Stimulation and Event-related Optical Signal	Chun-Yu Tse

Posters

Session II | Saturday 23rd November 14.45-16.30

1	Cognitive Predictors of Complex Task Performance: On the Influence of Attention Control, Working Memory and Situation-Specific Task Models	Angela D. Bender
2	A dynamic noise background reveals perceptual motion extrapolation	Ryohei Nakayama
3	Effort exertion modulates learning from choice outcomes	Huw Jarvis
4	The Contribution of Spatial Frequencies in Perceptual Rescaling Mechanisms	Gizem Yildiz
5	Association between hippocampal integrity and relational memory performance in older adults with subjective cognitive decline	David White
6	Sleep restriction reduces motivation to exert cognitive effort	Mindaugas Jurgelis
7	Examining the spatial dynamics of the center-of-gravity effects in inhibition of return and sensory adaptation	Nicholas R. Wilson
8	A rose coloured view of emotional processing in autism	David Crewther
9	Causal evidence of right temporal parietal junction involvement in implicit Theory of Mind processing	Amaya Fox
10	Functional connectivity in allelic variations of APOE and BDNF polymorphisms in adults: the Tasmanian Healthy Brain Project (THBP)	Manuela Pietzuch
11	High-intensity interval exercise as a modifier of neocortical plasticity in the visual cortex	Claire J. Cadwallader
12	The belief of being watched facilitates the rapid awareness of eye gaze	Kiley Seymour
13	Risky business: impulsivity and decision-making in younger-onset dementia	Stephanie Wong
14	Magnetoencephalography (MEG) reveals the timing of neural responses during real and pantomimed visually guided actions	Laila Hugrass
15	Sleep deprivation and circadian timing differentially impact prosaccade reaction times depending on cognitive demands	Jinny Collet
16	The relationship between negative symptoms and cognitive function in schizophrenia	Caitlin Yolland
17	Handedness modulates spatial attentional shifts in a monotonous simulated driving task	Dilushi Chandrakumar
18	Investigating the effects of iTBS and cTBS on working memory in healthy younger and older adults.	Catherine Offer
19	How Perceptions of Trustworthiness are Influenced by (Arbitrary) Group Memberships: A Facial EMG and fMRI Investigation	Eric Vanman
20	Investigating distractor interference by cognitive load using pupillary luminance responses in the anti-saccade paradigm	Chin-An Josh Wang
21	Functional connectivity and the neuroprotective effects of motherhood on the ageing human maternal brain.	Winnie Orchard
22	Internally-generated responses in parkinsonian disorders: A neuropsychological study of verbal and non-verbal fluency	Gail Robinson
23	Dynamic Within-Subject Metabolic Connectivity Using High Temporal-Resolution Simultaneous BOLD-fMRI FDG-PET	Sharna Jamadar
24	Diamonds are forever – priming effects from visual imagery on perceptual rivalry	Katie Wykes
25	Causality perception and temporal sensitivity at the Blind-spot	Neha Dhupia
26	Does the brain see what the eyes miss? A steady-state visual evoked potential (SSVEP) study of inattention blindness.	Oren Griffiths
27	Towards a More Accurate Assessment of Cognitive Processing in Aging & Post-Stroke: Insights from Healthy Aging	Deena Ebaid
28	Neurophysiology of perceptual decision formation in the ageing brain.	Méadhbh B. Brosnan
29	Modelling spelling as a process of Bayesian decision-making	Helen Mason
30	Fractals in Motion: The visual system's reliance on the fractal structure of natural scenes across spatial and temporal domains.	Michelle Roberts
31	Neural Implications of Emotional Imagery	Kajal Patel
32	Limited physiological adaptation over time for individuals with Intellectual Disability with and without Autism: A Pilot Study	Nahal Goharpey
33	Implicit vs explicit learning: Does the method of encoding affect delayed memory performance?	Bradley Skinner
34	Effect of obsessive-compulsive traits on decision-making is mediated by exploration-related strategies	Shinsuke Suzuki
35	Developing a robust analysis pipeline for paediatric magnetoencephalographic (MEG) data	Robert Seymour
36	Right and left hemisphere contributions to emotion induced blindness	Ella Moeck
37	Eye movements are related to error checking during enumeration and arithmetic	Jason Forte
38	Attention & Personality as Predictors of Creative Cognition & Achievement	Ciara Grossmann
39	Why Phonological Intervention Alone is not sufficient for remediation of Reading Fluency	Zena Elhassan
40	Autonomy support enhances movement efficiency	Reza Abdollahioupour
41	Stimulating prefrontal cortex enhances performance gains from sensory-motor training in older adults	Si Jing Tan (SJ)
42	Rules are made to be broken! - Cognitive and neural mechanisms underlying conditional rule-breaking	Leidy Yurani Cubillos-Pinilla
43	Omission and commission errors on a predictable Go/No-Go task differentially predict early and higher-order literacy and numeracy in 5-7-year-old children.	Frances C Lewis
44	Association between SLF, SLF I, II, III and complex motor planning in children with Developmental Coordination Disorder: Preliminary findings	Ranila Bhoymroo
45	Ideal or Real? Issues in Assessing Ideal Body Size	Nicole Thomas
46	UNSUPERVISED ANALYSIS OF SLEEP DATA DETECTS PERIODS OF LUCID DREAMING	Jasmine Walter
47	Response inhibition dysfunction in complex post-traumatic stress disorder	Jenny Tran
48	Muscle Strength to Mental Strength: Exercise Engagement and Age-Related Cognitive Decline	Rhianna Lovegrove
49	Divided attention in the tactile modality	Sharon Daniel
50	Motor neuron disease features are useful for predicting frontotemporal lobar degeneration subtypes	Zhe (Jill) Long
51	The Critical Role of the Inferior Frontal Cortex in Establishing a Prediction Model for Automatic/Pre-attentive Change Detection: A TMS-EEG Study	Troby Ka-Yan LUI

Social Events

Thursday 21st November

17.00-19.00

Welcome Reception

- Supported by UTAS School of Medicine

University of Tasmania
School of Creative Arts Gallery
Inveresk Campus

Friday 22nd November

18.00-21.00

Early Career Researcher Mixer

Open to ACNS Early Career Researchers ONLY.

James Boags Brewery Function Centre
(Ground Floor and Beer Garden)

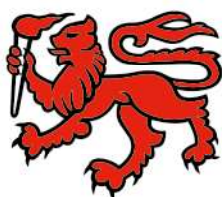
Saturday 23rd November

19.00- Late

Conference Dinner with entertainment from The Geale Brothers

- Supported by Compumedics

Penny Royal Restaurant
1 Bridge Road



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